

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

Final Permit
2010

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Black Mesa Complex
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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

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: A Process 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.