UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105

AUTHORIZATION TO DISCHARGE UNDER THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

NPDES PERMIT NO. NN 0022179

In compliance with the provisions of the Clean Water Act ("CWA") (Public Law 92-500, as amended, 33 U.S.C. 1251 et seq.), the following discharger is authorized to discharge from the identified facility at the outfall location(s) specified below, in accordance with the effluent limits, monitoring requirements, and other conditions set forth in this permit:

Discharger Name	Peabody Western Coal Company
Discharger Address	P.O. Box 650
	Kayenta, AZ 86033
Facility Name	Black Mesa Complex
Facility Location Address	Route 41
	Kayenta, AZ 86033
Facility Rating	Major

Outfall Number	General Type of Waste Discharged	Outfall Latitude	Outfall Longitude	Receiving Water
Over 100 Outfalls listed in Appendix A -C	Alkaline Mine Drainage, Coal Preparation Areas, Western Alkaline Reclamation,	Over 100 Outfalls listed in Appendix A -C	Over 100 Outfalls listed in Appendix A -C	Coal Mine Wash, Moenkopi Wash, Dinnebito Wash, Yellow Water Canyon Wash and tributaries

This permit was issued on:	September 16, 2010
This permit shall become effective on:	November 1, 2010
This permit shall expire at midnight on:	October 31, 2015
In accordance with 40 CFR 122.21(d), the discharger shall submit a new application for a permit at least 180 days before the expiration date of this permit, unless permission for a date no later than the permit expiration date has been granted by the Director.	

Signed this ___16th of September _____, 2010, for the Regional Administrator.

_// Alexis Strauss //_____
Alexis Strauss, Director
Water Division

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SECTION A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

1. Alkaline Mine Drainage Outfalls

During the period beginning on the effective date of this permit and lasting through the date of expiration, the permittee is authorized to discharge mine drainage from the Outfall Numbers listed in Appendix A – "Alkaline Mine Drainage" to the receiving waters listed in Appendix A – "Alkaline Mine Drainage. 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 A-1: Alkaline Mine Drainage Effluent Limitations and Monitoring Requirements

Effluent Parameter	Units	Monthly Average	Maximum For any 1 day	Monitoring Frequency (1)	Sampling Type
Flow	MGD	- -	- -	Continuous	Calculated(2)
TSS	mg/L	35	70	1/day(1)	Discrete
Iron, total	mg/L	3.5	7.0	1/day(1)	Discrete
pH	Std. units	between 6.5 to 9.0		1/day(1)	Discrete
Arsenic (3)(4)	ug/L	Monitor	Monitor	1/day(1)	Discrete
Cadmium (3)(4)	ug/L	Monitor	Monitor	1/day(1)	Discrete
Chromium (total as Cr)(4)	ug/L	Monitor	Monitor	1/day(1)	Discrete
Lead (3)(4)	ug/L	Monitor	Monitor	1/day(1)	Discrete
Mercury (3)(4)	ug/L	Monitor	Monitor	1/day(1)	Discrete
Selenium (3)(4)	ug/L	Monitor	Monitor	1/day(1)	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) To determine total flow in gallons for each discharge and duration of discharge.
(3) Dissolved.
(4) Monitoring applies to all Outfalls located on the Hopi Reservation. No set limit at this time. Results will be evaluated for reasonable potential to exceed Hopi Tribe Water Quality Standards.

2. Coal Preparation Plants, Storage Areas, and Ancillary Area Runoff Outfalls

During the period beginning on the effective date of this permit and lasting through the date of expiration, the permittee is authorized to discharge runoff from the Outfall Numbers listed in Appendix B – "Coal Preparation & Associated Areas" to the receiving waters listed in Appendix B – "Coal Preparation & Associated Areas". 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 A-2: Coal Preparation Areas Effluent Limitations and Monitoring Requirements

Effluent Parameter	**Units**	**Monthly Average**	**Maximum For any 1 day**	**Monitoring Frequency (1)**	**Sampling Type**
Flow	MGD	- -	- -	Continuous	Calculated(2)
TSS	mg/L	35	70	1/day(1)	Discrete
Oil and Grease	mg/L	--	15	1/day(1)	Discrete
Iron, total	mg/L	3.5	7.0	1/day(1)	Discrete
pH	Std. units	between 6.5 to 9.0		1/day(1)	Discrete
Arsenic (3)(4)	ug/L	Monitor	Monitor	1/day(1)	Discrete
Cadmium (3)(4)	ug/L	Monitor	Monitor	1/day(1)	Discrete
Chromium (total as Cr)(4)	ug/L	Monitor	Monitor	1/day(1)	Discrete
Lead (3)(4)	ug/L	Monitor	Monitor	1/day(1)	Discrete
Mercury (3)(4)	ug/L	Monitor	Monitor	1/day(1)	Discrete
Selenium (3)(4)	ug/L	Monitor	Monitor	1/day(1)	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) To determine total flow in gallons for each discharge and duration of discharge.

(3) Dissolved.

(4) Monitoring applies to all Outfalls located on the Hopi Reservation. No set limit at this time. Results will be evaluated for reasonable potential to exceed Hopi Tribe Water Quality Standards.

3. Western Alkaline reclamation, brushing and grubbing, topsoil stockpiling, and regraded area Outfalls.

During the period beginning on the effective date of this permit and lasting through the date of expiration, the permittee is authorized to discharge runoff from the Outfall Numbers listed in Appendix C – "Western Alkaline Reclamation Areas" to the receiving waters listed in Appendix C – "Western Alkaline Reclamation Areas".

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.

d) revise the Sediment Control Plan to incorporate new areas. As existing outfalls defined in this permit as "alkaline mine drainage" are reclaimed, the approved Sediment Control Plan shall be updated to incorporate the newly reclaimed outfalls into this subpart. 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 that has been disturbed by mining 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 as described in Section C of this permit.

4. Discharges resulting from precipitation events

a) The permittee is authorized to discharge runoff from Outfall Numbers listed in Appendix A – "Alkaline Mine Drainage" and Appendix B – "Coal Preparation & Associated Areas" resulting from precipitation events less than or equal to a 10-year, 24-hour precipitation event (1.80 inches within a 24 hour period)

During the period beginning on the effective date of this permit and lasting through the date of expiration, the permittee is authorized to discharge runoff from all Outfalls resulting from precipitation events less than or equal to a 10-year, 24-hour precipitation event (1.80 inches within a 24 hour period).

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.

During precipitation events, samples may be collected from a sampling point representative of the type of discharge, rather than from each point of discharge. At no time shall less than 20% of discharges be sampled. If samples are collected from a representative point, the permittee shall specify the Outfalls being represented in the quarterly report narrative.

Table A-4-a: Discharges from precipitation events less than 10-yr, 24-hr event.

Effluent Parameter	Units	Monthly Average	Maximum For any 1 day	Monitoring Frequency (1)	Sampling Type
Flow	MGD	- -	- -	Continuous	Calculated(2)
Settleable Solids	mL/L	- -	0.5	1/day(1)	Discrete
pH	Std. units	between 6.5 to 9.0		1/day(1)	Discrete
Arsenic (3)(4)	ug/L	Monitor	Monitor	1/day(1)	Discrete
Cadmium (3)(4)	ug/L	Monitor	Monitor	1/day(1)	Discrete
Chromium (total as Cr)(4)	ug/L	Monitor	Monitor	1/day(1)	Discrete
Lead (3)(4)	ug/L	Monitor	Monitor	1/day(1)	Discrete
Mercury (3)(4)	ug/L	Monitor	Monitor	1/day(1)	Discrete
Selenium (3)(4)	ug/L	Monitor	Monitor	1/day(1)	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) To determine total flow in gallons for each discharge and duration of discharge.
(3) Dissolved.
(4) Monitoring applies to all Outfalls located on the Hopi Reservation. No set limit at this time. Results will be evaluated for reasonable potential to exceed Hopi Tribe Water Quality Standards.

b) Discharges resulting from precipitation events great than a 10-year, 24-hour precipitation event (1.80 inches within a 24 hour period)

During the period beginning on the effective date of this permit and lasting through the date of expiration, the permittee is authorized to discharge runoff from all Outfalls resulting from precipitation events greater than a 10-year, 24-hour precipitation event (1.80 inches within a 24 hour period).

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.

During precipitation events, samples may be collected from a sampling point representative of the type of discharge, rather than from each point of discharge. At no time shall less than 20% of discharges be sampled. If samples are collected from a representative point, the permittee shall specify the Outfalls being represented in the quarterly report narrative.

Table A-4-b: Discharges from precipitation events greater than 10-yr, 24-hr event.

Effluent Parameter	**Units**	**Maximum For any sample**	**Monitoring Frequency (1)**	**Sampling Type**
Flow	MGD	- -	Continuous	Calculated(2)
pH	std. units	between 6.5 to 9.0	1/day(1)	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) To determine total flow in gallons for each discharge and duration of discharge.

5. Seepage study

Peabody Western Coal Company shall continue to implement the Seep Monitoring and Management plan designed to identify and characterize seeps; to identify those seeps that may pose a threat to water quality; and to establish Best Management Practices at seeps determined to pose a threat to water quality.

The plan shall be modified to address the construction of new impoundments, and shall include:

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, 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.

The plan shall continue to be implemented as described in the "Interim Final Report – Seepage Monitoring and Management Report" April 1, 2008 and as approved by EPA .

The study results shall be submitted yearly 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. Gaging Stations

For the purpose of this permit, the gauge stations used to monitor rainfall for specific discharge points shall be:

Peabody Gauge No.		Discharge Points
1.	(ARG1)	048, 049, 050, 051, 052, 069, 070, 071, 087, 088, 089, 090, 147, 163, 169, 170, 171, 172, 173
5.	(ARG2R)	017, 018, 026, 027, 047, 086, 098, 105, 141, 142, 149, 178
7.	(ARG7R	008, 009, 013, 014, 016, 081, 094, 159, 160, 161, 162, 164, 165
8.	(ARG6R	024, 025, 030, 031, 032, 033, 039, 043, 103, 104, 127, 130, 133, 168
9.	(ARG9)	001, 002, 003, 005, 010, 012, 021, 022, 037, 045, 082, 083, 099, 139, 140, 150, 151, 153, 157
10.	(ARG3R)	054, 095, 106, 107, 118, 126, 136, 137, 143, 144, 152, 167, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193
11.	(ARG200)	079, 148, 174, 175, 176, 177, 179, 195
12.	(ARG12)	180, 181, 182, 183

SECTION B. GENERAL DISCHARGE SPECIFICATIONS

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

a. Cause injury to, are toxic to, or otherwise adversely affect human health, public safety, or public welfare.
b . 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.
c. 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.
d . 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.
e. Cause solids, oil, grease, foam, scum, or any other form of objectionable floating debris on the surface of the water body; may cause a Elm 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.
f. Cause objectionable odor in the area of the water body.
g. Cause objectionable taste, odor, color, or turbidity in the water body.
h. Cause objectionable taste in edible plant and animal life, including waterfowl, that reside in, on, or adjacent to the water body.

2. The following General Standards apply to all surface and ground waters of the Hopi Tribe:

a. Stream Bottom Deposits: Surface waters shall be free from contaminants from other than natural causes that may settle and have a deleterious effect on the aquatic biota or that will significantly alter the physical or chemical properties of the water or the bottom sediments.

b. Floating Solids, Oil, and Grease: Surface waters shall be free from objectionable oils, scum, foam, grease, and other floating materials and suspended substances of a persistent nature

resulting from other than natural causes (including visible films of oil, globules of oil, grease, or solids in or on the water, or coatings on stream banks). As a guideline, oil and grease discharged into surface waters shall not exceed 10 mg/liter average or 15 mg/liter maximum.

c. Color: Surface waters shall be free from the true color-producing materials (other than those resulting from natural causes) that create an aesthetically undesirable condition. Color shall not impair the designated and other attainable uses of a water body. Color-producing substances from other than natural sources are limited to concentrations equivalent to 70 color units (CU).

d. Odor and Taste: Contaminants from other than natural causes are limited to concentrations that do not impart unpalatable flavor to fish, that do not result in offensive odor or taste arising from the water, and that do not otherwise interfere with the designated and other attainable uses of a water body. Taste and odor-producing substances from other than natural origins shall not interfere with the production of a potable water supply by modern treatment methods. Nuisance Conditions: Plant nutrients or other substances stimulating algal growth from other than natural causes shall not be present in concentrations that produce objectionable algal densities or nuisance aquatic vegetation, or that result in a dominance of nuisance species instream, or that cause nuisance conditions in any other fashion. Phosphorus and nitrogen concentrations shall not be permitted to reach levels that result in man-induced eutrophication problems. As a guideline, total phosphorus shall not exceed 100 µg/L instream or 50 µg/L in lakes and reservoirs, except in waters highly laden with natural silts or color that reduces the penetration of sunlight needed for plant photosynthesis, or in other waters where it can be demonstrated that algal production will not interfere with or adversely affect designated and other attainable uses. Alternative or additional nutrient limitations for surface waters may be established by the Hopi Tribe and incorporated into water quality management plans.

f. Pathogens: Waters shall be free from pathogens. Waters used for irrigation of table crops (e.g., lettuce) shall be free of salmonella and shigella species.

g. Turbidity: Turbidity attributable to other than natural causes shall not reduce light transmission to a point at which aquatic biota are inhibited or to a point that causes an unaesthetic and substantial visible contrast with the natural appearance of the water. Specifically, turbidity shall not exceed 5 nephelometric turbidity units (NTU, a measure of turbidity in water) over background when background turbidity is 50 NTU or less, with no more than a 10-percent increase when background turbidity is more than 50 NTU.

h. Temperature: The introduction of heat by other than natural causes shall not increase the temperature in a stream, outside a mixing zone, by more than 2.7EC (5EF), based upon the monthly average of the maximum daily temperatures measured at mid-depth or 3 feet

(whichever is less) outside the mixing zone. In lakes, the temperature of the water column or epilimnion (if thermal stratification exists) shall not be raised more than 1.7EC (3EF) above that which existed before the addition of heat of artificial origin, based upon the average of temperatures taken from the surface to the bottom of the lake, or surface to the bottom of the epilimnion (if stratified). The normal daily and seasonal variations that were present before the addition of heat from other than natural sources shall be maintained. In no case shall manintroduced heat be permitted when the maximum temperature specified for the reach (20EC/68EF for cold water fisheries and 32.2EC/90EF for warm water fisheries) would thereby be exceeded. High water temperatures caused by unusually high ambient air temperatures are not violations of these standards.

i. Salinity/Mineral Quality (total dissolved solids, chlorides, and sulfates): Existing mineral quality shall not be altered by municipal, industrial, and instream activities, or other waste discharges, so as to interfere with the designated or attainable uses for a water body. An increase of more than one-third over naturally occurring levels shall not be permitted.

j. pH: The following water quality standards for pH, expressed in standard units, shall not be violated by other than natural causes: Maximum 9.0; Minimum 4.5 ; Maximum change due to discharge: 0.5

k. Dissolved oxygen: If a stream or other water body is capable of supporting aquatic biota, the dissolved oxygen standard will be a minimum of 6 mg/L.

l. Fecal coliform: The following water quality standards for fecal coliform, expressed in colony forming units per 100 milliliters of water (cfu/100 mL), shall not be exceeded:
30-day geometric mean: (5 sample minimum): 200
10% of samples for a 30-day: 400
Single sample maximum: 800

m. Toxic Substances: Toxic substances shall not be present in receiving waters in quantities that are toxic to human, animal, plant, or aquatic life, or in quantities that interfere with the normal propagation, growth, and survival of the sensitive indigenous aquatic biota. Within the mixing zone, there shall be no acute toxicity.

n. Water discharged under this permit shall not contain settleable materials or suspended materials in concentrations great than or equal to ambient concentrations present in the receiving stream that cause nuisance or adversely affect beneficial uses.

o.Activities conducted under this permit shall not result in the violations of any narrative and numeric criteria established in the Hopi Tribe’s Water Quality Standards.

SECTION C. 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.

This permit authorizes the discharge of wastewater from over 110 outfalls in 3 distinct subcategories. Throughout the permit term, as mine operations continue in a linear fashion, new outfall locations may become necessary to treat runoff and other outfalls may need to be authorized under a different subcategory. Therefore, EPA may modify the list of Outfalls in the Appendixes during the permit term to add, terminate or reclassify a discharge that occurs during the anticipated course of the existing mining activities. This will be accomplished thru a minor modification of the permit in accordance with 40 CFR Part 122.63. The permit may be reopened to authorize new outfalls for an area not currently being mined through a major modification to the existing permit 40 CFR Part 122.63.

SECTION D. MONITORING AND REPORTING

1. Reporting of Monitoring Results

a. 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. Results of the Seep Monitoring and Management Plan shall be reported in a separate format, as specified in Section A.5 of the permit, and shall be submitted yearly to EPA.

Monitoring results obtained during the previous three (3) months 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. Monitoring results obtained from sampling any discharge shall be entered directly on the DMR forms. In cases where No Discharge has occurred, monitoring results may be reported in narrative format due the large number (over 100) of outfalls permitted.

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, April 28, July 28, and October 28 of each year. Duplicate signed copies of these, and all other reports required herein, shall be submitted to the following addresses:

NPDES Compliance Office
Environmental Protection Agency (WTR-1)
75 Hawthorne Street
San Francisco, CA 94105
Telephone: (415) 972-3519

Navajo Nation Environmental Protection Agency
Navajo Nation EPA
P.O. Box 339
Window Rock, AZ 86515
Telephone: (928) 871-7185

Hopi Tribe Department of Natural Resources
Water Resources Office
P.O. Box 123
Kykotsmovi, AZ 86039
Telephone: (928) 734-2441

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 or 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 non-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 Manager	Navajo Nation EPA
U.S. EPA Region 9	Attn: Patrick Antonio
(415) 972-3577	(928) 871-7185

If the permittee is unsuccessful in contacting the persons 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 E. 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 F. 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.

APPENDIX A – "Alkaline Mine Drainage"

Serial Number/ Outfall Number	Latitude Deg.Min.Sec.	Longitude Deg.Min.Sec.	Receiving Water
005/N5-A	36-31-15	110-24-45	Coal Mine Wash
008/N10-A1	36-32-45	110-22-30	Coal Mine Wash
010/J3-A	36-28-45	110-25-00	Coal Mine Wash Trib.
012/N6-E	36-30-30	110-25-15	Coal Mine Wash Trib.
013/N10-B	36-33-00	110-22-15	Coal Mine Wash Trib.
018/J3-D	36-28-15	110-24-00	Moenkopi Tributary
024/N14-F	36-30-30	110-18-30	Moenkopi Tributary
025/N14-G	36-30-30	110-18-15	Moenkopi Tributary
026/MW-A	36-27-30	110-23-45	Moenkopi Wash
027/MW-B	36-27-30	110-23-45	Moenkopi Wash
030/J16-D	36-30-00	110-18-30	Moenkopi Tributary
031/J16-E	36-30-00	110-18-30	Moenkopi Tributary
032/J16-F	36-30-00	110-18-45	Moenkopi Tributary
033/J16-G	36-29-45	110-19-00	Moenkopi Tributary
039/N14-H	36-30-45	110-17-30	Moenkopi Tributary
045/WW-6	36-30-00	110-22-15	Moenkopi Tributary
048/J7-G	36-25-00	110-24-15	Red Peak Valley
052/J7-K	36-24-30	110-23-00	Sagebrush Wash
069/J7-I	36-24-45	110-24-30	Yucca Flat Wash Trib.
070/J7-J	36-24-30	110-24-30	Yucca Flat Wash Trib.
071/J7-M	36-24-15	110-24-15	Yucca Flat Wash Trib.
079/J21-A	36-26-15	110-14-45	Dinnebito Wash
081/N1-O	36-32-00	110-24-00	Coal Mine Wash
082/N5-E	36-31-15	110-25-00	Coal Mine Wash
086/WW-4	36-26-45	110-24-45	Moenkopi Wash
087/WW-9	36-23-45	110-24-45	Yucca Flat Wash Trib.
088/WW-9A	36-23-45	110-24-45	Yucca Flat Wash Trib.
089/WW-9B	36-23-45	110-24-45	Yucca Flat Wash Trib.
090/WW-9C	36-24-15	110-24-30	Yucca Flat Wash Trib.
141/J3-F	36-28-00	110-25-15	Coal Mine Wash Trib.
142/J3-G	36-28-00	110-25-15	Coal Mine Wash Trib.
143/N7-D	36-32-30	110-25-45	Yellow Water Canyon Trib.
144/N7-E	36-32-30	110-25-30	Yellow Water Canyon
147/J7-A	36-25-30	110-23-30	Red Peak Valley
148/J21-C	36-26-00	110-15-30	Dinnebito Wash
150/N6-G	36-29-30	110-23-00	Coal Mine Wash
151/N6-H	36-29-30	110-23-00	Coal Mine Wash
153/N6-I	36-31-45	110-24-15	Coal Mine Wash
157/N6-J	36-31-45	110-24-00	Coal Mine Wash
159/N11-A	36-32-20	110-22-40	Coal Mine Wash
160/N11-C	36-32-25	110-22-35	Coal Mine Wash
161/N11-E	36-32-35	110-22-25	Coal Mine Wash
162/N11-G	36-32-30	110-21-40	Coal Mine Wash

APPENDIX A – "Alkaline Mine Drainage" - Continued

163/J7-B1	36-25-10	110-23-58	Red Peak Valley
164/N6-L	36-31-58	110-23-58	Coal Mine Wash
165/N6-M	36-32-12	110-23-27	Coal Mine Wash
168/N14-T	36-30-20	110-18-20	Moenkopi Tributary
169/J7-R	36-24-05	110-24-00	Moenkopi Tributary
170/J7-S	36-24-05	110-23-50	Yucca Flat Wash
171/J7-T	36-24-00	110-23-40	Yucca Flat Wash
172/J7-U	36-24-10	110-23-30	Yucca Flat Wash
173/J7-V	36-24-10	110-23-20	Yucca Flat Wash
176/J21-F	36-25-23	110-16-00	Dinnebito Wash
177/J21-G	36-24-44	110-16-40	Dinnebito Wash
178/J27-RC	36-27-08	110-23-02	Moenkopi Tributary
179/J7-JR	36-26-13	110-19-52	Red Peak Valley Wash
180/J19-A	36-27-28	110-19-24	Reed Valley Wash
181/J19-B	36-27-16	110-20-10	Red Peak Valley Wash
182/J19-D	36-26-50	110-19-55	Red Peak Valley Wash
183/J19-E	36-26-42	110-19-55	Red Peak Valley Wash
184/N9-A	36-34-49	110-23-56	Yellow Water Canyon
185/N9-B	36-33-49	110-24-13	Yellow Water Canyon
186/N9-C	36-33-23	110-24-49	Yellow Water Canyon
187/N9-D	36-33-18	110-25-02	Yellow Water Canyon
188/N9-E	36-32-56	110-25-24	Yellow Water Canyon
189/N9-F	36-32-44	110-25-31	Yellow Water Canyon
190/N9-G	36-33-27	110-25-51	Yazzie Wash
191/N9-H	36-33-58	110-25-46	Yazzie Wash
192/N9-I	36-34-13	110-25-32	Yazzie Wash
193/N9-J	36-34-25	110-25-24	Yazzie Wash
195/J21-H	36-24-29	110-17-04	Dinnebito Wash

APPENDIX B – "Coal Preparation & Associated Areas"

Serial Number/ Outfall Number	Latitude Deg.Min.Sec.	Longitude Deg.Min.Sec.	Receiving Water
001/N1-F	36-31-45	110-24-45	Coal Mine Wash
002/N1-L	36-31-45	110-24-15	Coal Mine Wash
003/N1-M	36-32-45	110-24-15	Coal Mine Wash
009/N10-C	36-32-00	110-24-00	Coal Mine Wash
014/N10-D	36-32-30	110-23-00	Coal Mine Wash Trib.
016/N12-C	36-32-15	110-23-15	Coal Mine Wash Trib.
017/BM-A1	36-26-30	110-24-00	Moenkopi Tributary
043/N14-Q	36-30-00	110-19-15	Moenkopi Tributary
047/J7-DAM	36-25-30	110-23-30	Red Peak Valley
054/N1-AC	36-32-00	110-25-45	Yellow Water Canyon
083/N5-F	36-31-15	110-25-00	Coal Mine Wash
094/N10-B1	36-33-00	110-22-15	Coal Mine Wash Trib.
095/KM-D	36-31-30	110-25-15	Coal Mine Wash Trib.
098/BM-SS	36-27-00	110-23-45	Moenkopi Tributary
099/J3-E	36-28-45	110-23-30	Moenkopi Tributary
103/N14-B	36-31-00	110-20-30	Moenkopi Tributary
104/N14-C	36-30-00	110-19-15	Moenkopi Tributary
105/BM-B	36-26-45	110-24-00	Moenkopi Tributary
106/KM-A3	36-31-45	110-26-00	Yellow Water Canyon
107/KM-B	36-31-30	110-26-00	Yellow Water Canyon
118/TPC-A	36-33-00	110-29-15	Long House Valley Trib.
126/TS-A	36-33-45	110-31-00	Klethla Valley
127/J16-A	36-30-00	110-18-15	Moenkopi Tributary
130/N14-P	36-31-00	110-20-30	Moenkopi Tributary
133/J16-L	36-30-45	110-19-30	Reed Valley
136/KM-TPB	36-31-15	110-28-00	Yellow Water Canyon Trib.
137/KM-TPB1	36-33-00	110-28-00	Yellow Water Canyon Trib.
139/KM-E	36-31-15	110-25-30	Coal Mine Wash Trib.
140/J2-A	36-29-00	110-25-45	Wild Ram Valley
149/J27-A	36-27-15	110-23-15	Moenkopi Tributary
152/TS-B	36-33-30	110-31-15	Klethla Valley
167/TPF-E	36-32-00	110-26-02	Yellow Water Canyon

APPENDIX C – "Western Alkaline Reclamation Areas"

Serial Number/ Outfall Number	Latitude Deg.Min.Sec.	Longitude Deg.Min.Sec.	Receiving Water
021/N6-C	36-29-30	110-22-45	Moenkopi Tributary
022/N6-D	36-29-15	110-23-00	Moenkopi Tributary
037/N6-F	36-30-45	110-22-30	Moenkopi Tributary
049/J7-CD	36-24-45	110-22-15	Sagebrush Wash
050/J7-E	36-24-45	110-22-30	Sagebrush Wash
051/J7-F	36-24-30	110-22-30	Sagebrush Wash
174/J21-D	36-25-39	110-15-37	Dinnebito Wash
175/J21-E	36-25-32	110-15-49	Dinnebito Wash

FACT SHEET
Peabody Western Coal Company - Black Mesa Complex
NPDES Permit No. NN0022179

Final Permit
2010

Applicant address: Peabody Western Coal Company
Black Mesa Complex
P.O. Box 650
Kayenta, AZ 86033

Applicant contact: Gary Wendt, Environmental Manager
(928) 677-5130
gwendt@peabodyenergy.com

Address: P.O. Box 650
Kayenta, AZ 86004

I. Status of Permit

EPA re-issued the current National Pollutant Discharge Elimination System Program (NPDES) Permit (No. NN0022179) for the discharge of treated wastewater to the Peabody Western Coal Company (PWCC), Black Mesa/Kayenta Mine Complex on December 29, 2000. On August 3, 2005 PWCC filed a timely renewal of its NPDES permit for discharge of wastewater into waters of the United States. EPA has administratively continued the permit since its expiration on February 1, 2006. PWCC also has coverage under the federal Multi-Sector General Permit for stormwater (AZR05F121). During the past permit term, EPA modified the permit several times to incorporate new outfalls and to eliminate expired outfalls due to the ongoing mining activities.

EPA proposed the permit renewal on February 19, 2009. EPA received two comments on the permit during the public comment period: one from the applicant PWCC and the other from several nonprofit organizations. On August 5, 2009, EPA issued the final permit, which the nonprofit groups that had previously commented on the permit subsequently appealed. Among other issues, the appellants argued that EPA did not address the concerns of the community because EPA did not holding a public hearing during the public comment period. In response, EPA has decided to re-open the public comment period and to hold two public hearings on the permit to allow further opportunity for public review and comment. Hearings were subsequently held on the Navajo and Hopi Reservations.

This permit is substantially similar to the previous (2000) permit but does include several changes. First, the permit incorporates new regulatory requirements for the Western Alkaline Coal Mining Subcategory for reclamation areas that were promulgated in January 2002. Second, several new outfall locations have been added and several have been eliminated to reflect changes due to ongoing mining activities. Finally, the permit also incorporates revisions to the Seep Monitoring and Management Plan, which was created pursuant to the previous permit, in order to reflect the results of previous monitoring and to address the impoundments causing seeps. No other significant changes have been made to the permit.

II. Background

The Black Mesa/Kayenta mine has operated since the early 1970s southwest of Kayenta, Arizona. The complex is located on approximately 64,858 acres of land leased within the boundaries of the Hopi and Navajo Indian Reservations primarily located in Navajo County, Arizona. About 25,000 acres of the lease area mineral rights are owned exclusively by the Navajo Nation, and 40,000 are owned jointly by the Navajo Nation and Hopi Tribe. The Kayenta mining operation is the sole supplier of coal to the Navajo Generation Station, located near Page, Arizona. The Black Mesa mining operation was the sole supplier of coal to the Mojave Generating Station, located in Laughlin, Nevada. Coal supplied to the Mojave Generating Station was supplied via a 273 mile long pipeline through which coal was slurried. The Mojave Generating Station ceased production in December 2005, and PWCC temporarily suspended mining operations at the Black Mesa Mine.

In addition to this NPDES permit, PWCC was required to obtain a Life-of-Mine permit from the Office of Surface Mining Reclamation and Enforcement (OSMRE). The Life-of-Mine permit is a separate permitting activity from the NPDES permit and authorizes PWCC to mine coal. Whereas the NPDES permit authorizes PWCC to discharge treated wastewater from the mine site that is composed of runoff from active mine areas, coal preparation plant areas, and reclamation areas. On February 17, 2004 PWCC filed a Life-of-Mine permit revision application to OSMRE proposing several revisions to its previous Life-of-Mine permit. EPA was a Cooperating Agency on the environmental impact analysis conducted for the Life-of-Mine permit revision. OSMRE published a draft Environmental Impact Statement in November 2006 (DOI DES 06-48). PWCC submitted a revised Life-of-Mine permit application to OSM in July 2008. OSMRE published the Final EIS in November 2008 (DOI FES 08-49) and issued the Life-of-Mine permit on December 22, 2008. On January 5, 2010, The U.S. Department of Interior's Office and Hearings and Appeals overturned the Life-of-Mine permit issued by OSM for reasons unrelated to the NPDES permit renewal.

III. Receiving Water

The Black Mesa/Kayenta Complex discharges to receiving waters located on the Navajo Nation and Hopi Tribe Reservations. The receiving waters are two principal drainages within the

Black Mesa/Kayenta Complex, the Moenkopi Wash and Dinnebito Wash. Both are ephemeral washes with short intermittent reaches that drain southwest to the Little Colorado River system. Five large washes are tributaries to the Moenkopi Wash – the Coal Mine, Yellow Water Canyon, Yucca Flat, Red Peak Valley, and Reed Valley Washes. No waterbodies receiving discharges from Black Mesa/Kayenta Complex have been identified as impaired and therefore have not been listed on the Clean Water Act Section 303(d) list.

Both the Navajo Nation Surface Water Quality Standards (NNSWQS) and the Hopi Surface Water Quality Standards apply to the receiving waters previously mentioned, and thus, the permit incorporates limits and standards for the protection of receiving waters in accordance with those standards. The Resources Committee of the Navajo Nation Council approved the NNSWQS on November 9, 1999 and amended the NNSWQS on July 30, 2004. Subsequently, the Navajo Nation received Treatment as a State for the purposes of Sections 106 and 303 of the CWA. EPA approved the Navajo Nation's water quality standards in March 2006. Similarly, the Hopi Tribe approved Surface Water Quality Standards in August 29, 1997, and subsequently on April 24, 2008, the Hopi Tribe received Treatment as a State for the purposes of Sections 106 and 303 of the CWA. EPA approved the Hopi water quality standards on July 8, 2008.

The designated uses of the receiving waters for the Moenkopi Wash and its tributaries and Dinnebito Wash on the Navajo Nation are Secondary Human Contact (ScHC), Ephemeral Warm Water Habitat (EphWWhbt), and Livestock and Wildlife Watering (L&W).

The designated uses of the receiving waters for on the Moenkopi Wash and its tributaries and Dinnebito Wash on the Hopi Reservation are Aquatic and Wildlife warm water habitat (A&Ww), Partial Body Contact (PBC), Agricultural Livestock Irrigation, (AgL), Agricultural Irrigation (Agl), and Groundwater recharge (GWR).

IV. Description of Discharge

The discharge from the Black Mesa/Kayenta Complex includes runoff from active mine areas, coal preparation plant areas, and reclamation areas. The discharge meets the definition of "alkaline, mine drainage," defined at 40 CFR Part 434 and is mine drainage which, before any treatment, has a pH equal to or greater than 6.0 and total iron concentration of less than 10 mg/l. 40 C.F.R. § 434.11(c).

The permit authorizes discharge from 111 outfalls. During the previous permit term (from 2005-2009), there have been a total of 31 discharges from the Black Mesa/Kayenta Complex, either due to precipitation events or as a result of pond dewatering. The following is a table of the discharges occurring from 2005-2009 and the volume of each discharge:

Year	Number of Discharges	Cause of Discharge	Amount Discharged
2009	1	dewatering stormwater ponds	8.946 acre-feet
2008	4	dewatering stormwater ponds	326.59 acre-feet
	5	precipitation events	46.58 acre-feet
2007	5	dewatering stormwater ponds	8.097 acre-feet
	5	precipitation events	57.81 acre-feet
2006	2	dewatering stormwater ponds	5.701 acre-feet
	2	precipitation events	1.416 acre-feet
2005	3	dewatering stormwater ponds	7.933 acre-feet
	4	precipitation events	0.61 acre-feet

V. Regulatory Basis of Effluent Limits

Section 301(a) of the Clean Water Act provides that the discharge of any pollutant to waters of the United States is unlawful except in accordance with a NPDES permit. Section 402 of the Act establishes the NPDES program. The program is designed to limit the discharge of pollutants into waters of the United States from point sources through a combination of various requirements including technology-based and water quality-based effluent limitations.

1. Technology-based effluent limitations

The discharge of wastewater from coal mines is subject to 40 C.F.R. Part 434: Coal Mining Point Source Category Best Practicable Control Technology (BPT), Best Available Technology (BAT), Best Conventional Pollutant Control Technology (BCT) Limitations and New Source Performance Standards. The Black Mesa/Kayenta Complex has the potential to discharge wastewater from separate sources that are subject to separate subcategories of Part 434. These include:

A. Appendix A Outfalls – "Alkaline Mine Drainage"

The outfalls listed in Appendix A of the permit meet the definition of "alkaline, mine drainage" in 40 C.F.R. § 434.11(c). Therefore, the permit sets effluent limits for these outfalls in accordance with the requirements of Subpart D - Alkaline Mine Drainage for BPT, BCT, and

BAT regulations that apply to such discharges. The permit sets discharge limits for these outfalls for total iron (3.5 mg/l daily average and 7.0 mg/l daily maximum), Total Suspended Solids (TSS)(35 mg/l daily average and 70 mg/l daily maximum), and pH (no less than 6.0 or greater than 9.0 standard pH units). Flow volumes, total iron, TSS and pH monitoring is required during any discharge event. These requirements are consistent with those of the previous permit.

B. Appendix B Outfalls – "Coal Preparation & Associated Areas"

The outfalls listed in Appendix B of the permit meet the definition in 40 C.F.R. Sections 434.11(e), (f) and (g) for "coal preparation plants," "coal preparation plant and associated areas", and "coal preparation plant water circuit," respectively. Therefore, the permit sets limits for the outfall in accordance with Subpart B - Coal Preparation Plants and Coal Preparation Plant Associated Areas for BPT, BCT, and BAT regulations that apply to such discharges. The requirements for the outfalls listed in Appendix B are the same as those for "alkaline, mine drainage," with the addition of limitations and monitoring requirements for oil and grease (15 mg/l daily maximum). These requirements are consistent with those of the previous permit.

C. Appendix C Outfalls – "Western Alkaline Reclamation Area

The outfalls listed in Appendix C of the permit meet the definition of Subpart H- Western Alkaline Coal Mining, which applies to "alkaline mine drainage at western coal mining operations from reclamation areas, brushing and grubbing areas, topsoil stockpiling areas, and regraded areas." 40 C.F.R. § 434.81. As established by the Memorandum of Understanding between EPA Region IX and the Office of Surface Mining Reclamation and Enforcement (OSMRE), in order for the technology standards in Subpart H to apply to outfalls, the permittee must meet the basic requirements listed in Subpart H and OSMRE must conduct a technical review of and approve the permittee's Sediment Control Plan. See Memorandum of Understanding between EPA Region IX and the Office of Surface Mining Reclamation and Enforcement (OSMRE), Process for Obtaining A NPDES Permit Under Subpart H - Western Alkaline Mine Drainage Category (December 19, 2003).

First, EPA has determined that PWCC has met the basic requirements of Subpart H. In accordance with the requirements established in Subpart H, PWCC has:

1) submitted a site-specific Sediment Control Plan to EPA incorporating the minimum requirements of 40 C.F.R. § 434.82, and

2) demonstrated 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 operator submitted these materials to EPA in a letter with attachments on September 24, 2008. These materials are part of the Administrative Record for the permit and are available for public review.

The permit approves the Sediment Control Plan as being consistent with the requirements of Subpart H. Additionally, in accordance with Subpart H, the permit incorporates the Sediment Control Plan as an effluent limit and requires that the permittee design, implement, and maintain the best management practices (BMPs) in the manner specified in the Sediment Control Plan.

Second, OSMRE completed a technical review of PWCC's Sediment Control Plan, which PWCC submitted in order to re-categorize outfalls as Western Alkaline Reclamation Areas and to apply for a revision of its permit under the Surface Mining and Control Reclamation Act. See January 28, 2009 letter from Dennis Winterringer, OSMRE to Gary Wendt, PWCC. OSMRE concluded that PWCC's Sediment Control Plan complied with the requirements of the Clean Water Act and SMCRA because it contained text, appendices, surface water modeling results for the applicable areas, methodology for pond removal, and sediment control traps. However, OSMRE expressed concerns with the seep management results (documented in Section VI of this fact sheet) for Outfalls 031 and 032 (Ponds J16-E and J16-F, respectively). As a result of this review and EPA's continuation of the revised seep management plan, EPA has decided that Outfalls 031/J16-E and 032/J16-F will remain classified as "alkaline, mine drainage" and will not be categorized as "Western Alkaline Reclamation Areas" until PWCC addresses the concerns raised in OSMRE's technical evaluation. As described in Section VI of this fact sheet, EPA will require continued monitoring and BMPs for the seeps identified in the final permit.

As existing outfalls defined in this permit as "alkaline, mine drainage" are reclaimed, PWCC may update the Sediment Control Plan to incorporate additional outfalls. PWCC must submit a revised plan to be approved by EPA before it becomes effective. A revised plan will also be reviewed by OSMRE prior to EPA approving the revisions. Revisions to the Sediment Control Plan must meet all requirements contained at 40 CFR § 434.82, and all of the drainage areas to an outfall that have been disturbed by mining must meet the definition of Subpart H to be considered for coverage under Subpart H. EPA's approval of an updated Sediment Control Plan and reclassification of an existing outfall from "alkaline, mine drainage" to Subpart H requirements will be considered a minor modification to this permit.

2. Water Quality-Based Effluent Limitations

In addition to technology-based effluent limitations, Sections 402 and 301(b)(1)(C) of the Clean Water Act require that an NPDES permit contain effluent limitations that, among other things, are necessary to meet water quality standards. An NPDES permit must contain effluent limits for pollutants that are determined to be discharged at a level which has "the reasonable potential to cause or contribute to an excursion above any State [or Tribal] water quality standard, including State [or Tribal] narrative criteria for water quality." 40 C.F.R. § 122.44(3)(1)(i). To determine whether the discharge causes, has the reasonable potential to cause or contributes to an excursion of a numeric or narrative water quality criterion for individual toxicants, the regulatory authority must consider a variety of factors.[1] 40 C.F.R. §

[1] Guidance for the determination of reasonable potential to discharge toxic pollutants is included in both the

122.44(d)(1)(ii). These factors include the following:

- Dilution in the receiving water;
- Existing data on toxic pollutants;
- Type of industry;
- History of compliance problems and toxic impacts; and
- Type of receiving water and designated use.

Based on an application of these factors to the Black Mesa/Kayenta Complex operations and projected wastewater quality data provided in the application, EPA concluded that the discharges do not present a "reasonable potential" to cause or contribute to an exceedance of water quality standards. Due to the facility potentially discharging to dry washes, EPA has not considered available dilution, which may be present in the receiving waters. Therefore, EPA has made the most conservative and protective assumption of no available dilution in its analysis and that water quality standards must be met at the end of pipe prior to discharge. As noted above, the complex discharges infrequently; with over 100 permitted outfalls located over a 65,000 acre lease area, the facility has discharged 31 times over the past five years from 2005-2009. All drainages have been treated in pond systems in order to remove sediment that may have accumulated from the mining activities prior to discharge. Therefore, based on sampling data and an evaluation of discharge characteristics, EPA has concluded, consistent with the previous permit, that the effluent limitations for pH, TSS, Oil and Grease, and iron protect receiving water quality standards and that there is no reasonable potential for other pollutants to cause or contribute to a violation of receiving water standards. However, EPA has included monitoring in the permit for several additional parameters in order to further verify these assumptions.

Although EPA has determined that the discharges do not have a reasonable potential to cause or contribute to a exceedance of water quality standards, the permit sets general conditions based on narrative water quality standards contained in Section 203 of the NNSWQS and Chapter 3 (General Standards) of the Hopi Water Quality Standards (August 29, 1997). These standards are set forth in Section B (General Discharge Specifications) of the permit.

VI. Special Conditions- Seep Monitoring and Management Plan

Section A.5 of the previous permit required that PWCC design and conduct a Seepage Monitoring and Management Plan to determine the source of and pollutants in seepages below impoundments. The permit specifically required PWCC to:

- Identify all seeps located within 100 meters downgradient of sediment impoundments;

- Conduct sampling (or summary of current data if sufficient and valid) of seepages

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Technical Support Document for Water Quality-Based Toxics Control (TSD) - Office of Water Enforcement and Permits, U.S. EPA, dated March 1991 and the U.S. EPA NPDES Permit Writers Manual - Office of Water, U.S. EPA, dated December 1996.

identified for pH, Iron (Total and Dissolved), Dissolved Oxygen, Selenium (Total and Dissolved) and Nitrates;

- Conduct hydrogeologic modeling or studies in order to determine if the source of the seeps are the impoundments and, if so, which impoundments; and

- Determine the source of Selenium and Nitrates if data indicates that seepages have a reasonable potential to violate water quality standards.

Over 230 impoundments exist on the Black Mesa/Kayenta Complex. Many are internal impoundments for treatment and storage, which do not discharge to a water of the United States. There are currently 111 impoundments that discharge to waters of the United States and which, therefore, are listed as NPDES outfalls in compliance with this permit. Seeps have been identified at 33 of these impoundments. A seep is an area not related to the outfall location, which may exhibit moisture or flow, generally at the toe of an impoundment where the stormwater has filtered into the soils and then re-appears at an area hydrologically downgradient of the impoundment. As documented in the characterization reports, seeps may exhibit flows up to a few gallons per minute, although many do not exhibit measurable volumes of flow. Typically, the seeps will disappear back into the soils within a short distance (ranging from several feet to a hundred feet).

PWCC has been monitoring and characterizing seeps on the Black Mesa/Kayenta Complex since 1999. Each year, PWCC sampled the seeps where there was an identifiable flow:

Year	Number of Seeps Identified and Sampled
1999	11
2000	9
2001	7
2002	12
2003	16
2004	14
2005	12
2006	16
2007	14

In addition, the previous permit required PWCC to create and submit an annual Seepage Monitoring and Management Report based on the monitoring required by the Seep Monitoring and Management Plan, such as regular inspections of outfall impoundments for seeps,

documented seep discharge volumes, and sampling results. On April 1, 2008, Peabody submitted an "Interim Final Report" summarizing the data collected at each of the seeps, including a description of the following information:

- Number of seep inspections;
- Number of flows observed;
- Range of flows observed;
- Number of samples taken;
- Exceedances of livestock standards, acute standards, and chronic standards;
- Current use of impoundment (e.g., outfall location or treatment within the mine site; treatment for reclaimed area, active, shop areas, etc.);
- Final use of impoundment, including an estimation of whether the impoundment can be removed;
- BMPs utilized (e.g., vegetation, fencing, dewatering); and
- Potential BMPs to be evaluated (e.g., pond removal, vegetation, passive pH treatment, clay lining, dewatering, other).

Using the information PWCC gathered, EPA evaluated the risk level to water quality from the seeps and assessed what BMPs would be applicable to control that risk. The following is a description of the three risk levels EPA used to evaluate the seeps:

- Level 1: Generally contains very low flows, few instances of observed seeps. If seep observed, seep meets water quality standards (WQS) or had one sample slightly above WQS.

- Level 2: Generally contains medium flows, but seeps detected at higher frequencies. Multiple samples may be above WQS, but samples above WQS are only slightly above WQS. No samples significantly above WQS. No bioaccumulative toxic pollutant above WQS.

- Level 3: May be one or a combination of high flows, high occurrences of seeps, multiple samples above WQS, or any sample significantly above WQS. Any sample of bioaccumulative toxic pollutant above WQS is a Level 3 risk.

Seep Characterization

Impoundment	Does Seep Characterization meet WQS ?	Risk Level	Type	Existing BMPS	Notes	Peabody Conclusion for Revised Seep Management Plan	EPA Assessment for Continued Monitoring & Management
BM-A1	No. Low pH, Nitrate, Aluminum.	2	Temporary		Pond treats process areas & cannot be removed	Install passive treatment. Remove pond eventually. Continue monitoring.	OK
J2-A	Yes Few seeps present	1	Permanent			Permanent Discontinue inspections.	OK
J3-D	No, Chloride. TDS. Aluminum, sulfate. Selenium (1/5 @ 67)	3	Permanent			Permanent Pursue Variance for Alum, TDS & sulfate	Selenium potential concern. Explore remove this pond and /or mitigation.
J3-E	Generally Yes Few seeps Alum, pH slightly above	1	Permanent		Drains shop area	Permanent Discontinue inspections	OK
J7-A	No TDS, Sulfate	1	Temporary		Will remove ~2011	Pond Removal ~2011 Pursue Variance for TDS, Sulfate	OK. Continue monitoring.
J7-CD	No Alum, TDS, sulfate, chromium	3	Temporary		Drains reclaimed mining areas	Remove Pond	OK. Remove ASAP
J7-Dam	No. Historically, TDS, Sulfate, pH. Se (4/16 @ 51-64)	3	Permanent	Artificial wetland. Fenced	Has met all standards over past 3 years. Levels decreasing.	Permanent. Increase wetland treatments. Continue annual monitoring	OK
J7-JR	No but very low flows [<0.01 gpm] TDS, Sulfate, Alum	2	Permanent		Drains Active mining areas	Permanent Pursue Variance for TDS, Sulfate, Alum	OK. Continue monitoring.
J16-A	No. TDS, sulfate	2	Permanent		Drains coal prep areas	Permanent Pursue Variance for TDS, sulfate	OK. Continue monitoring.

J16-E	No. pH. Se (5/5 @ 71-160)	3	Temporary		Drains reclaimed mining areas	Remove ~ 2009	PWCC must mitigate / document pre-existing seep.
J16-L	No seeps found	1	Permanent			Permanent Discontinue monitoring	OK
J19-D	No. TDS , sulfate	2	Temporary		New. Will treat stormwater for active areas for some time	Continue monitoring Pursue Variance for TDS, sulfate	OK. Continue monitoring.
J21-C	No. Aluminum	2	Permanent			Variance for Alum	OK. Continue monitoring.
J27-A	No. (1 sample) TDS, chloride	1	Temporary			Pursue Variance for TDS, chloride	OK. Continue monitoring.
J27-RC	No. (1 of 10 samples). TDS Sulfate	1	Permanent			Pursue Variance for TDS, sulfate	OK. Continue monitoring.
N6-C	No. 1 seep, 1 sample TDS, sulfate	1	temporary			Remove Pond	OK
N6-F	No. Low pH . high Alum	3	temporary			Remove Pond	OK
N14-B	No. Sulfate, TDS, Alum (1 sample > chronic)	2	temporary		Treats conveyor areas	Pursue Variance for TDS, sulfate, Alum	OK. (Temp pond.) Continue monitoring
N14-H	No. Sulfate (1 sample)	1	Permanent			Pursue Variance for sulfate	OK. Continue monitoring.
N14-P	No Sulfate, TDS, pH (5.3), Cadmium, Aluminum	2	temporary			Continue Monitoring Pursue Variance for TDS, sulfate, Aluminum	OK (Temp pond). Continue monitoring.
WW-9	No. sulfate, TDS, Aluminum	1	temporary			Continue monitoring Pursue Variance for TDS, sulfate, Aluminum	OK. Continue monitoring.

Based on PWCC's report and the analysis above, EPA and PWCC prioritized measures to address seeps, including:

1) Reclaim as many ponds as possible;
2) Eliminate monitoring requirements for seeps not causing problems;
3) Continue monitoring where data is inconclusive;

4) Establish a permanent fix for problem areas; and
5) Explore if regulatory variances may be applicable for certain non-bioaccumulative parameters.

Based on this assessment, EPA has concluded that PWWC must continue to implement its Seep Monitoring and Management Plan, which will include a few revisions from the previous permit conditions. Several impoundments where water quality problems in the seeps have been identified will be removed. At several other ponds, PWWC will use BMPs to treat the seep and will continue to monitor. Where parameters such as aluminum, TDS, and sulfate are present due to suspected natural causes and which do not exceed naturally occurring background levels, EPA may explore the feasibility of granting a water quality variance with the Navajo and Hopi Tribes. Any potential water quality variance would require a water quality standards revision and would require public notice and comment, and EPA is not considering a variance as an option at this time.

VII. Monitoring Requirements

The permit requires discharge data obtained during the previous three months to be summarized and reported quarterly. If there is no discharge for the quarter, PWCC shall indicate Zero Discharge. These reports are due January 28, April 28, July 28, and October 28 of each year. Duplicated signed copies of these, and all other required reports, shall be submitted to the Regional Administrator, the Navajo Nation EPA, and the Hopi Tribe Water Resources Office.

VIII. Threatened and Endangered Species

Section 7 of the Endangered Species Act (ESA) of 1973 requires federal agencies to ensure that any action authorized, funded, or carried out by a federal agency does not jeopardize the continued existence of a listed or candidate species, or result in the destruction or adverse modification of its habitat. 16 U.S.C. § 1536(a)(1). A federal agency must consult with the relevant Service, either U.S. Fish and Wildlife Service (FWS) or the National Marine Fisheries Service, if it determines that an endangered or threatened species is present in the area affected by the federal action and that the implementation of such action will likely affect the species. ESA §7(a)(3); 16 U.S.C. § 1536(a)(3).

To identify the endangered and threatened species that are present in the action area, EPA used the list generated for OSMRE during the revision of PWCC's Life-of-Mine permit. FWS created a list of threatened and endangered species on June 13, 2005 as part of the Final Black Mesa Project Biological Assessment (November 2008) for OSMRE's revision to the Life-of-Mine permit action. The species identified as potentially affected by the project were presented in Table 1-1 "Federally Listed Species Considered for Evaluation in the Biological Assessment"

and are listed below:

Mammals

- Black Footed Ferret (*Mustela nigripes*): Endangered

Birds

- Southwestern willow flycatcher (*Empidonax traillii extimus*): Endangered
- Mexican Spotted owl (*strix occidentalis lucida*): Endangered
- Bald eagle (*haliaeetus leucocephalus*): Threatened
- California condor (*Gymnogyps californicus*): Endangered

Plants

- Navajo sedge (*Cares specuicola*): Threatened

The species identified which were determined to have no effect were presented in Table 1-2 "Special Status Species Excluded from Further Consideration and Reasons for their Exclusion." The species and the reason for the no effect determination are listed below:

Birds

- Yellow-billed Cuckoo (*Coccyzus americanus*): Candidate species: No suitable habitat in project area.
- California Brown Pelican (*Pelecanus occidentalis californicus*): Endangered: No breeding records in Arizona, but an uncommon transient on many Arizona lakes and rivers, including the Colorado River.

Reptiles/Amphibians

- Chiricahua leopard frog (*Rana chiricahuensis*) Threatened: Project area is outside current range of species.

Fish

- Apache trout (*Oncorhynchus apache*) Threatened: No suitable habitat in project area.
- Little Colorado spinedace (*Lepidomeda vittata*) Threatened: No suitable habitat in project area.
- Spikedace (*Meda fulgida*) Threatened: No suitable habitat in project area.
- Loach minnow (*Tiaroga cobitis)* Threatened: Project area is outside current range of species.

Plants

- Peebles Navajo cactus (*Pediocactus peeblesianus peeblesianus)* Endangered: Project area is outside current range of species.
- Welsh's milkweed (*Asclepias welshii*): Threatened : No habitat is present in the

project area.

OSMRE and FWS determined that the project may affect, but is not likely to adversely affect, the endangered black-footed ferret, endangered southwestern willow flycatcher, threatened Mexican spotted owl, threatened Navajo sedge and its critical habitat, or the California condor. The agencies determined that any potential direct or indirect effects on the species are either insignificant or discountable.

EPA has determined that this action will have no effect on threatened and endangered species. First, as documented in Section IV, the permitted discharge occurs infrequently and the discharges have previously met, and must continue to meet, all water quality standards which have been set at a level necessary to protect aquatic wildlife. Second, as evidenced by OSMRE's Biological Assessment for the Life-of-Mine permit, no threatened or endangered aquatic species are located in the project area. While the Biological Assessment for the Life-of-Mine permit found the mine may affect, but is not likely to adversely affect, several mammals, birds, and plants, FWS concluded that the potential impacts from the Life-of-Mine project were insignificant or discountable for the entire mine site. Further, FWS did not identify any effects on listed species due to the discharges that would be regulated by PWCC's NPDES permit. Therefore, due to the low frequency of discharge, the requirement that the discharge must meet water quality standards, and the absence of aquatic species or species that could be detrimentally impacted by the wastewater discharge, EPA has made a no effect determination.

In considering all information available, EPA concluded that a determination of no effect is appropriate for this federal action. A copy of the statement of basis and permit was sent to the US Fish and Wildlife Service and the Arizona Game and Fish Department for review and comment during the 30-day public review period.

EPA's determination is consistent with the previous permit (issued 2000) for the Black Mesa Mine permit, where EPA concluded the permitting action will have no effect on threatened and endangered species.

IX. Permit Reopener

The permit contains a reopener clause to allow for modification of the permit if it is demonstrated that the discharges have a reasonable potential to exceed applicable water quality standards during the life of the permit.

X. Standard Conditions

Conditions applicable to all NPDES permits are included in accordance with 40 CFR, Part 122.

XI. Administrative Information

Public Notice (A.A.C. R18-9-A907)

The public notice is the vehicle for informing all interested parties and members of the general public of the contents of a draft NPDES permit or other significant action with respect to an NPDES permit or application. The basic intent of this requirement is to ensure that all interested parties have an opportunity to comment on significant actions of the permitting agency with respect to a permit application or permit. This permit will be public noticed in a local newspaper after a pre-notice review by the applicant and other affected agencies.

Public Comment Period (A.A.C. R18-9-A908)

Rules require that permits be public noticed in a newspaper of general circulation within the area affected by the facility or activity and provide a minimum of 30 calendar days for interested parties to respond in writing to EPA. After the closing of the public comment period, EPA is required to respond to all significant comments at the time a final permit decision is reached or at the same time a final permit is actually issued.

Public Hearing (A.A.C R18-9-A908(B))

Public hearings will be held in the vicinity of the mine site as detailed in the public notice.

XII. Additional Information

Additional information relating to this permit may be obtained from the following locations:

U.S. Environmental Protection Agency,
75 Hawthorne Street (WTR-5)
San Francisco, California 94105

Attn: John Tinger or email: Tinger.John@EPA.gov
Telephone: (415) 972-3518

XIII. Information Sources

While developing effluent limitations, monitoring requirements and special conditions for the draft permit, the following information sources were used:

1. EPA Technical Support Document for Water Quality-based Toxics Control dated March 1991.

2. U.S. EPA NPDES Basic Permit Writers Manual (December 1996).

3. 40 CFR Parts 122, 131, and 133.

4. NPDES permit application forms 1 and 2C, provided in letter from Mr. Gary Wendt, PWCC, August 3, 2005.

5. Memorandum of Understanding: AProcess for Obtaining A NPDES Permit Under Subpart H - Western Alkaline Mine Drainage Category, EPA Region IX and the Office of Surface Mining Reclamation and Enforcement Office (OSM), dated December 19, 2003.

6. Annual Seep Monitoring Reports, PWCC.

7. Technical Evaluation of Permit Revisions, OSRME, January 28, 2009. Letter from Dennis Winterringer, OSMRE to Gary Wendt, PWCC.

8 Black Mesa Project Biological Assessment. OSMRE, November 2009.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105-3901

In reply, refer to WTR-5

SEP 16 2010

Mr. Gary Wendt
Manager, Environmental Affairs
Peabody Western Coal Company
P.O. Box 605
Navajo Route 41
Kayenta, AZ 86033

Re: Re-issuance of NPDES Permit NN0022179: Black Mesa Complex

Dear Mr. Wendt:

Please find enclosed the final National Pollutant Discharge Elimination System (NPDES) permit renewal for the Black Mesa Complex, along with the final Fact Sheet and Comment Response Document. EPA first proposed the permit on February 19, 2009 with a 30 day comment period. On August 5, 2009, EPA issued the final permit which was subsequently appealed. Among other issues, the appellants argued that EPA did not address the concerns of the community by not holding a public hearing on the proposed permit. Therefore, EPA decided to withdraw the permit reissuance and re-open the comment period to hold public hearings. EPA re-noticed the permit on January 20th, 2010 and extended the public comment period thru April 30th, 2010, during which time EPA hosted two public hearings on the proposal. EPA received approximately 20 written comments and approximately 30 comments in oral testimony on the permit.

Within 33 days of this notice, any person who filed comments on the proposed permit conditions may petition the Environmental Appeals Board (EAB) to review the conditions of the permit. The petition shall include a statement of the reasons supporting that review, including a demonstration that any issues being raised were raised during the public comment period and a showing that the condition in question is based on: (1) a finding of fact or conclusion of law which is clearly erroneous, or (2) an exercise of discretion or an important policy consideration which the EAB should, in its discretion, review. See 40 C.F.R. § § 124.19(a) and 124.20(d).

40 C.F.R. § 124.60 (b)(1) states that, as provided in 40 C.F.R. § 124.16 (a), if an appeal of an initial permit decision is filed under Section 124.19 of this Part, the force and effect of the contested conditions of the final permit shall be stayed until final agency action under 40 C.F.R. § 124.19 (f). In accordance with 40 C.F.R. § 124.16 (a)(1), "[i]f the permit involves a . . . new source, new discharger or a recommencing discharger, the applicant shall be without a permit for

the proposed new . . . source or discharger pending final agency action." Please review 40 C.F.R. § 124 and the revisions at 65 Fed. Reg. 30886 for a complete description of the requirements regarding appeal of NPDES permits.

If you have any questions regarding the procedures outlined above, or if you would like to review or request any documents from the Administrative Record, please contact me at (415) 972- 3464 or contact John Tinger of my staff at (415) 972-3518 or e-mail at Tinger.John@epa.gov.

Sincerely,

David W. Smith, Manager
NPDES Permits Office

Enclosures (3):
Final Permit
Final Fact Sheet
Comment Response Document

CC: w/attachments
Mr. Rick Williamson
OSMRE
P.O. Box 46667
Denver, CO 80201-6667

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

The Hopi Tribe
Water Resources Office
P.O. Box 123
Kykotsmovi, AZ 86039

Mr. Brad A. Bartlett
Energy Minerals Law Center
1911 Main Ave, Suite 238
Durango, CO 81301

CC: w/o attachments via email and or/hardcopy:
Attached Mailing list

All materials available at http://www.epa.gov/region09/water/npdes/permits.html

Black Mesa Mailing List

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U.S. Fish and Wildlife Service
2321 West Royal Palm Road, Suite 103
Phoenix, AZ 85021-4951

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P. O. Box 1480
Window Rock, Arizona

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108 North Behrend, Suite I
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Comment Response Document
Peabody Western Coal Company - Black Mesa Complex
NPDES Permit No. NN0022179

Final 2010

1. EPA needs to conduct NEPA analysis

COMMENT: EPA must comply with the National Environmental Policy Act, 42 U.S.C. § 4321, *et seq.* (―NEPA") in issuance of a NPDES permit. No NEPA document has ever analyzed EPA's authorization of discharges at Peabody's Black Mesa Complex which were first issued on December 29, 2000. That said, Black Mesa Water Coalition BMWC requests that EPA analyze the impacts of the NDPES Permit in an Environmental Impact Statement (―EIS") or, at a minimum, an Environmental Assessment (―EA").

The trigger for an agency to be subject to NEPA mandates and the use of the NEPA procedural requirements to ―prevent or eliminate damage" to the environment is a ―major federal action." 42 U.S.C. § 4332(2)(C); *Ross v. FHA*, 162 F.3d 1046, 1051 (10th Cir. 1998) (―major federal action" means that the federal government has ―actual power" to control the project). The NEPA process must ―analyze not only the direct impacts of a proposed action, but also the indirect and cumulative impacts of past, present, and reasonable foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions.'" *Custer County Action Ass'n v. Garvey*, 256 F.3d 1024, 1035 (10th Cir. 2001). Once a ―federal action" triggers the NEPA process, an agency cannot define ―the project's purpose in terms so unreasonably narrow as to make the [NEPA analysis] a foreordained formality.'" *City of Bridgeton v. FAA*, 212 F.3d 448, 458 (8th Cir. 2000) (*quoting Citizens Against Burlington, Inc. v. Busey*, 938 F.2d 190, 196 (D.C. Cir. 1991), cert. denied 502 U.S. 994 (1991) (*citing Simmons v. U.S. Army Corps of Eng'rs*, 120 F.3d 664, 666 (7th Cir. 1997))).

NEPA applies to EPA's decision to issue the first NPDES permit renewal. *See* 33 U.S.C. § 1371(c)(1) (CWA section specifically making EPA ―new source" permit approvals subject to NEPA); 40 C.F.R. § 6.101. New source means ―any source" the construction of which is commenced after the promulgation of Clean Water Act standards applicable to the source. 33 U.S.C. §1316(a)(2). Additionally, as stated by EPA's Notice of Policy and Procedures for Voluntary Preparation of National Environmental Policy Act (NEPA) Documents: EPA will prepare an EA or, if appropriate, an EIS on a case-by-case basis in connection with Agency decisions where the Agency determines that such an analysis would be beneficial. Among the criteria that may be considered in making such a determination are: (a) the potential for improved coordination with other federal agencies taking related actions; (b) the potential for using an EA or EIS to comprehensively address large-scale ecological impacts, particularly cumulative effects; (c) the potential for using an EA or an EIS to facilitate analysis of environmental justice issues; (d) the potential for using an EA or EIS to expand public involvement and to address controversial issues; and (e) the potential of using an EA or EIS to address impacts on special resources or public health. 63 Fed. Reg. 58045-58047 (Oct. 29, 1998).

In this case, "several new outfall locations have been added and several have been eliminated to reflect changes in ongoing mining activities." Fact Sheet at 2 (January 2010). The permit also "incorporates new regulatory requirements for the Western Alkaline Coal Mining Subcategory for reclamation areas that were promulgated in January 2002… ." *Id*. In other words, EPA's permit specifically covers "new sources" as defined by Section 306 of the CWA, 33 U.S.C. § 1316, (i.e., new outfalls) which should have been analyzed under NEPA. 33 U.S.C. § 1371(c)(1) ("discharge of any pollutant by a new source … shall be deemed a major Federal action significantly affecting the quality of the human environment" within the meaning of NEPA) (emphasis supplied). For example, there are over eight (8) new sources that are now covered by the new regulations for Western Alkaline Coal Mining Subcategory for reclamation areas. See NPDES Permit at Appendix C. The environmental impacts of these new sources were never considered or analyzed pursuant to NEPA and must be analyzed in and EIS or EA.

Further, the proposed NPDES Permit is based on significant new information. According to EPA's Fact Sheet, "the proposed permit also incorporates revisions to the Seep Monitoring and Management Plan, which was created pursuant to the previous permit, in order to reflect the results of previous monitoring and to address the impoundments causing seeps." Fact Sheet (January 2010) at 2 (emphasis supplied). Again, this significant new information must be analyzed in a NEPA document.

Moreover, there are multiple connected actions that must be analyzed in an EIS or EA including, but not limited to, OSM's proposed permit renewal for the Kayenta Mine; OSM "technical review" of the PWCC's Sediment Control Plan (which was based on the now vacated Life of Mine permit issued by OSM); and/or, any and all 404 permitting by the U.S. Army Corps of Engineers. NEPA and its implementing regulations define "connected actions" as, among other things, actions that are "interdependent parts of a larger action and depend on the larger action for their justification," and require that they be addressed in the same NEPA review document. 40 C.F.R. § 1508.25(a)(1). Additionally, and from the public's perspective, NEPA compliance is clearly necessary to facilitate and increase agency cooperation and evaluation of these interrelated matters. See 40 C.F.R. §1501.6 (dealing with cooperating agencies). Finally, a NEPA process would allow for meaningful public evaluation and understanding of EPA's NPDES permitting process and these complex environmental matters. It would also facilitate analysis of environmental justice issues, expand public involvement, address controversial issues and allow for analysis of impacts to special resources (such as livestock grazing) or public health. Many of the people directly impacted by EPA's permit issuance are downstream Navajo and Hopi tribal communities in the Black Mesa area (including tribal members who use these impoundments for livestock grazing) who bear a disproportionate share of Peabody's ongoing discharge of numerous pollutants onto tribal lands. These communities often lack the political agency and economic leverage required for effective participation in environmental decision-making processes. EPA should use the NEPA process to take the required "hard look" and ensure that tribal people and lands are not being disproportionately impacted by Peabody's massive mining operation and ongoing discharge of pollutants. Any NEPA process should include adequate public notice, comment, and participation pursuant to NEPA's implementing regulations at 40 C.F.R. §1506.6.

The permit application and some of the exchanges between the applicant and the agency establish that maintenance of leaking impoundments (of questionable design criteria and 404 permitting status) is being advanced as the preferred means to address problematic releases of polluted water. In one unusually straight forward example, and in response to a query by the agency about lining a pond to stop problem seeps below the impoundment, the idea was dismissed by the PWCC because doing so would result in substantial and frequent outlet discharges that do not currently occur. As discussed in more detail below, and among other things, EPA should use the NEPA process to address appropriate corrective enforcement measures to address these issues

RESPONSE: The Clean Water Act (~~"C~~CWA") and its implementing regulations do not require EPA to conduct an analysis under the National Environmental Policy Act (~~"N~~NEPA") in order to renew the permit at issue. EPA actions taken under the authority of the CWA generally do not trigger NEPA. CWA § 511(c), 33 U.S.C. § 1371(c). There are two exceptions to this rule, but neither applies here. First, EPA must comply with NEPA when it provides federal financial assistance for publicly owned treatment works. *Id*. This is not applicable to EPA's action because EPA has not financially assisted the construction of this facility, nor is the facility a publicly owned treatment works. Second, EPA must comply with NEPA when it issues permits for discharges of pollution by ~~"n~~new sources" within the meaning of CWA § 306. *Id*. This exception does not apply because EPA is not issuing a NPDES permit for a new source.

A ~~"n~~new source" is ~~"a~~ny source, the construction of which is commenced after the publication of proposed regulations prescribing a standard of performance [under Section 306 of the CWA] which will be applicable to such source." CWA § 306(a), 33 U.S.C. § 1316(a). More specifically, a ~~"n~~new source coal mine" is defined as a coal mine which has commenced construction after May 4, 1984, or which has been determined by the EPA Regional Administrator to constitute a ~~"m~~major alteration." 40 C.F.R. § 434.11(j).

EPA is renewing a NPDES permit for two mines, which began operations in the early 1970s. EPA established New Source Performance Standards (~~"N~~NSPS") for the Coal Mining Point Source Category, 40 C.F.R. Part 434, on October 9, 1985. *See* 50 Fed. Reg. 41305. Thus, the NSPS applicable to the mines were promulgated after construction of the mine had commenced. In addition, a major alteration in connection with the mine has not occurred. For example, the addition of new outfalls is not considered a major alteration. See 40 C.F.R. § 434.11(j). Therefore, EPA is not required to undergo a NEPA analysis before it reissues the NPDES permit.

Finally, outfalls reclassified as Western Alkaline Reclamation Areas are not new sources, as the commenter suggested. As stated in the Fact Sheet, the permit ~~"~~incorporates new regulatory requirements for the Western Alkaline Coal Mining Subcategory for reclamation areas that were promulgated in January 2002." These requirements apply to ~~"a~~lkaline mine drainage at western coal mining operations from reclamation areas, brushing and grubbing areas, topsoil stockpiling

areas, and regraded areas." *See* 40 C.F.R. § 434.81. The Western Alkaline Coal Mining Subcategory effluent limitations apply to both new and existing sources meeting this definition.

As noted in the Fact Sheet, the NPDES permit reclassifies several existing outfalls, which were regulated in the previous permit as discharges from active mining areas, as discharges from Western Alkaline reclamation areas because the area contributing to the outfall has been regraded and reclaimed. Therefore, the effluent limitations required by the Western Alkaline Coal Mining Subcategory apply to these outfalls. However, the reclassified outfalls do not qualify as new sources because they are existing outfalls, and no construction or major alternation has occurred that would trigger a NEPA requirement.

Although EPA may, at its discretion, voluntarily prepare a NEPA analysis, the Agency, in this case, chooses not to use this authority. EPA believes it has provided for full and meaningful public comment and review of the permit renewal. *See* Response #3. Thus, the Agency has determined that preparing NEPA documents will not be beneficial.

2. EPA should not issue one NPDES permit for the Black Mesa and Kayenta Mine

COMMENT: Do not consider the Black Mesa Mine and the Kayenta Mine as one Black Mesa Mine Complex. They are separate and distinct mines. Kayenta Mine is has a permanent mine status and Black Mesa Mine does not. The recent ruling by the Administrative Law Judge Holt concerning the Life of Mine Permit confirms that status, therefore the two mines must be treated as separate mines. Black Mesa Complex no longer exists. Separate permits need to be issued for Black Mesa Mine and Kayenta Mine; EPA cannot legally issue a permit that covers both mines as one complex. EPA cannot legally issue a permit for mine that is not in operation [Black Mesa Mine]. EPA must withdraw and republish the proposed permit for two mines.

RESPONSE: EPA will continue to permit the Black Mesa Mine and the Kayenta Mine under one NPDES permit for two reasons. First, EPA has historically permitted the two mines as one facility. Although the two mines have not been covered under one operational permit, which is issued by the Office of Surface Mining, Reclamation and Enforcement (~~O~~SMRE"), EPA's permitting process is not dependent upon OSMRE's decision. [EPA is renewing the NPDES permit issued to the Peabody Western Coal Company (~~P~~WCC") for wastewater discharges associated with the Kayenta and Black Mesa Mines, consistent with the requirements of previously issued NPDES permits.] Second, although Peabody has stopped extracting coal at the Black Mesa Mine, discharges from the site are still possible. The Clean Water Act is applicable to the discharge of all pollutants from a mine site ~~u~~ntil the performance bond issued to the facility by the appropriate Surface Mining Control and Reclamation Act (~~S~~MCRA") authority

has been released." *See* 40 CFR 434.52(a) and 434.81(c). Therefore, PWCC must continue to meet effluent limitations, monitoring requirements, and must install and maintain best management practices in accordance with the permit provisions for all areas of the coal mine until reclamation is complete and bond release obtained. The cessation of coal extraction does not cease the permittee's obligations under the Clean Water Act to control discharges of pollutants from point sources of the mine site to Waters of the U.S., and the permit reflects this obligation.

3. The Hearing & Public Notice were inadequate

a. <u>EPA needs to hold additional hearings and consultations</u>

COMMENTS: Several comments suggested that EPA should and/or was obligated to allow for more public participation during the permitting process.

- Need more communication between people, agencies, tribes, mine; EPA should set up working group between EPA, tribal governments, and tribal people/NGOs
- Proper communication takes longer than one meeting
- EPA should not only consult with tribal governments on when and where to hold hearings
- EPA should, in particular, meet with tribal elders
- Need to have additional hearings at other chapter houses (in particular, Forest Lake Chapter House, Black Mesa Chapter House, and Hopi Villages that are downstream of discharge
- Many of the people directly impacted by EPA's permit issuance were unable to make the public hearings which EPA knowingly scheduled in remote parts of the reservation in the middle of winter during a time of ceremony. Here, many impacted Navajo and Hopi tribal members, if they speak English at all, speak English primarily as a second language. Additionally, many Native American communities in the Black Mesa area bear a disproportionate share of Peabody's ongoing and potentially permanent discharge of numerous pollutants onto tribal lands. These communities often lack the political agency and economic leverage required for effective participation in environmental decision-making processes. Further, EPA owes a trust obligation to indigenous people and therefore needs to ensure that tribal people and lands are not being disproportionately impacted by Peabody's massive mining operation and ongoing discharge of pollutants.

RESPONSE: EPA believes the Agency has met all its obligations to involve the public, Tribes, and affected parties through the public comment process and public hearings. EPA issued a renewed permit for the mine complex in 2009 and later withdrew it to provide for additional public review and comment. After renoticing the draft permit on January 20, 2010, EPA hosted

two public workshops followed by public hearings on February 23, 2010 in Kayenta, AZ and February 24, 2010 in Kykokstmovi, AZ. While EPA regrets that the Agency cannot accommodate the schedules of all who wished to attend the hearings, EPA planned the workshops and hearings at times and locations that provided reasonable access to members from both the Navajo and Hopi tribes and members of the public. EPA followed advice from Navajo EPA and Hopi Water Resources Department about when and where to hold the meetings. Over 100 people were able to attending the hearings.

EPA held informal workshops at each location to explain the permit and to answer questions from the public prior to receiving formal testimony. EPA then held formal hearings to receive public testimony regarding concerns on the proposed permit. Both Navajo and Hopi language interpreters were available at the meetings to ensure non-English speakers could participate. EPA offered formal government-to-government consultations on the permits in letters dated January 20, 2010 to both the Navajo Nation and the Hopi Tribe. Additionally, EPA extended the comment period two times, to April 30, 2010 to accommodate requests for extension of the comment period.

EPA also met with representatives of the Center for Biological Diversity, the Sierra Club, and Black Mesa Trust at EPA‘s San Francisco Office on March 3, 2010 to hear the concerns of interested parties regarding the permit.

Further, EPA attended public hearings held by the OSMRE regarding OSMRE‘s permit renewal for the Kayenta mine on May 26, 2010 in Kykokstmovi, AZ and May 27, 2010 in Kayenta AZ. EPA was present at the request of commenters who asked that EPA be available to address concerns regarding the different permits and regulatory authorities for the mine.

EPA believes the Agency has met all its obligations to provide for full and meaningful public participation for the permit renewal.

b. <u>Hearing conflicted with Hopi Ceremonial season and weather impeded attendance</u>

COMMENTS: Several comments criticized the timing of the public hearings

- Some could not attend due to weather; need to have additional meetings
- Some could not attend due to commitments to Hopi ceremonial times; need to have additional meetings
- Hearings not considerate of Navajo and Hopi cultures.
- Announcement of public comment period and hearing cannot be understood and/or will not reach the majority of people
- Hearings should include prolonged, full presentations about the permit; one-two day workshop
- Need more information about how livestock grazing areas and mine discharges overlap
- Need more time at hearings to take comments
- Navajo Nation EPA should be issuing this permit in the future
- Request more time in comment period (did not give a specific time frame)
- The area is under a winter storm watch, and people will not be able to attend due to weather, especially from remote areas.
- EPA's trust responsibility requires the agency to go above and beyond normal permitting processes

RESPONSE: EPA regrets that the Agency may not have been able to accommodate the schedules or needs of all persons who had interest in attending the hearings. As stated previously, EPA followed advice from Navajo EPA and Hopi Water Resources Department about when and where to hold the meetings. EPA does not believe the weather was a significant barrier to attending the hearings. As noted earlier, over 100 people attended the hearings. While there was light dusting of snow on the evening of February 24, 2010, the roads were clear and EPA officials from San Francisco drove without difficulty on both paved and dirt roads in the vicinity of the hearings. Regarding ceremonial commitments, EPA understands from conversations at the hearings that no specific ceremonial activities conflicted with the hearing dates but that Hopi objected to holding any hearings during the ceremonial season, which EPA understands is based on the lunar cycle during the winter months and encompasses February, March, and April. While EPA acknowledges and regrets that some may not have been able to attend due to concerns of weather or due to ceremonial obligations, EPA does not agree that that new public hearings are required.

Moreover, as documented above, EPA was also present at hearings held by OSMRE May 26, 2010 in Kykokstmovi, AZ and May 27, 2010 in Kayenta, AZ to answer questions related to

EPAs‘ permit. Attendance at these hearings in late May was approximately half the attendance at the EPA hearings in February.

c. Other Agencies needed to be present at the public hearings

COMMENT: Additionally, and although BMWC [the commenter] had specifically requested it in prior comments to the agency, the U.S. Army Corp of Engineers, the Federal Office of Surface Mining Control and Enforcement (–OSM") and U.S. Fish and Wildlife Service were not present at the hearings and were therefore unable to answer any related questions—such as how EPA‘s permitting decision is impacted by remand of the OSM‘s Life-of-Mine permit by Administrative Law Judge Holt

RESPONSE: EPA conducted public workshops and hearings for the reproposed NPDES permit issued under Section 402 the Clean Water Act. The decision of other agencies to attend the hearings is at the discretion of the other agencies.

4. **General opposition to issuance of the NPDES permit**

COMMENT: Do not issue permit to mine. The mine should be closed.

RESPONSE: EPA notes the objections to the permit.

5. Water Quality Standards

a. EPA did not use Hopi water quality standards

COMMENT: The permit allows degredation to occur and does not implement Hopi water quality standards.

RESPONSE: As documented in Section III of the Fact Sheet, both the Navajo Nation Surface Water Quality Standards (NNSWQS) and the Hopi Surface Water Quality Standards apply to the receiving waters. Thus, the permit incorporates limits and standards for the protection of receiving waters in accordance with those standards. The permit incorporates both narrative and numerical effluent limitations which do not allow for degradation of the receiving waters to occur. The permit includes general conditions based on narrative water quality standards contained in Section 203 of the NNSWQS and Chapter 3 (General Standards) of the Hopi Water

Quality Standards (August 29, 1997). These standards are set forth in Section B (General Discharge Specifications) of the permit, and prohibit, for example, the "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". Because the discharges are often to dry washes without dilution, EPA has not considered available dilution in its assessment. Therefore, EPA has made the most conservative and protective assumption of no available dilution in its analysis that water quality standards must be met at the end of pipe prior to discharge to prevent any degredation of the receiving waters. EPA received a Water Quality Certification from the Hopi Tribe on June 12, 2009 granting certification with certain conditions. The conditions requested by the Hopi Tribe have been incorporated into the final permit.

b. EPA needs to comply with TMDLs

COMMENT: It is unlawful for EPA to issue a NPDES Permit for new sources unless and until Water Quality Limited Segments ("WQLS") and Total Maximum Daily Loads ("TMDLs") are established for Moenkopi Wash Drainage and Dinnebito Wash Drainage. Congress enacted the Clean Water Act, 33 U.S.C. § 1251, et seq. ("CWA") "to restore and maintain the chemical, physical, and biological integrity of the Nation's waters." 33 U.S.C. § 1251(a). The Act seeks to attain "water quality which provides for the protection and propagation of fish, shellfish, and wildlife." Id. at § 1251(a)(2). The primary means of accomplishing these goals include effluent limitations for point sources—implemented through NPDES permits—and TMDLs covering water bodies for which effluent limitations are not stringent enough to attain water quality standards. In achieving water quality restoration, EPA has ultimate responsible for the country's water quality. Id. at § 1251(d).

Specifically, Congress designed the NPDES and TMDL system to operate as follows:

1. Each state (or tribes who have received "Treatment as a State" status) has the responsibility in the first instance to identify waterbodies that are compromised despite permit-based limits on point-source pollutant discharges. 33 U.S.C. § 1313(d).
2. If a waterbody is not in violation of a water quality standard, NPDES permits may be issued so long as they do not violate effluent limits. 33 U.S.C. § 1342(a)(1)
3. If a waterbody is in violation of a water quality standard despite effluent limits, the State (or Tribe) must identify the waterbody as impaired on its § 303(d) list and establish a TMDL for it. 33 U.S.C. § 1313(d).
4. Where the State (or Tribe) has established a final TMDL, it may issue an NPDES permit so long as the applicant can show that the TMDL provides room for the additional discharge and establishes compliance schedules for current permit holders to meet the water quality standards. 40 C.F.R. § 122.4(i). Otherwise, no NPDES permits may be issued which allow new or additional discharges into the impaired waterbody. *Id*.

Section 303 of the CWA establishes three specific components that a state or tribe must adopt if it seeks to run its own water quality program. First, a state or tribe must designate the "beneficial uses" of its waters. 33 U.S.C. § 1313(c)(2)(A). Second, a state or tribe must establish "water quality criteria" to protect the beneficial uses. Id. Third, a state or tribe must adopt and implement an "antidegradation" policy to prevent any further degradation of water quality. Id. At § 1313(d)(4)(B); see also 40 C.F.R. § 131.12. These three components of a state or tribe's water quality program are independent and separately-enforceable requirements of federal law. *PUD No. 1 of Jefferson County v. Washington Dep't of Ecology,* 511 U.S. 700, 705 (1994).

In addition, and particularly important with respect to the Black Mesa, the CWA requires states (or tribes) to identify any degraded waterbodies within their borders, and to establish a systematic process to restore those waterbodies. States or tribes must periodically submit to the EPA for its approval a list of waterbodies that do not meet water quality standards—i.e., the state's or tribe's Section 303(d) list. 33 U.S.C. § 1313(d). The designated waterbodies are called "water quality limited," 40 C.F.R. § 130.10(b)(2), which means they fail to meet water quality criteria for one or more "parameters"—including particular pollutants (such as selenium, aluminum or chloride) as well as stream characteristics such as temperature, flow, and habitat modification. The "water quality limited" designation also means that the waterbody is not expected to achieve water quality criteria even after technology-based or other required controls—such as NPDES discharge permits—are applied. 33 U.S.C. § 1313(d)(1); 40 C.F.R. § 130.7(b)(1).

For these degraded waterbodies, the state or tribe must develop and implement a "total maximum daily load" ("TMDL") to restore water quality. See 33 U.S.C. § 1313(d)(1)(C) (explaining TMDLs). The TMDL process includes identifying sources of pollution that have caused or contributed to the degraded water quality, then establishing waste load allocations (for point sources of pollution) and load allocations (for nonpoint sources of pollution), for those sources which have caused or contributed to the degraded water. 40 C.F.R. § 130.2(g) and (h). The final TMDL represents a "pie chart" of the pollution sources and their respective pollutant allocations which, if properly adhered to, is intended to result in restoration of the stream to water quality standards; it reflects an impaired waterbody's capacity to tolerate point source, nonpoint source, and natural background pollution, with a margin of error, while still meeting state or tribal water quality standards.

Despite the fact that both the Navajo Nation and Hopi Tribe have received "Treatment as a State" status for purposes of Sections 106 and 303 of the CWA, 33 U.S.C. §§ 1256, 1313, EPA's Administrative Record demonstrates that neither the Tribes (nor the State of Arizona) have submitted to EPA for its approval a list of waterbodies in the tribal land portion of the Little Colorado River Watershed (and in particular Moenkopi Wash Drainage and Dinnebito Wash Drainage) that do not meet water quality standards—i.e., the state or tribe's Section 303(d) list. These drainages have not been assessed by Arizona Department of Environmental Quality ("AZ DEQ"), EPA or the Tribes to determine whether they are "attaining" TMDLs or are "impaired." See AZ DEQ 2006-2008 Status at 8 (identifying the drainages as "Tribal Land—Not Assessed"). Further, there are at least two stream segments in the Little Colorado/San Juan Watershed that

have been identified by AZ DEQ and EPA as being impaired or not attaining TMDL‘s for copper, silver and suspended sediments. Id. at 9.

BMWC [the commenter] notes that the tribes‘ water quality standards require monitoring of water quality to assess the effectiveness of pollution controls and to determine whether water quality standards are being attained as well as assessment of the probable impact of effluents on receiving waters in light of designated uses and numeric and narrative standards. See e.g. Hopi WQS §2.102(A)(1997); Navajo WQS §203 (2008).

In light of this, it is unlawful for EPA to issue a permit for new sources or increase permitted discharges without first identifying whether these waterbodies are compromised despite permit based limits on point-source pollutant discharges, and if so, without first ensuring that TMDLs are established for the tribal land portion of the Little Colorado River Watershed, and in particular, Moenkopi Wash Drainage and Dinnebito Wash Drainage. See, e.g., *Friends of the Wild Swan v. U.S. Envtl. Protection Agency*, 130 F. Supp. 2d 1199, 1203 (D. Mo. 2000) (holding that ―[u]ntil all necessary TMDLs are established for a particular WQLS, the EPA shall not issue any new permits or increase permitted discharge for any permit under the [NPDES] permitting program"), aff‘d in part, rev‘d in part, remanded by, *Friends of the Wild Swan v. U.S. EPA*, 2003 WL 31751849, 2003 U.S. App. LEXIS 15271 (9th Cir. Mont. 2003).

BMWC‘s [the commenter‘s] request is consistent with, but not identical to, the Hopi Tribe‘s 401 Certification for the NPDES Permit and the Tribe‘s condition that ―[w]ater discharged under this permit shall not contain settleable materials or suspended materials in concentrations greater than or equal to ambient concentrations present in the receiving stream that cause nuisance or adversely affect beneficial uses." See June 12, 2009 Letter from Hopi Tribe to John Tinger

In this case, and until all necessary TMDLs are established for these WQLS (e.g. until EPA knows the ―ambient concentrations" present in the receiving streams), a permit renewal incorporating new discharges and outfalls cannot be issued.

RESPONSE: The permit renewal does not authorize a new source, an increased discharge, or any discharge to an impaired waterbody.

First, as described in the Fact Sheet, Section III, no waterbodies receiving discharges from Black Mesa and Kayenta Mines have been identified as impaired. As the commenter notes, both the Hopi Tribe and Navajo Nation have Treatment as a State authority, and have the authority to conduct surface water quality assessments under Section 303 of the Clean Water Act. The commenter is incorrect to cite ADEQ‘s report as evidence that no assessment has been conducted on the waterbodies because the State of Arizona does not conduct assessments on Tribal lands. Neither Tribe has listed any of the waterbodies receiving discharges from the Black Mesa and Kayenta Mines on the Clean Water Act Section 303(d) list.

Because the Tribes have not listed any of the receiving waters as impaired, there is no need to develop a TMDL for any of the receiving waters, and comments related to restrictions on discharges to impaired waterbodies are not applicable to this permit renewal.

As the commenter notes, there are two stream segments in the Little Colorado River Watershed outside of tribal boundaries that have been identified by ADEQ and EPA as being impaired for copper, silver, suspended sediments and e. coli. The two water segments are located on the Little Colorado River between Winslow and Holbrook, Arizona, over 100 miles from the Black Mesa and Kayenta mines. The drainage from the mine site does not have any hydrological connection to these upper reaches of the Little Colorado River. Therefore, the comments related to these waterbodies are not applicable to this permit renewal.

Second, comments related to restrictions on discharges from new sources or increased discharges to impaired waterbodies are not applicable to this permit renewal. This includes comments made in reliance on 40 C.F.R. § 122.4(i), which the commenter cites without clearly noting that its application is limited to ~~"n~~new dischargers" and ~~"n~~new sources," which are defined in EPA's regulations. As stated previously, EPA is renewing a permit for an existing discharger with a previously issued NPDES permit. EPA is not issuing a permit for a new source or an increased discharge.

c. <u>EPA needs to conduct Reasonable Potential Analysis</u>

COMMENT: Among other things, EPA should conduct a "reasonable potential analysis" of the permit's potential to contribute to narrative or numeric water quality standards to ensure the permit complies with the CWA.

RESPONSE: As documented in Section III of the Fact Sheet, EPA has conducted a reasonable potential analysis. EPA must determine whether the discharge causes, has the reasonable potential to cause or contribute to, an excursion of a numeric or narrative water quality criterion for individual toxicants, and in doing so, it must consider a variety of factors. 40 C.F.R. § 122.44(d)(1)(ii). These factors include the following:

- Dilution in the receiving water;
- Existing data on toxic pollutants;
- Type of industry;
- History of compliance problems and toxic impacts; and
- Type of receiving water and designated use.

Based on an application of these factors to the Black Mesa and Kayenta Mine operations and projected wastewater quality data provided in the application, EPA concluded the discharges do not present a "reasonable potential" to cause or contribute to an exceedance of water quality standards. Because the discharges are often to dry washes without dilution, EPA has not considered available dilution in its assessment. Therefore, EPA has made the most conservative and protective assumption of no available dilution in its analysis that water quality standards must be met at the end of pipe prior to discharge. As noted above, the mines discharge infrequently; with over 100 permitted outfalls located over a 65,000 acre lease area, the facility has discharged 31 times over the past five years from 2005-2009. All drainages have been treated in pond systems to remove sediment accumulated from the mining activities prior to discharge. Therefore, based on sampling data and an evaluation of discharge characteristics, EPA has concluded that the effluent limitations for pH, TSS, Oil and Grease, and iron protect receiving water quality standards and that there is no reasonable potential for other pollutants to cause or contribute to a violation of receiving water standards. However, EPA has included monitoring in the permit for several additional parameters in order to further verify these conclusions.

Although EPA has determined that the discharges do not have a reasonable potential to cause or contribute to an exceedance of water quality standards, the proposed permit includes general conditions based on narrative water quality standards contained in Section 203 of the NNSWQS and Chapter 3 (General Standards) of the Hopi Water Quality Standards (August 29, 1997). These standards are set forth in Section B (General Discharge Specifications) of the permit.

d. Water Quality Issues

COMMENTS: EPA received several comments relating to compliance with water quality standards at the Black Mesa Complex.

- EPA should not issue a permit to a facility that has had many violations over the years
- Commenter witnessed wastewater leak
- Runoff and wastewater often bypasses impoundments; violations occur on a daily basis.
- EPA must/should enforce against PWCC for violations
- Commenter does not believe that heavy metals, such as arsenic, will settle out in impoundments, and thus, they are discharging into washes.
- PWCC does, in fact, pollute the surface and groundwater
- Oil and diesel often spills on mine site
- For outlets and seeps subject to monitoring and that have exceedance of water quality standards ("WQS"), EPA must enforce WQS standards and require PWCC to address the exceedances. See Proposed NPDES permit at 9-11 (identifying 21 impoundments with exceedance).
- Under the CWA, EPA may not issue NPDES permits for discharges that cause or contribute to an exceedance of water quality standards. 33 U.S.C. §1311(b)(1)(c); 40 C.F.R. §122.4(a) (no permit may be issued "[w]hen the conditions of the permit do not provide for compliance with the applicable requirements of CWA, or regulations promulgated under CWA"); 40 C.F.R. § 122.44(d) (no permit may be issued "[w]hen the imposition of conditions cannot ensure compliance with the applicable water quality requirements of all affected States").

RESPONSE:

Cause or contribute to water quality violations: EPA agrees that it cannot issue a permit for discharges that cause or contribute to an exceedance of water quality standards. To meet this duty, EPA has conducted a reasonable potential analysis and concluded that the discharges regulated under the NPDES permit do not have a reasonable potential to cause or contribute to exceedances of water quality standards. See Response #5.c.

As indicated in the Fact Sheet, the permit authorizes the discharge of mine drainage stormwater at over 100 Outfall locations which drain areas of the mine site defined as "Alkaline Mine Drainage", "Western Alkaline Reclamation Areas" and "Coal Preparation and Associated Areas". All stormwater runoff from the mine site is subject to NPDES permitting requirements and is treated in pond impoundments prior to discharge. The NPDES permit ensures that the water being discharged from the impoundments through outfalls meets technology and water quality based requirements.

The Administrative Record does not demonstrate significant water quality problems at the Black Mesa Complex. As stated above, EPA's analysis found no reasonable potential for the discharge of mine drainage from authorized Outfalls to cause or contribute to the exceedance of water quality standards.

Wastewater bypassing impoundments: EPA has no evidence to suggest that runoff bypasses impoundments or that the runoff discharged from impoundments is in violation of water quality standards. Based on a review of the impoundments located on site, EPA notes that all drainages from mining activities flow to impoundments where a bypass would not be possible except in events of extreme precipitation. Most impoundments on the mine site are overdesigned so that the runoff remains in the impoundments and does not discharge. The permit contains specific requirements for allowable discharges during precipitation events (Permit, Section A.4), including numeric limits applicable to discharges resulting from precipitation events which exceed the 10-year, 24-hour storm event (Permit, Section A.4).

Heavy metals in discharge: EPA agrees with the commenter that if heavy metals were present in dissolved form in the untreated wastewater they would not likely settle out in impoundments to a significant degree. However, EPA has found no evidence that heavy metals such as arsenic are present in the untreated runoff or that dissolved heavy metals are present in the water discharged from the impoundments, and the commenters have provided no evidence that contradicts EPA's findings. Therefore, EPA does not believe there is a reasonable potential for the discharge to cause or contribute to an exceedance of water quality standards.

Oil spills: The Administrative Record does not demonstrate frequent spills of oil and diesel fuel on site. However, the NPDES permit establishes an effluent limitation for Oil and Grease (Section A), and establishes a prohibition on the discharge of any wastewater with an oily sheen (Section B.1.c and B.2.b). See response to comment 7.c regarding an isolated incident of a spill of tank truck wash water to an impoundment which occurred in 1989.

Seeps: EPA has documented that stormwater collected and stored in impoundments may infiltrate soil underlying those impoundments (see Section VI of Fact Sheet). At several impoundments, depending on the location of the impoundment and the geologic formations beneath them, water that has seeped into the soils may re-emerge below the impoundment structure, causing "seeps". The permit does not authorize discharges to waters of the United States from any seeps at the mine site, but addresses the seeps in the permit through the Seep Management Plan, based on the characterization of the seeps (i.e. water quality of the seep, risk level, type, and current best management practices employed).

EPA originally observed these seeps on a compliance inspection (March 2004) and subsequently required Peabody Western Coal Company ("PWCC") to monitor and characterize these seeps in the previous permit (issued December 2000). As stated in the Fact Sheet, EPA required PWCC to review whether any seeps existed near all 230 impoundments on the Black Mesa Complex, many of which are internal impoundments for treatment and storage and which do not discharge to a water of the United States (there are currently 111 ponds that discharge via outfalls to waters of the United States and which are therefore regulated discharges in this permit). EPA instructed PWCC to monitor all seeps located within 100 feet of an impoundment.

As a result of the required monitoring, PWCC submitted an "Interim Final Report" ("Report") on April 1, 2008 which summarized the data collected at each of the seeps, including a description of the following information:

- Number of seep inspections;
- Number of flows observed;
- Range of flows observed;
- Number of samples taken;
- Exceedances of Livestock standards;
- Exceedances of acute standards, exceedances of chronic standards;
- Current use of pond (e.g., outfall location, internal pond, treatment for reclaimed water, active, shop areas, etc.);
- Final use of pond, including an estimation if pond can be removed;
- Best Management Practices ("BMPs") utilized (e.g., vegetation, fencing, dewatering);
- Potential BMPs to be evaluated (e.g., pond removal, vegetation, passive pH treatment, clay lining, dewatering, other);

PWCC has characterized both the water quality of the impoundments and the water quality of the seeps as part of the report. In general, the seeps are small in number, low in flows, and may not result in a discharge to a water of the United States. Many of the seeps are simply moist areas which do not generate actual flow volumes. Additionally, many other seeps are in locations from which discharges do not reach waters of the United States.

Seep identification and characterization has demonstrated that several seeps have shown concentrations of pollutants above water quality standards. By comparing the water quality of the seeps to that of mine drainage stormwater collected in the impoundments, EPA concluded that many pollutant levels found at the seep locations were caused by the seepage activity itself (during which stormwater infiltrates certain soil layers below the impoundment ponds and leaches pollutants found in the soil layers) and not by mining activities themselves. Therefore, the water characterization of the seeps must be considered separately from both the water quality of the stormwater contained in the ponds and the water quality of the discharges from authorized outfalls. Again, the reissued permit does not authorize the discharge of any pollutants from seeps to a water of the U.S. A complete analysis of these seeps was provided in the Fact Sheet.

Regardless of the cause of the pollutant concentrations documented in Section VI of the Fact Sheet and regardless of whether the seep is or is not considered a discharge to a water of United States, EPA has required PWCC to implement the Seep Management Plan at all impoundments at the mine site in order to characterize and implement corrective actions to control all seeps. EPA believes the most comprehensive and effective approach to control seeps is to implement the Seep Management Plan. The Seep Management Plan requires monitoring, corrective actions, and the installation of Best Management Practices at those seeps which have been identified with the potential to cause water quality problems. Under the plan, EPA has established a priority for PWCC to reclaim those impoundments that are not necessary to meet the conditions of the permit which will result in elimination of seeps from those impoundments, whether or not they may discharge a pollutant to a water of the U.S. The reissued permit will require reclamation of post-mined lands by incorporating new requirements for the Western Alkaline Reclamation Areas. These requirements will eliminate the need for impoundments to

treat stormwater in those areas, which will, in turn, eliminate the sources of many of the seeps. Where impoundments are necessary for treatment of stormwater, the Seep Management Plan requires continued monitoring and implementation of a permanent solution to control seeps. EPA believes the conditions in the permit are effective for the monitoring and control of seeps.

Compliance Order: The commenter's request to issue a compliance order is a separate matter from the effluent limitations, monitoring requirements, and special conditions contained in the reissued NPDES permit.

EPA acknowledges that under the CWA, it has significant enforcement authority. Section 309 of the CWA authorizes EPA to commence an enforcement action, including issuance of an administrative compliance order, whenever EPA finds that a person is discharging pollutants to waters of the U.S. in violation of an NPDES permit. However, this authority is not linked to the issuance of a permit pursuant to Section 402 of the CWA, and, furthermore, EPA is afforded discretion in the exercise of its enforcement authority. Sierra Club v. Whitman, 268 F.3d 898, 905 (9th Cir. 2001).

e. Typographical Corrections

COMMENT: The Fact Sheet and Permit contain several minor editorial and typographical errors.

RESPONSE: Typographical errors have been corrected.

f. EPA should reject request for a waiver

COMMENT: Additionally, EPA should reject PWCC's extraordinary request for a waiver of the WQS standards so that the outlet can be considered in compliance. BMWC [the commenter] is aware of no legal basis for EPA to grant such a request.

RESPONSE: PWCC has made no request for a waiver from water quality standards. No variances or waivers were proposed nor considered in the draft permit. The reissued permit does not allow for, nor does it authorize, any variances at the Black Mesa Mine Site.

6. Technical Comments

a. <u>All outfalls must be monitored</u>

COMMENT: EPA must require monitoring of all impoundments (or outlets) at the mine and covered by the NPDES Permit. According to EPA's permit, there are over 230 impoundments that exist on the Black Mesa/Kayenta Complex and which are covered by the proposed permit. EPA's Proposed NPDES Permit at 8.

In this case, PWCC argues without legal authority that, because the operation at Black Mesa is huge and results in many hundreds of individual outlets PWCC (and by extension EPA) can monitor less than all of the outlets. Only a small percentage of PWCC's outlets are monitored and the results of monitoring this small subset is asserted as somehow indicative or representative of the total population of outlets.

First, designated outlets cannot legitimately be considered in compliance with the CWA without actual monitoring data. BMWC [the commenter] finds nothing in the CWA that would allow EPA to rely on a subset or sample of monitored outlets to determine CWA compliance for non-monitored outlets. Second, there is no discussion or rationalization for choosing data from one monitored outlet over another for purposes of monitoring. Third, there is no indication that there is a feed-back or spot checking procedure to ensure the adequacy and appropriateness of the selected monitoring points or that all problematic monitoring locations are being evaluated. Finally, given the relative abundance of outlets with exceedance of one or more water quality standards, it seems exceedingly likely that there are many others not on the radar for lack of actual monitoring. In sum, EPA must require monitoring of all outlets covered by the proposed NPDES permit. Additionally, EPA should require PWCC to recover at least 1-years worth of data for all outlets prior to issuance of an NPDES permit renewal

RESPONSE: Section A of the permit establishes effluent limitations and monitoring requirements for 111 outfalls categorized as either ~~–~~Alkaline Mine Drainage," ~~–~~Coal Preparation Plants, Storage Areas, and Ancillary Area Runoff Outfalls," or ~~–~~Western Alkaline reclamation, brushing and grubbing, topsoil stockpiling, and regraded areas." During discharge, the permit requires daily monitoring for a number of parameters, including flow, TSS, pH, Oil & Grease, iron, arsenic, cadmium, chromium, mercury, lead, and selenium. For discharges that occur as a result of precipitation events, Section A.4 of the permit establishes specific requirements. One of the conditions allows that, during precipitation events, samples may be collected from a sampling point representative of the type of discharge, rather than from each point of discharge. At no time shall less than 20% of discharges be sampled. If samples are collected from a representative point, the permittee shall specify the Outfalls being represented in the quarterly report narrative.

EPA regulations at 40 C.F.R. § 122.41(j)(1) state that samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity. Discharges from the mine site consist of stormwater runoff from areas classified as either ~~"~~Alkaline Mine Drainage," ~~"~~Coal Preparation Plants, Storage Areas, and Ancillary Area Runoff Outfalls," or ~~"~~Western Alkaline reclamation, brushing and grubbing, topsoil stockpiling, and regraded areas." Each of these areas is materially similar in terms of the mining activities that take place within that area, the alkaline characteristics of soil types present (e.g., not acid generating), the expected runoff pollutant concentrations, the type of stormwater treatment and best management practices employed, and the effluent limitations applicable to the discharge. Therefore, EPA has determined representative sampling may be obtained without monitoring the discharge from all 111 outfalls on a daily basis. EPA believes it is reasonable to establish a monitoring limit that at least 20% of outfalls must be sampled to obtain representative monitoring of the mine site discharge. The establishment of representative samples during precipitation events is consistent with past permits issued to PWCC.

b. <u>OSMRE technical review of Sediment Control Plan is insufficient</u>

COMMENT: Here, it is unlawful for EPA to rely on OSM's ~~"~~technical review" of PWCC's Sediment Control Plan for purposes of approval of the NPDES Permit. According to EPA's Fact Sheet at 5, and based on a Memorandum of Understanding between EPA and OSM, EPA is relying on OSM's ~~"~~technical review and approve[al of] the permittee's Sediment Control Plan." Id. Specifically,~~"~~OSMRE completed a technical review of PWCC's Sediment Control Plan, which PWCC submitted in order to re-categorize outfalls as Western Alkaline Reclamation Areas and to apply for a revision of its permit under the Surface Mining and [sic] Control Reclamation Act. See January 28, 2009 letter from Dennis Winterringer, OSMRE to Gary Wendt, PWCC." Id.

PWCC requested under the Clean Water Act Western Alkaline Drainage Category regulations to use ~~"~~best management practices in lieu of eight existing sedimentation ponds in areas N6, J7 (ponds 021 (N6-C), 022 (N6-D), 037 (N6-F), 049 (J7-CD), 0505 (J7-E), 051 (J7-F), 174 (J21-D), and 175 (J21-E))." June 16, 2009 Letter from Dennis Winterringer, OSM to Gary Wendt, Peabody. OSM approved PWCC's request as ~~"~~an application for minor revision of Black Mesa Complex permit AZ 0001D (project AZ-0001-D-J-58)." Id. (w/attached ~~"~~Application for Miner Permit Revision").

As EPA is aware Administrative Law Judge Holt issued an Order on January 5, 2010 vacating the underlying Life of Mine (~~"~~LOM") permit from OSM. OSM's LOM permit allowed Peabody to operate the Black Mesa and Kayenta mines jointly as the Black Mesa Project (a.k.a. Black

Mesa Complex). Because the LOM is now vacated, OSM's approval of a "minor revision" to the LOM permit should also be considered vacated.7 Any other interpretation would be inconsistent with Judge Holt's Order.

Additionally, and as BMWC has already requested and because there is no Black Mesa Complex, EPA should temporarily withdraw the proposed NPDES Permit for the Black Mesa Complex and reissue any proposed permit at some future date in accordance with Judge Holt's findings and the existing status quo (i.e. treating the mines as separate entities for permitting purposes).

In sum, it is unlawful for EPA to rely on OSMRE's "technical review" and approval of a "minor revision" of the LOM and for purposes of approval of the NPDES Permit. At a minimum, EPA and OSM should use the NEPA process to evaluate any "technical review" and approval of the permittee's Sediment Control Plan and issuance of any proposed NPDES permit in accordance the existing status quo (i.e. treating the mines as separate entities for permitting purposes).

RESPONSE: EPA relied on OSMRE's technical expertise to review the sediment control plan prior to EPA approving the adequacy of PWCCs submittal, as described in Section V.C of the Fact Sheet and in accordance with EPA's MOU with OSMRE (December 19, 2003). It is entirely appropriate for EPA to solicit comments and review from another federal agency with expertise in the subject matter. However, EPA is the permitting authority responsible for the approval of PWCC's sediment control plan, not OSMRE.

The decision by Administrative Law Judge Holt on January 5, 2010 vacating the underlying Life of Mine ("LOM") permit from OSMRE was issued mainly because the final EIS alternatives analysis did not reflect the fact that the Black Mesa mine had closed, since the draft EIS was issued. This decision is not related to EPA's reissuance of the NDPES permit, nor does it affect OSMRE's technical review of the sediment control plan.

See also Response #2 (discussing permitting one vs. two mines) and Response #1 (EPA's NEPA obligation in reissuing permit).

c. Contaminants from dust control and vehicle washing

COMMENT: Chemicals are used for dust control – this is washed into the washes. Magnesium chloride is used. Vehicle wash waters have caused contamination. There was a problem when explosive powder was washed, livestock drank it and died.

RESPONSE:
PWCC utilizes magnesium chloride for dust control on haul roads at the mine site. Magnesium chloride is a salt commonly used for dust control as well as for deicing highways during winter storms.

Magnesium chloride dissolves in water to give a faintly acidic solution (pH = approximately 6) but is not generally considered toxic
(from http://www.chemguide.co.uk/inorganic/period3/chlorides.html). EPA has not established recommended water quality criteria for either magnesium chloride or for the metal magnesium. Magnesium chloride does contribute to the total dissolved solids concentrations in water, which may be a concern for drinking water or agricultural uses when present at high concentrations. Excess Total Dissolved Solids (TDS) may be objectionable in drinking water (due to taste, color, and salt deposition) at high concentrations above 250 mg/L, and may have negative affects to aquatic wildlife and plants at high concentrations (above 500 mg/L). (EPA, Water Quality for Toxics, "Goldbook", EPA 440/5-86-001, 1986). None of the receiving waters at the mine site have been designated as a source a drinking water.

Magnesium chloride in only used for dust control on haul roads, a relatively insignificant portion of the land area of the mine site. EPA does not believe stormwater generated from the haul roads will be of sufficient quantities to have any measurable increase in the dissolved solids concentrations of the stormwater generated from the mine site. Additionally, all stormwater from roads is collected and directed to stormwater impoundments on the mine site prior to discharge.

Regarding vehicle wash water and the comment that livestock were killed, EPA is aware that in 1989, there was a spill from a contractor improperly washing a vehicle tanker truck which caused the death of several sheep. This incident has been documented, and is not under consideration for this permit. The discharge of any wastewater associated with vehicle wash waters is not allowed under the permit.

As background, PWCC has provided the following description of the incident:

1. ~~W~~We were notified of the incident on June 23, 1989.
2. Upon notification, we immediately notified USEPA, NNEPA, OSM, and the Chairman of the Navajo Nation of the incident.
3. The incident involved rinsing out a tanker truck tank containing Ammonium Nitrate-based blasting emulsion residue at the truck wash facility at the Black Mesa Mine.
5. Water from the truck wash area collects in a small drainage that flows to sediment control structure BM-A1.
6. A herd of sheep drank from the drainage to BM-A1 coincident with the cleaning of the truck tank.
7. Eighty-six sheep and goats were killed as a result of ingesting abnormally large concentrations of the emulsion product in the drainage.
8. In the morning after learning of the incident, PWCC environmental personnel sampled the water in the drainage and downstream sediment pond and documented the high salt concentrations. This data was provided to the NNEPA. Follow-up sampling the next day indicated the problem had attenuated.
9. The next day, NNEPA personnel arrived on site and sampled water in the drainage and pond, and sediment in the pond. PWCC was not provided the results of this sampling, so PWCC assumed the samples showed normal results similar to those of PWCC's follow-up samples.
10. PWCC immediately changed the policy of cleaning out the emulsion trucks to ensure the incident would not be repeated. The trucks were washed out at the blast sites in the active mining areas from that point forward. The incident has never been repeated, so the corrective action was effective.
11. PWCC entered into an agreement with the family after the incident to compensate them for the loss of the livestock and install an isolated water source for livestock among other commitments."

d. <u>Outfalls are not properly identified</u>

COMMENT: Neither the draft permit nor the fact sheet identifies what outfalls have been added or eliminated. EPA must identify with specificity these changes.
The outfall gauges are not in right place and do not match GPS coordinates.

RESPONSE: The draft permit identified each outfall in Appendices A, B, and C of the permit, along with the subcategorization, the latitude, longitude and receiving water associated with each outfall. The previous permit listed each outfall under the applicable regulatory subcategory. While EPA did not present a detailed description in the Fact Sheet of each of the more than 100 outfalls, a comparison of the two permits provides a list of the outfall eliminated or added.

Each outfall location is identified in the permit by its latitude and longitude coordinates. EPA has concluded the locations provided in the permit are correct. During inspections, EPA inspectors verify the GPS locations of the outfall.

7. Endangered Species Concerns

COMMENT: EPA cannot rely on OSM's Biological Assessment for ESA Compliance. EPA must comply with the Endangered Species Act, 16 U.S.C. § 1531, et seq. ("ESA") when issuing the NPDES permit. Section 7 of the ESA places affirmative obligations upon federal agencies. Section 7(a)(1) provides that all federal agencies "shall, in consultation with and with the assistance of the Secretary [of Commerce or the Interior], utilize their authorities in furtherance of the purposes of this chapter by carrying out programs for the conservation of endangered species and threatened species." 16 U.S.C. § 1536(a)(1). Section 7(a)(2) mandates that:

Each Federal agency shall, in consultation with and with the assistance of the Secretary [of Commerce or the Interior], insure that any action authorized, funded, or carried out by such agency ... is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of habitat of such species which is determined ... to be critical, unless such agency has been granted an exemption for such action ... pursuant to subsection (h) of this section. Id. § 1536(a)(2).

The ESA's implementing regulations set forth a specific process, fulfillment of which is the only means by which an action agency ensures that its affirmative duties under section 7(a)(2) of the ESA are satisfied. In re Desert Rock Energy Company, LLC, PSD Appeal Nos. 08-03, 08-04, 08-05 & 08-06, slip op. (EAB Sep. 24, 2009) at 36 (citing 50 C.F.R. § 402.14(a); Sierra Club v. Babbitt, 65 F.3d 1502, 1504-05 (9th Cir. 1995); In re Indeck-Elwood, LLC, PSD Appeal No. 03-04, slip op. (EAB Sep. 27, 2006) at 95). By this process, each federal agency must review its "actions" at "the earliest possible time" to determine whether any action "may affect" listed species or critical habitat in the "action area." 50 C.F.R. § 402.14. The "action area" is defined to mean all areas that would be "affected directly or indirectly by the Federal action and not merely the immediate area involved in the action." 50 C.F.R. § 402.02. The term "may affect" is "broadly construed by FWS to include '[a]ny possible effect, whether beneficial, benign, adverse, or of an undetermined character,' and is thus easily triggered." Indeck-Elwood, slip op. at 96 (quoting 51 Fed. Reg. at 19926); Desert Rock, slip op. at 36 n. 33. If a "may affect" determination is made, "consultation" is required. Id.

Consultation is a process between the federal agency proposing to take an action (the "action agency") – here, EPA – and, for activities affecting terrestrial species, the U.S. Fish and Wildlife Service ("FWS"). "Formal consultation" commences with the action agency's written request for consultation and concludes with FWS's issuance of a "biological opinion" ("BiOp"). 50 C.F.R. § 402.02. The BiOp issued at the conclusion of formal consultation "states the opinion" of FWS as to whether the federal action is "likely to jeopardize the continued existence of listed species" or

–result in the destruction or adverse modification of critical habitat." 16 U.S.C. § 1536(c)(1); 50 C.F.R. § 402.12(c).

Prior to commencing formal consultation, the federal agency may prepare a –biological assessment" (–BA") to –evaluate the potential effects of the action on listed and proposed species and designated and proposed critical habitat" and –determine whether any such species or habitat are likely to be adversely affected by the action." 50 C.F.R. § 402.12(a). While the action agency is required to use a BA in determining whether to initiate formal consultation, FWS may use the results of a BA in determining whether to request the action agency to initiate formal consultation or in formulating a BiOp. 50 C.F.R. §§ 402.12(k)(1), (2). If a BA concludes that the action is –not likely to adversely affect" a listed species, and FWS concurs in writing, that is the end of the –informal consultation" process. 50 C.F.R. § 402.13.

B. EPA Must Consult with FWS to Consider the Effects of the NPDES Permit to Threatened and Endangered Species in the Action Area.

Threatened and endangered species that are known to occur within the –action area" of the permit that may be affected directly, indirectly, and/or cumulatively by the activities authorized by the permitted discharges. At a minimum, such species include the endangered southwestern willow flycatcher, the threatened Mexican spotted owl, and the threatened Navajo sedge and its critical habitat, black-footed ferret as well as species and habitat that occur downstream from the discharges, such as the Little Colorado River spinedace, and species that are affected by the air emissions resulting from combustion of the coal at the Navajo Generating Station. The NPDES permit authorizes new and continued discharges from active mine areas, coal preparation areas, and reclamation areas within the Complex, including discharges of selenium and other pollutants that are known to affect flora and fauna such as these species. But rather than meeting its ESA section 7 duties and considering the full spectrum of such potential effects, EPA avoids its ESA section 7 duties altogether, choosing to skip consultation with FWS to consider the effects of the NPDES permit issuance to listed species and critical habitat.

As an initial matter, it must be noted that EPA's attempt to apply the analysis contained in an ESA document prepared by a separate federal agency, the Office of Surface Mining Reclamation & Enforcement (–OSM"), for a different agency action, OSM's now-invalidated issuance of a life-of-mine permit revision for the Black Mesa and Kayenta coal mines, to EPA's separate issuance of the NPDES permit. Indeed, there is nothing in the ESA's regulations, statutory language, or fundamental purposes that would EPA to do this, and EPA's attempt to do so here illustrates the problems with such an approach.

If FWS concludes that the activities are not likely to jeopardize listed species, it must provide an –incidental take statement" with the BiOp that specifies the amount or extent of such incidental take, the –reasonable and prudent measures" that FWS considers necessary or appropriate to minimize such take, the –terms and conditions" that must be complied with by the action agency or any applicant to implement any reasonable and prudent measures, and other details. 16 U.S.C. § 1536(b)(4); 50 C.F.R. § 402.14(i). –Take" means an action would –harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect," or –attempt to engage in any such conduct." 16

U.S.C. § 1532(19). Thus, a BiOp with a no-jeopardy finding effectively green-lights a proposed action under the ESA, subject to an incidental take statement's terms and conditions. Bennett v. Spear, Bennett v. Spear, 520 U.S. 154, 170 (1997).

First, OSM's BA does not actually consider the effects of discharges to threatened and endangered species in the action area. As a result, it is palpably incorrect for EPA to suggest, as it does, that FWS concluded that there would not be ~~"a~~ny effects on listed species due to the discharges that would be regulated by PWCC's NPDES permit." Fact Sheet at 13-14. FWS made no such conclusion, and OSM's BA contained no such analysis. Thus, EPA cannot escape its duties under ESA section 7 to consult with FWS directly over the effects of discharges – including by obtaining FWS's concurrence in its own determinations, as appropriate – on this basis.

Indeed, there are numerous other flaws in the OSM BA that would render EPA's reliance on it in the NPDES permitting context particularly arbitrary. For example, OSM's BA does not consider, at all, the effect of the mines' operations to the recovery of threatened and endangered species, and only considers the potential effects to species' survival. This is a patent violation of the letter and spirit of the ESA, as is particularly illustrated in the omission of any analysis of the effects of mining operations (again, not discharges) downstream from the source, such as to threatened and endangered species that occur in the Little Colorado River watershed including the Little Colorado spinedace and other listed species and their critical habitat. Instead, the BA dismisses these species out of hand by stating that such species have no "~~s~~uitable" habitat in the action area. Completely unaddressed are, e.g., whether any listed species located downstream of the "~~p~~roject area" (i.e., within the "~~a~~ction area") have areas in the "~~a~~ction area" for the NPDES permit that are essential to their recovery, regardless of whether such areas are currently "~~s~~uitable" or inhabited by listed species.

In addition, in its BA OSM focused exclusively on direct effects – i.e., those effects occurring as a result of impacts in the direct footprint of the mines and their related infrastructure. For example, the OSM BA only considered the potential direct effects to the Southwestern willow flycatcher habitat within the footprint of the "~~p~~roject area" – an area that is not described in the BA but is depicted on a map included in the document. See OSM BA at 6-2 to 6-5 (discussing effects to Southwestern willow flycatcher within the "~~p~~roject area"); id. at 2-2 (Figure 2-1) (Map of "~~P~~roject Area"). The Final BA also focuses on impacts in areas occupied by listed species or critical habitat and the area of "~~M~~ining Operations," see id. at 6-5 (addressing potential effects to Mexican spotted owl), or the "~~L~~ease Area." Id. (considering effects to black-footed ferret).

For instance, how will the discharges affect the recovery of the Southwestern willow flycatcher? The southwestern willow flycatcher is a riparian-obligate species that relies on rivers, streams, and other wetlands for breeding. Id. at 6-1. Suitable foraging and resting habitat is known to exist in the area of the mines for this species, "~~n~~ear the black mesa mining operation", including in Moenkopi Wash. Id. at 6-3. Southwestern willow flycatchers are known to be threatened in part due to the "~~r~~eduction, degradation, or elimination of riparian habitat, which has curtailed the range, distribution and populations of this species." Id. The loss of riparian habitat results from impoundments, among other things. Id.

The draft permit's Fact Sheet expressly adopts this flawed approach. See Fact Sheet at 13(stating that EPA has reached a "no effect" determination for listed species because "as evidenced by OSMRE's Biological Assessment for the Life-of-Mine permit, no threatened or endangered species are located in the project area") (emphasis added).

Completely ignored throughout the OSM BA – as indirect or interrelated effects or as part of the environmental baseline – are the effects of emissions of mercury and selenium from coal combustion at the Navajo Generating Station that will occur within 300 km of the mines. In evaluating the effects of the proposed Desert Rock Energy Project, a coal-fired power plant that is proposed to be sited on the Navajo Nation within New Mexico, the FWS determined that three hundred kilometers (300 km) is the appropriate distance for properly evaluating the effects of air emissions from major sources like coal-fired power plants on federally-listed species. FWS, Attachment A (Ex. 3) at 4. In this case, the desert tortoise, southwestern willow flycatcher, Colorado pikeminnow, and razorback sucker, as well as other listed species all occur within 300 km the Navajo Generating Station, as well as the Black Mesa Project area, and therefore are potentially affected by mercury and selenium emissions. See Center for Biological Diversity Maps. Some species, including Colorado pikeminnow, razorback sucker, humpback chub, Little Colorado spinedace, Mexican spotted owl, and Southwestern willow flycatcher, occur within 300 km of the San Juan Generating Station and Four Corners Power Plant as well. See id. There is also critical habitat for the desert tortoise, Colorado pikeminnow, razorback sucker, humpback chub, Little Colorado spinedace, southwestern willow flycatcher, Mexican spotted owl, and Navajo sedge within 300 km of the Black Mesa Project area.

Coal-fired power plants are the largest source of mercury emissions in the United States. Mercury levels in the Four Corners region are already high and adversely affecting the Colorado pikeminnow and razorback sucker. In fact, the Navajo Generating Station, which is within the 300km Black Mesa Project area, is a large source of mercury and selenium, particularly in combination with the San Juan Generating Station and Four Corners Power Plant. See EPA's Emissions of Mercury by Plant – 1999 (Ex. 1).

The ESA's implementing regulations are clear and require a biological assessment to discuss the "effects of the action," which include both direct and indirect effects, together with the effects of other activities that are interrelated or interdependent with that action, that will be added to the environmental baseline. 50 CFR 402.02. Indirect effects are those that are caused by the proposed action and are later in time, but are still reasonably certain to occur. "Interrelated actions" are those that are part of a larger action and depend on the larger action for their justification; "interdependent actions' are those that have no independent utility apart from the action under consideration. 50 CFR 402.02. Under this regulatory scheme, it is clear that the effects of burning coal at the Navajo Generating Station must be considered as part of EPA's ESA section 7 consultation. Yet, the OSM BA does not consider these effects at all. Thus, it is unlawful for EPA to rely on its flawed analysis.

OSM does not define the Project's "action area" in its BA for the life-of mine permit revision for the mines. Had OSM and FWS identified the "action area" for the life-of-mine permit, such a

description would have been included in the Final BA. See 50 C.F.R. § 402.02 (―biological assessment" contains, by definition, ―the information prepared by or under the direction of the Federal agency concerning listed and proposed species and designated and proposed critical habitat that may be present in the action area and the evaluation of potential effects of the action on such species and habitat") (emphasis added). The fact that the Final BA contains no description of the action area simply confirms that the agencies never considered the effects to listed species and critical habitat, and EPA has not remedied this defect by adopting OSM's BA.

The ―environmental baseline" must, for its part, include analysis of ―the past and present impacts of all Federal, State, or private actions and other human activities in the action area." 50 C.F.R. § 402.02. Here, because emissions of air pollutants from the San Juan Generating Station and Four Corners Power Plant are affecting endangered fish in the San Juan River Basin, which is also within 300 km of the Black Mesa Project area, these plants' emissions should have been accounted for as part of the environmental baseline for the mines, and hence, the NPDES permit.

The OSM BA omits consideration of these problems as well. FWS has acknowledged that mercury and selenium contamination are of particular concern to the endangered fish species and to fish-eating birds along the San Juan River and that fish tissue samples exceed recommended mercury thresholds, putting the birds that eat them at risk for mercury toxicity. Biological Assessment for the Proposed Desert Rock Energy Project (Rev. Oct. 2007) (―Desert Rock BA") at 27. Studies also show that diet items for Colorado pikeminnow, including small fish, speckled dace, and red shiners, exceed threshold levels of concern and compromise the species' ability to reproduce. Id. Continued coal burning at Navajo Generating Station, together with coal combustion at the San Juan Generating Station and the Four Corners Power Plant, will only exacerbate these effects.

The purpose of a biological assessment is to determine, based on the ―best available scientific …data", 16 U.S.C. § 1536(a)(2), whether an action ―may affect" listed species or critical habitat, and the ―may affect" threshold is low. 51 Fed. Reg. 19926 (June 3, 1986) (the ―may affect" threshold is a ―low threshold" that is ―easily triggered" and ―broadly construed" to include ―[a]ny possible effect, whether beneficial, benign, adverse, or of an undetermined character")(emphasis added). Given the elevated levels of mercury and selenium in endangered fish within the action area of the mines, the indirect effects of such emissions from the Navajo Generating Station, San Juan Generating Station, and Four Corners Power Plant clearly ―may affect" – and indeed, are affecting and will continue to affect – these and other species, and therefore should have been considered. By adopting OSM's flawed effects analysis, EPA fails also to consider these emissions is a violation of the plain language of the ESA's implementing regulations. Nat'l Wildlife Fed'n v. Nat'l Marine Fish. Serv., 481 F.3d 1224, 1235 (9th Cir. 2007) (compliance with the ESA's implementing regulations is ―not optional" and is the only way to ensure that action agency's affirmative duties under section 7 are satisfied).

Third, the OSM BA fails to incorporate into the environmental baseline any acknowledgement or analysis of the ongoing effects of global warming that are already being observed in the action area. The OSM BA does not incorporate an analysis of the ongoing and projected global warming-related changes to vegetation, fire regimes, or water availability, despite the plethora of

information about such impacts in the southwestern United States that was available at the time OSM was engaging in ESA section 7 consultation for the life-of-mine permit revision – and which is certainly available now, when EPA should be conducting its own ESA section 7 consultation for issuance of the NPDES permit.

The Navajo Generating Station, San Juan Generating Station, and Four Corners Power Plant are some of the largest and highest-polluting coal-fired power plants in the United States.

Furthermore, despite being dated "November 2008," the Final BA does not even refer to many studies dated after 2006.13 This is because the bulk of the ESA consultation history for OSM's life-of-mine permit revision occurred between May 2005 and March 2007. OSM only spent June through November 2008, when the OSM BA is dated – or, less than six months – focused on considering the effects of the life-of-mine permit revision to listed species and critical habitat, and even then, simply revised the BA to omit discussion of certain aspects of the mines that have since been discontinued (such as the coal-slurry pipeline). Yet, numerous scientific studies and reports were released during 2007 through 2008 that document changing conditions due to climate change in the Southwest, and these should have been considered during the ESA consultation for the life-of-mine permit revision, but were not. These changing conditions, which are already occurring, include decreasing water availability and streamflows, and increasing temperatures and aridity. See NRDC v. Kempthorne, 506 F. Supp. 2d at 369 (citing Pac. Coast Fed'n of Fishermen's Ass'ns v. Nat'l Marine Fisheries Serv., 265 F.3d 1028, 1033 (9th Cir. 2001)) ("[a]t the very least, these studies suggest that climate change will be an important aspect of the problem' meriting analysis" during section 7 consultation); cf. Greater Yellowstone Coal., et al. v. Servheen, et al., 9:07-cv-00134-DWM, slip op. at 26-29 (D. Mont. Sep. 21, 2009) (vacating rule delisting Yellowstone population of grizzly bears for failure to consider effects of decreasing whitebark pine due caused in part by climate change).

Finally, even it could somehow be said that it is appropriate for EPA to rely on the OSM BA in this instance to comply with ESA procedural obligations, EPA still has not met its duty under section 7(a)(1), which "imposes a specific obligation upon all federal agencies to carry out programs to conserve each endangered and threatened species." Fla. Key Deer v. Paulison, 522 F.3d 1133, 1146 (11th Cir. 2008) (citing Sierra Club v. Glickman, 156 F.3d 606, 616 (5th Cir. 1998) ("Given the plain language of the statute and its legislative history, we conclude that Congress intended to impose an affirmative duty on each federal agency to conserve each of the species listed pursuant to [16 U.S.C.] § 1533. In order to achieve this objective, the agencies must consult with [the] FWS as to each of the listed species, not just undertake a generalized consultation."). While EPA has some discretion to determine how it will meet section 7(a)(1)'s affirmative duty, "[t]otal inaction is not allowed." Id. Yet, here EPA totally avoids its duty to comply with section 7(a)(1), an error which is corollary to its decision to simply adopt OSM's flawed BA for its own purposes. See id. at 1147 (citing Pyramid Lake Paiute Tribe of Indians v. U.S. Dep't of Navy, 898 F.2d 1410, 1417 (9th Cir. Nev. 1990)). At the very least, section 7(a)(1) requires EPA to consult with FWS to ensure that OSM's BA is adequate for this purpose, up-todate, will significantly contribute to the recovery as well as the survival of listed species, and that nothing more will be required to conserve listed species affected by discharges. See Pyramid

Lake, 898 F.2d at 1417 (in exercising their duty to conserve, non-Interior Department agencies must do so in consultation with the Secretary").

There are only three references, out of dozens listed in the References section of the Final EA, are dated after 2006, all of which are at least almost two years old. They are: BIOME Ecological and Wildlife Research (BIOME). 2008. Final report 2007: wildlife monitoring, Black Mesa, Arizona. Submitted to Peabody Western Coal Company, Black Mesa and Kayenta Mines.

Roth, D. 2008. Personal communication by D. Roth, botanist, Navajo Natural Heritage Program, with Jean Charpentier, URS Corporation, June 25, 2008.
U.S. Department of the Interior, Fish and Wildlife Service (FWS). 2008a. Coconino County Listed Species. Accessed online July 2008. http://www.fws.gov/southwest/es/arizona/Documents/CountyLists/Yuma.pdf.

Indeed, the OSM BA only mentions the term "climate change" twice – both times, in connection with a discussion about the anticipated effects to Navajo sedge. See Final BA at 6-15 (Bates # 3-01-01-001119). But even then, the OSM BA fails to actually consider what the converging effects of the Project and global warming to Navajo sedge would actually be.

For all of these reasons, EPA has failed to comply with its affirmative duties under ESA section 7 in connection with its issuance of the NPDES permit.

RESPONSE: EPA has met all its obligations under the Endangered Species Act ("ESA") Section 7 to ensure that the permit renewal is not likely to jeopardize the continued existence of a listed or candidate species, or result in the destruction or adverse modification of its critical habitat. Section 7 of the ESA requires federal agencies to ensure that any action authorized, funded, or carried out by a federal agency is not likely to jeopardize the continued existence of a listed species, or result in the destruction or adverse modification of its designated critical habitat. 16 U.S.C. § 1536(a)(1). EPA has evaluated the potential effect the discharge authorized by this permit may have on threatened and endangered species, as described in Section VIII of the Fact Sheet. EPA has determined that this action will have no effect on threatened and endangered species. *See* Section VIII of the Fact Sheet. EPA's determination is consistent with previous determinations for NPDES permit renewals for PWCC.

EPA does not agree that formal consultation with FWS is required. When a "no effect" determination is made, no consultation is required.

In considering impacts on listed species, it is important to remember that EPA is issuing the NPDES permit renewal under Section 402 of the CWA for the discharge of wastewater associated with mining operations to surface waters of the U.S. The permit authorizes the discharge of treated stormwater from 111 outfalls at the mine site to surface waters of two primary drainages, and their tributaries, of the Moenkopi Wash and Dinnebito Wash. This permit neither authorizes PWCC to mine coal at either the Kayenta or Black Mesa mines, nor does it authorize the combustion of the coal mined at either mine or at any power plant in the region. As stated in the Fact Sheet, EPA utilized the list of endangered and threatened species generated by the Fish and Wildlife Service in June 2005 which OSMRE also used for its Biological Assessment (November 2008). The species identified as potentially affected by the proposed project were presented in Table 1-1 –Federally Listed Species Considered for Evaluation in the Biological Assessment" of the fact sheet and include consideration of: Black Footed Ferret (*Mustela nigripes*), Southwestern willow flycatcher (*Empidonax traillii extimus*): Mexican Spotted owl (*strix occidentalis lucida*), Bald eagle (*haliaeetus leucocephalus*), California condor (*Gymnogyps californicus*), Navajo sedge (*Cares specuicola*), Yellow-billed Cuckoo (*Coccyzus americanus*), California Brown Pelican (*Pelecanus occidentalis californicus*), Chiricahua leopard frog (*Rana chiricahuensis*), Apache trout, (*Oncorhynchus apache*) Little Colorado spinedace Spikedace (*Meda fulgida*), Loach minnow (*Tiaroga cobiti),* Peebles Navajo cactus (*Pediocactus peeblesianus peeblesianus,* and Welsh's milkweed (*Asclepias welshii*).

EPA believes the Agency has evaluated a comprehensive list of all endangered and threatened species that may reside in the action area. The commenter does not appear to dispute the list of species EPA has considered with regard to the mine site, although the commenter expresses concern for one species, the desert tortoise, which EPA did not consider in its list. The desert tortoise is not known to occur within the vicinity of the mine site. The closest population known is in Mojave County, AZ, which is over one hundred miles from the mine site. In addition as discussed below, no indirect effects of the discharges authorized by the NPDES permit impact the desert tortoise. Because the desert tortoise is not present in the action area, EPA did not consider the species in its ESA analysis.

EPA has concluded that the discharge of treated wastewater from the mine site will have no effect on endangered or threatened species. First, no threatened or endangered aquatic species are located in the tributaries where discharges of treated wastewater are being permitted. In addition, no threatened or endangered aquatic species are located in the tributaries downstream of the permitted discharges. Additionally, all receiving waters are ephemeral drainages which do not support populations of fish which could be consumed by species of concern such as the bald eagle or California brown pelican. Therefore, there is no potential for indirect impacts which could occur from species consuming fish in the vicinity of the outfalls. Second, the mines discharge infrequently; with over 100 permitted outfalls located over a 65,000 acre lease area, the facility has discharged 31 times over the past five years from 2005-2009 for a total volume under 500 acre-ft. Third, and of particular importance, the permit requires all discharges to meet water quality standards that have been specifically set at a level necessary to protect aquatic wildlife. Because the discharges are often to dry washes without dilution, EPA has not considered available dilution in its assessment. Therefore, EPA has made the most conservative and protective assumption of no available dilution in its analysis that water quality standards must be met at the end of pipe prior to discharge. All drainages are treated in pond systems to remove sediment accumulated from the mining activities prior to discharge. Therefore, even if species were present, for the above reasons, the discharges would not likely affect listed species.

EPA‘s conclusion of no effect is consistent with the determinations made in previous permit reissuances for PWCC. Furthermore, since EPA last made those determinations, no significant changes in facility operations or endangered and threatened species inhabiting the area have occurred.

Although not required, EPA sent a copy of the permit and Fact Sheet to the U.S. Fish and Wildlife Service (”FWS”) for review and comment during the public comment period. FWS did not send comments objecting to EPA‘s analysis or determination. *See In re: Chukchansi Gold Resort and Casino Waste Water Treatment Plant*, 2009 WL 152741 (EAB 2009) (upholding agency‘s ~~n~~o effect” determination and noting that the Region sent the draft permit and fact sheet to FWS and received no comments).

While EPA has made its own assessment relative to the NPDES permitting action, EPA‘s conclusion is consistent with the determinations made by OSMRE and FWS for the Biological Assessment for the Life of Mine Permit. Additionally, EPA‘s limited use of OSMRE‘s BA (to produce a list of potentially affected species) to make its determination was appropriate. The regulations, 50 C.F.R. § 402.12(g), allow agencies to utilize other biological assessments prepared for similar actions. Commenter makes several claims that the OSMRE‘s BA was insufficient, and thus, EPA‘s reliance on the BA was faulty. However, the alleged faults that the commenter points to in OSMRE‘s BA do not implicate EPA‘s analysis because EPA did not rely on any part of the BA which the commenter found to be insufficient.

Based on the above analysis, EPA‘s ~~“n~~o effect” determination is reasonable.

The commenter asks that EPA consider impacts to listed species that are not caused by this permitting action. Specifically, the commenter requests that EPA consider the impacts to listed species due to impacts to riparian habitat from the impoundments, due to air emissions from coal-fired power plants, and due to climate change. First, the permittee‘s discharges do not cause, directly or indirectly, effects on riparian habitat. If impacts to riparian habitat were to occur, these would be related to the creation and/or operation of impoundments, which is permitted under Section 404 of the Clean Water Act by the U.S. Army Corps of Engineers. Therefore, EPA should not and did not consider these effects in its ESA analysis.

Second, the commenter expresses concern for the impacts related to potential emissions of mercury and selenium from the Navajo Generating Station and the proposed Desert Rock Power plant within a 300 kilometer radius to the desert tortoise. EPA did not consider the effects of air emissions on the desert tortoise, because this permit does not directly or indirectly cause the air emissions to occur. Although, EPA agrees with the commenter that it is obligated to consider both direct and indirect effects of its action on listed species, the action being evaluated must actually cause the effect on listed species for EPA to consider the effect in the ESA analysis. This causal link does not exist between the NPDES permit and air emissions, because the NPDES permit does not authorize the mining or combustion of coal. If the EPA were to deny

this NPDES permit, the permittee would not be prohibited from mining coal. Therefore, because the mining and combustion of coal are not results caused by the NPDES permit, EPA did not consider the impacts of air emissions on listed species in this permitting process.

Third, the commenter asks that EPA also consider the effect of climate change on listed species. However, as with the effects of air emissions on listed species, the effects of climate change on listed species are not caused directly or indirectly by the discharges permitted by the NPDES permit. Therefore, EPA did not consider the impacts of climate change on listed species through this permitting process.

In conclusion, EPA determined that this permitting action would not affect listed species, and thus, it was not required to consult with FWS. This permit does not authorize, nor does it cause, the construction of surface impoundments, or air emissions resulting from the mining or combustion of coal. Therefore, the issues related to the impacts of filling wetlands, power generation, or air impacts are not related to this permitting action, and EPA cannot consider the impacts due to such activities in its ESA analysis.

8. Administrative Record Deficiencies

COMMENT: The Administrative Record provided to BMWC by the agency is entirely inadequate. Although there are numerous documents cited in the permit application that would assist the public in assessing the validity of EPA‘s assertions and the adequacy of the proposed NPDES permit, these materials are not part of the agency‘s Administrative Record. Their absence precludes the public (and by extension the agency) from forming a defensible conclusion on the adequacy of the proposed permit.

In particular, the Administrative Record does not include the monitoring data upon which may of the assertions in the application rely. Rather than data that shows analyses and trends over the decades that have been monitored, the application and the Administrative Record include only summaries of the data. Further, these summaries are presented only for sites that have had exceedances and report only the number of exceedances and the ranges and averages. Absent entirely are time series data from which one might extract insights with respect to either typical trends or anomalous trends at specific points.

Letters in the Administrative Record seemingly acknowledge that meaningful trends may possibly exist (and allude to specific trends in general terms), but again no data is provided in the

application, the permit or the Administrative Record from which to view or understand those discussed or others that may be present.

This inadequacy applies to both water chemistry and flow rates. Flow rates are simply (and generally) listed as the numbers of occasions with flow, with ponded water, with wetness, or with dry. The information on flow rates provided in the record provides no meaningful understanding of the sequencing, duration, or magnitude of flow.

Among the more important missing documents are the results of the annual seep investigations that track conditions at some impoundment locations over a period of about a decade. These reports are cited and clearly relied upon by the applicant and EPA, but are not part of the Administrative Record and accessible by the public for independent review and assessment. Finally, the record fails to include maps showing the location of the outfalls. The record is also devoid of any related 404 permitting materials from the Army Corps of Engineers. BMWC [the commenter] respectfully requests that these materials be incorporated into the agency's Administrative Record and that the draft permit be re-noticed for additional public review and comment.

BMWC notes that on March, 29, 2010, the Center for Biological Diversity submitted a Freedom of Information Act ("FOIA") request to EPA for all records related to the proposed NPDES permit. At a minimum, BMWC et al. should be allowed to supplement their comments on the NPDES permit 60-days after release of any records under FOIA by the agency.

RESPONSE: EPA does not agree the Administrative Record is incomplete or deficient. "[T]he complete or official administrative record for an agency decision includes all documents, materials, and information that the agency relied on directly or indirectly in making its decisions." *In re: Dominion Energy Brayton Point*, L.L.C., 12 E.A.D. 490, PPT (EAB Feb. 1, 2006) (*citing Bar MK Ranches v. Yuetter*, 994 F.2d 735, 739 (10th Cir. 1993); *Thompson v. U.S. Dep't. of Labor*, 885 F.2d 551, 555 (9th Cir. 1989)). Specifically, the Administrative Record for the draft permit must contain the permit application and any data supplied by the applicant, the draft permit, the fact sheet, all documents cited in the fact sheet, and all other documents contained in the supporting file for the draft permit. 40 C.F.R. § 124.9. The Administrative Record includes all documents, materials, and information upon which EPA relied in making its permitting decision. EPA did not omit any of data supplied by the applicant from the Administrative Record. Further, the Administrative Record includes all the specific documents required by 40 C.F.R. § 124.9. Therefore, the Administrative Record is complete.

The commenter states that —no data is provided in the application, the permit or the Administrative Record from which to view or understand those discussed." The commenter's assertion is incorrect. Data on water chemistry and flow rates is provided throughout the Administrative Record, particularly in the Fact Sheet. For example, the table in Section IV of the Fact Sheet provides the date, volume, and source of every discharge which has occurred during the past permit term from 2005-2009. The permit application, EPA Form 2C, Attachment 1, provides Organic, Inorganic, Biological and Radiochemical Analysis for pollutant concentrations, including the maximum daily value and concentration for analytical parameters.

The commenter is correct that the Administrative Record does not include a copy of every Discharge Monitoring Report ("DMR") which the permittee has submitted every quarter in accordance with the previous permit terms. The DMRs are not typically part of administrative records due to the volume of material and the fact that EPA utilizes data provided in the permit application, not the DMRs, to assess the reasonable potential of the discharge to cause or contribute to a violation of water quality standards. EPA typically evaluates the maximum observed concentrations to assess reasonable potential in accordance with the methodology detailed in the Technical Support Document for Water Quality-based Toxics Control (EPA, 1991). The maximum observed concentration data is provided in the permit application, not the DMRs.

While the DMR data is not included in the Administrative Record, all DMRs are publicly available documents which can be obtained directly from EPA by request or, alternatively, can be directly viewed on EPA's website through the Permit Compliance System webpage. All DMRs are available to the public for review at the following website: http://www.epa-echo.gov/echo/compliance_report_water_pcs.html.

Additionally, Section VI of the Fact Sheet contains a detailed description of the seep monitoring results, including a table listing the number of seeps identified and sampled each year and a table summarizing the data obtained from each impoundment as it relates to water quality standards. The Interim Final Report on Seep Management Plan is provided in the Administrative Record in

Part F, Seep Management Plan Review. This report provides a detailed written analysis of every impoundment, including its drainage age, use for stormwater controls, location of seeps discovered, and sampling conducted at those seeps, along with data results compared to water quality standards. Additional tables in the report provide Summary of Seepage Inspections and Monitoring Results for each year from 2003 to the present (Table 1); Site Conditions at Monitored Seeps 1999-2007 (Table 2); and Summary of Exceedances of NNEPA water quality standards (Table 3) which lists every data sample which exceeded water quality standards. Thus, the Administrative Record is not lacking the results of the seep investigations, as the commenter suggests.

The commenter is correct that the Administrative Record contains no materials related to the 404 permitting from the Army Corps of Engineers. The 404 permit issued by the Army Corps of Engineers is a separate permitting action from the NPDES permit renewal and is not a part of the regulatory record for the 402 permit reissuance.

EPA disagrees that EPA should further extend the comment period as a result of the March 29, 2010 FOIA request. EPA first proposed to reissue the permit on February 19, 2009, and subsequently reproposed the permit on January 20, 2010 to allow for additional public comment. EPA provided two comment period extensions at the request of commenters, which ultimately extended the comment period to April 30, 2010. The FOIA request was not submitted until March 29, 2010, more than two months after the reproposal was issued, and EPA provided a timely response. The commenter does not contend that EPA's response was delayed. EPA held two public workshops and hearings, in addition to meeting with commenters at the San Francisco EPA office on March 3, 2010. EPA believes commenters have had ample opportunity to request additional materials and to review the record for the permitting action.

9. Additional Comments related to other permitting actions & authorities

a. Need to apply new Guidance for Appalachian coal mines

COMMENT: New EPA guidance (April 1, 2010) provides instructions for improving EPA‘s of surface coal mining operations in Appalachian coal mines. As this guidance is equally

applicable to the Black Mesa mine, BMWC [the commenter] asks EPA to use this new guidance in permitting for Black Mesa.

RESPONSE: On April 1, 2010, EPA issued guidance to clarify how EPA is carrying out responsibilities to assure that the environment impacts of Appalachian surface coal mining operations comply with the CWA, NEPA, and the Environmental Justice Executive Order 12898. EPA notes that Appalachian Coal Mining has many unique environmental consequences due to geography, soil geochemistry, pollutants of concern, surface water resources, and legacy coal mining which are not necessarily related to surface coal mines of northeastern Arizona. For example, PWCC is not conducting ~~"m~~mountaintop removal" where stream valleys are permanently filled with overburden, nor do the Kayenta or Black Mesa mines have the potential to generate acid mine drainage. The Region has reviewed the guidance, and has concluded the permit is consistent with those portions of the guidance that address compliance with applicable conditions established under the CWA for all coal mines, regardless of location.

b. Concerns regarding invasive species

COMMENT: You have failed to address the impacts of the proposed infrequent discharges on invasive species, particularly salt cedar. I believe these infrequent discharges will encourage growth of this species

RESPONSE: The commenter fails to provide specific information on which the concern regarding invasive species is based, and EPA therefore cannot provide a detailed response to this comment. The record does not indicate any conditions which will exacerbate the growth of invasive species. *See also* Response # 8, above (discussing compliance with the Endangered Species Act).

c. Permit allows self-regulation

COMMENTS: Several comments claimed that the permit allows PWCC to ~~"s~~elf-regulate:"

- Should consult with citizens to do monitoring of mine site; EPA should fund citizens to do water quality monitoring
- Monitoring should be done by independent group
- PWCC is not properly monitoring and reporting

- It appears the dischargers are essentially managing themselves.

RESPONSE: Nationwide, the NPDES program relies on permittee self-monitoring, with oversight by EPA (or the authorized State or Tribe). The permit requires that the permittee prepare a Quality Assurance sampling plan (*see* Section D.1 of permit), provide monitoring results to EPA, utilize EPA-approved methods under the Clean Water Act, use certified laboratories, and maintain records of monitoring. These are standard components of all EPA issued permits and are included in the final permit. In addition, the permittee is required to submit monitoring reports to the Navajo and Hopi environmental offices as well as to EPA. These reports must be certified and signed by a duly authorized representative of the permittee. If false data is submitted, the permittee is subject to civil and criminal liability. EPA does not typically require independent monitoring for other permittees, and EPA does not agree monitoring need be conducted by an independent agency for this permit. Regulatory agencies, including EPA and the Navajo Nation, conduct regular compliance inspections of the mine.

10. Comments related to issues not addressed by CWA Section 402 Permits

a. OSMRE permits

COMMENTS: Several comments focused on the relationship of the OSM permit and the NPDES permit being issued by EPA.

- EPA's NPDES permit process should coincide with OSM's permitting process (how does EPA know what the discharges are when we do not know what OSM will do with the mine?)
- need to issue a cease and desist order under PWCC posts necessary bonds
- The Black Mesa & Kayenta mines are operating without a permit due to Judge Holt's decision on the life of mine permit, and the NPDES permit is therefore illegal as well

RESPONSE: The NPDES permit renewal is issued under the authority of Section 402 of the CWA for the discharge of pollutants through a point source to a water of the U.S. The decision regarding the Life of Mine permit under SMCRA authority does not affect this permitting action for the control of pollutants discharged to waters of the United States from the mine site.

b. <u>Groundwater concerns</u>

COMMENTS: Sediment ponds and/or discharges contaminate groundwater; EPA should not treat surface water and groundwater separately

RESPONSE: The NPDES permit renewal is issued under the authority of Section 402 of the CWA for the discharge of pollutants through a point source to a surface water of the United States. Section 402 of the CWA does not regulate the discharge of pollutants that reach only groundwater. Although certain discharges to groundwater may be subject to the Underground Injection Control provisions of the Safe Drinking Water Act, 42 U.S.C. §300f et. seq., that is beyond the scope of this permit.

c. Air concerns

COMMENTS: Coal dust settles on bottom of ponds, when it dries the wind blows the dust. Coal dust should be cleaned from ponds.

RESPONSE: The NPDES permit renewal is issued under Section 402 of the CWA for the discharge of pollutants through a point source to a water of the United States. Although the regulation of air pollutants from the mine site may be subject to the requirements of the Clean Air Act, 42 U.S.C. §7400 et. seq., that is beyond the scope of this permit.

d. CWA 404

COMMENT: EPA seeks to issue the NPDES permit for discharges or outfalls from earthen impoundments with no indication that such impoundments have not been properly permitted in the first instance by the Army Corps of Engineers ("Corps") under Section 404 of the CWA. 33 U.S.C. § 1344. It is impossible to discern from EPA's administrative record which impoundments were subject to 404 permitting. When contacted, the head of EPA's permitting office, David Smith, claimed that he "was personally unfamiliar with the 404 permitting history at the site and that I did not personally recall seeing any 404 permitting issues raised during the period I managed EPA Region 9's Wetlands Office." No other information has been provided by the EPA regarding this matter.

Additionally, and because EPA has acknowledged that "[t]he facility may also require authorization under a separate permit under the authority of Section 404 of the CWA for the discharge of fill material to a water of the U.S.," Comment Response Document (August 3, 2009) at 8, BMWC requests that EPA: (1) identify all impoundments which will be subject to 404 permitting under the terms and conditions of the current NPDES permit renewal; (2) identify all of the impoundments (and outfalls) which are or have been subject to 404 permitting; and, (3)

Identify and provide any and all previously issued or to be issued 404 permits for inclusion in EPA's administrative record. Additionally, BMWC[the commenter] requests that EPA identify and any and all requirements and design parameters that may be necessary to implement Section 404 of the CWA and as they relate to the 111 outfalls now covered by EPA's NPDES permit.

RESPONSE: The NPDES permit does not address, nor authorize, any activity which results in the discharge of dredged or fill material to a water of the United States. The NPDES permit renewal is issued under Section 402 of the CWA for the discharge of pollutants through a point source to a water of the United States. A separate CWA Section 404 permit, issued by the U.S. Army Corps of Engineers, is required for any activity at the mine site which results in the discharge of dredged or fill material to a water of the United States.

e. Water Rights

COMMENTS: Several comments focused on water rights and water usage.

- Moenkopi wash used to flow all the time
- Water is lossed [sic] for downstream farmers because water is trapped in impoundments
- Any water impoundment and discharge permit is illegal without the resolution of Hopi Reserved Water Rights of Moencopi farmers.

RESPONSE: As described in the Fact Sheet, the new permit establishes effluent limits for Western Alkaline Reclamation Areas and requires a seep management plan that prioritizes the removal of impoundments. The new regulatory category for Western Alkaline Reclamation Areas requires PWCC to establish Best Management Practices for the control of sediment, such as reclamation, re-vegetation, contour furrowing, etc. Implementation of Best Management Practices for post-mining areas will allow the permittee to meet effluent limitations by removing impoundments and reclaiming the impoundment areas to re-establish the natural hydrology of the channels. Although EPA is prioritizing the removal of impoundments to reclaim the post-mining areas through implementation of the seep management plan and through implementation of the Sediment Control Plan for Western Alkaline Reclamation Areas for purposes of protecting downstream water quality, EPA believes that the effects of such work may have beneficial impacts on conditions leading to the commenters' concerns.

EPA‘s reissuance of the NPDES permit is not predicated on the resolution of Hopi Reserved Water Rights of Moencopi farmers. As discussed in the response to comment 5.a., above, EPA received a Water Quality Certification from the Hopi Tribe on June 12, 2009 granting certification with certain conditions, which have been incorporated into the final permit.

f. Mine Lease

COMMENT: EPA should not issue permit until Navajo Nation council has reviewed the mine lease

RESPONSE: EPA does not consider issues related to the mine lease in the reissuance of this permit.