

**ENVIRONMENTAL APPEALS BOARD
U.S. ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C.**

In Re:)
)
)
Four Corners Power Plant)
NPDES Renewal Permit: NN0000019)
Arizona Public Service Company (Applicant))
)
)

PETITION FOR REVIEW BY DINE’ CITIZENS AGAINST RUINING THE ENVIRONMENT, SAN JUAN CITIZENS ALLIANCE, AMIGOS BRAVOS, CENTER FOR BIOLOGICAL DIVERSITY, AND SIERRA CLUB.

Pursuant to 40 CFR § 124.19(a), Dine’ Citizens Against Ruining the Environment (“Dine’ CARE”), San Juan Citizens Alliance (“SJCA”), Amigos Bravos, Center for Biological Diversity (“the Center”), and Sierra Club (collectively “Petitioners”) jointly file this Petition for Review of Final Renewal NPDES Permit No. NN0000019 (“Permit”), issued by Tomas Torres, Director, Water Division, EPA Region IX, to Arizona Public Service Company (“APS”) for the Four Corners Power Plant on June 12th, 2018. Attached as Exhibit 1.¹

The entire Permit is based on erroneous findings of fact and conclusions of law. These errors also involve significant policy matters that warrant review by the Environmental Appeals Board. 40 CFR § 124.16(a).

¹ The cover letter to the June 12, 2018 Permit is attached hereto as Exhibit 2. The Permit Fact Sheet is attached hereto as Exhibit 3. The Permit Response to Comments is attached hereto as Exhibit 4.

Upon the filing of this Petition for Review, because this action involves a renewal permit, “the contested permit conditions shall be stayed...” 40 C.F.R. § 124.16(a)(1). Further, “[u]ncontested conditions which are not severable from those contested shall be stayed together with the contested conditions.” Petitioners are contesting the legality of EPA’s issuance of the Permit as a whole in addition to specific conditions. Except for the conditions specifically identified herein, all provisions of the contested Permit must be stayed.

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III. INTRODUCTION

This case raises important issues of environmental justice, as well as the protection of public health and the environment. The Four Corners Power Plant is a coal-fired power plant owned and operated by a conglomerate of large corporate utility companies.² The power plant is located entirely on the Navajo Nation, as are the receiving waters of Morgan Lake, No Name Wash, the Chaco River and the San Juan

² Exhibit 3, pp. 1-2.

River (portion only).³ On July 2, 2018 the Navajo Nation, through its wholly owned company Navajo Transitional Energy Company, purchased a 7% share in the power plant.⁴ Prior to this recent purchase, the Navajo Nation did not have any ownership interest in the Plant.⁵

As a condition of operations, the corporate utility companies forced the Navajo Nation to contract away its right to regulate any environmental aspect of the plant, including but not limited to water pollution discharges from the plant into Navajo watersheds.⁶ The December 1, 1960 “Indenture of Lease” governing the construction and operation of the FCPP on the Navajo Nation prohibits the Navajo Nation from regulating any environmental aspect of plan operation.⁷ The lease was subsequently revised.⁸ The currently effective lease between the FCPP owners and the Navajo Nation includes the following provision:

The Tribe covenants that, other than as expressly set out in the New Lease or in the Amended Original Lease, respectively, it will not directly or indirectly regulate or attempt to regulate the Lessees under the New Lease or Arizona under the Amended Original Lease or the construction, maintenance or operation of the Enlarged Four Corners Generating Station and the transmission systems of the Lessees and Arizona, or their rates, charges, operating practices, procedures, safety rules, or other policies or practices, or their sales of power...” (“Lease Provision”)⁹

³ *Id.*

⁴ Exhibit 5.

⁵ Since it is now a partial owner of the plant, EPA must require the Navajo Nation to waive its sovereign immunity and be subject to the jurisdiction of U.S. federal courts for purposes of enforcing federal environmental laws, including but not limited to the Clean Water Act citizen suit provision. 33 U.S.C. §1365.

⁶ Exhibit 6, p. 22, § 17.

⁷ *Id.*

⁸ Exhibit 7 and Exhibit 8.

⁹ Exhibit 8, p. 41, ¶ 22.

In 2006 EPA approved Navajo Nation’s Section 518 “treatment as State” application to adopt tribal water quality standards, but this approval did not include standards for Morgan Lake. In approving the “treatment as State (“TAS”)” application, EPA stated:

“In approving the Tribe’s Application, EPA is not making any findings about the Tribe’s authority over Morgan Lake or the Four Corners Power Plant and Navajo Generating Station or their owners and operators. EPA is also deferring the issue of whether the Tribe’s water quality standards, if and when approved by EPA, would apply to any CWA-permitted discharges from these facilities to Tribal waters. To the extent necessary, ***EPA will consider these issues***, and how they relate to the lease provisions, ***in the context of future permitting*** or other relevant action taken by EPA.”¹⁰ (emphasis added).

With the contractual waiver, TAS reservation, and since States may not enforce federal law on federally recognized Indian Reservations, only EPA can administer the federal Clean Water Act requirements for Morgan Lake.

EPA had not renewed the previous FCPP NPDES permit since 2001.¹¹ EPA allowed the prior NPDES permit to languish un-renewed for over 12 years after it expired. EPA also repeatedly broke promises to renew the permit. EPA finally issued the Permit only after being sued by Petitioners in federal court to force action.¹²

As will be discussed below, EPA’s long overdue Permit is a dereliction of duty because the agency completely failed to include the protections guaranteed by the federal Clean Water Act and the implementing regulations. EPA’s shamefully defective Permit raises significant environmental justice concerns for Navajo Nation residents—one of the

¹⁰ Exhibit 9, p. 11, footnote 4.

¹¹ Exhibit 10.

¹² Exhibit 11.

poorest minority communities in the United States. The Board must reverse EPA's deficient Permit.

IV. THRESHOLD PROCEDURAL REQUIREMENTS

Petitioners satisfy the threshold requirements for filing a petition for review under 40 C.F.R. Part 124. First, the Petition is timely.¹³ Second, on February 15, 2015 each of the Petitioners filed a joint comment letter on EPA's Draft Permit.¹⁴ In addition, all of the issues raised in this Petition for Review are ripe because each issue was raised with adequate specificity in Petitioners' comment letter.¹⁵

Each Petitioner is a public interest conservation organization with members adversely impacted by EPA's issuance of the Permit. Each Petitioner organization has members that live, work, and/or recreate near the Four Corners Power Plant and in watersheds affected by the Plant, including Morgan Lake, the Chaco River and the San Juan River.¹⁶ In addition, Dine' CARE is a Navajo based public interest organization with Navajo members living near the power plant. As such, each Petitioner organization has standing to bring this Petition for Review. 40 C.F.R. §124.19(a)(2).

V. FACTUAL BACKGROUND

A. The Coal Plant

The Four Corners Power Plant is located on the Navajo Nation, near Farmington, New Mexico. The power plant began operations in 1963 and is scheduled to continue operating until at least 2041—over 75 years.

¹³ Exhibit 2. Petitioners had 33 days, or until July 16, 2018, to file their Petition.

¹⁴ Exhibit 12 hereto.

¹⁵ A citation to the administrative record identifying where each issue was raised during public comment is provided in the "Issues Presented" section of this Petition.

¹⁶ Declarations from members of the Petitioner organizations further establishing standing are attached hereto as Exhibit 13, Exhibit 14, and Exhibit 15.

The FCPP provides electrical power to urban areas in Arizona, Texas, and New Mexico. None of the power serves residents on the Navajo Nation despite the fact that 32% of all Navajo families lack electricity in their homes.¹⁷

The coal plant diverts up to 48 million gallons of water per day from the San Juan River.¹⁸ The water is withdrawn via two 10 by 10-foot screened intake bays located just above a gated weir.¹⁹ The weir dams water in the river to assure the intake bays are adequately submerged.²⁰ Water drawn from the San Juan River is conveyed to Morgan Lake, a man-made reservoir adjacent to the plant, is then used as cooling water in the coal plant, and is then discharged back Morgan Lake and then discharged to No Name Wash, which flows to the Chaco River, which flows back into the San Juan River downstream of the intake location.²¹

Coal combustion waste results from burning coal at the coal plant. This waste—fly ash, bottom ash, and boiler slag—is collected in the plant’s boilers and pollution control equipment and then disposed of in lined and unlined liquid surface impoundments at the coal plant site.²² Over the past 50 years, Arizona Public Service has disposed of approximately 33.5 million tons of coal combustion waste. Coal ash contains numerous toxic constituents including heavy metals such as antimony, arsenic, barium, beryllium, cadmium, chromium, lead, mercury, nickel, selenium, and thallium. Pollutants from coal combustion waste have leached through the bottom of existing coal combustion waste

¹⁷ <https://newsmaven.io/indiancountrytoday/archive/not-alone-in-the-dark-navajo-nation-s-lack-of-electricity-problem-yO5P4y3H6k6kuxF-U5FvvQ/>.

¹⁸ Exhibit 3, p. 8.

¹⁹ Exhibit 16.

²⁰ *Id.*

²¹ *Id.* at pp. 2 & 8.

²² Exhibit 17, Section 4.5, p. 4.5-6.1 excerpt.

impoundments at the site and entered the groundwater migrating toward the Chaco River.²³ The coal ash emerges as seepage down gradient from the unlined coal ash ponds. Arizona Public Service has constructed various intercept trenches and pump-back wells beginning in 1977 and continuing through the present attempting to minimize the migration of this pollution to the adjacent Chaco River.²⁴

B. The San Juan River, Morgan Lake, and the Chaco River

The second largest of the three sub-basins of the Colorado River, the San Juan River is one of the most important waterways in the Southwest. Morgan Lake, No Name Wash, and the Chaco River are tributary to the San Juan River. Morgan Lake is a 1,200-acre cooling pond for the power plant that is also operated as a public recreation area.²⁵ Primary contact recreation is allowed on the lake, including windsurfing, waterskiing, boating, fishing, and other activities which can result in ingestion, inhalation, and direct contact with the waters of Morgan Lake.²⁶ The lake is also used for livestock watering. EPA previously required the adjacent Navajo coal mine to obtain an NPDES permit for discharges into the lake, thus concluding that the lake was a “water of the United States.”²⁷

C. Endangered Colorado Pikeminnow and Razorback Sucker

The Colorado pikeminnow was federally listed as endangered in 1973. Critical habitat for the Colorado pikeminnow, designated in 1994, includes the 100-year

²³ *Id.*

²⁴ *Id.*

²⁵ <https://farmingtonnm.org/listings/morgan-lake/> (last visited July 4, 2018).

²⁶ Exhibit 4, pp. 15-16. Although EPA claims these uses of the lake are “incidental” and do not indicate the presence of ‘interstate commerce’, these statements are arbitrary and capricious because they are not supported by evidence in the administrative record.

²⁷ Exhibit 18, cover page and p. 3.

floodplain of the species' historic range in San Juan County, New Mexico, and San Juan County, Utah. This critical habitat includes the stretch of the San Juan River adjacent to the FCPP and the location of the plant's cooling water intake structure and the confluence of the San Juan River where its pollution discharges from Outfall 001 flow. Remnant populations of this endangered fish exist in this segment of the San Juan River.

The razorback sucker was federally listed as endangered in 1991. The Service designated the segment of the San Juan River from the Hogback Diversion to Lake Powell as critical habitat for the razorback sucker in 1994. This critical habitat includes the stretch of the San Juan River adjacent to the FCPP.

In 2015, as required by section 7 of the Endangered Species Act, the Fish and Wildlife Service issued a Biological Opinion analyzing the effects of continued operation of the Four Corners Power Plant and related coal mine on endangered species as part of the lease extension allowing operation of the plant from 2016-2041.²⁸ The Biological Opinion acknowledged the already dire state of the Colorado pikeminnow and razorback sucker populations in the San Juan River and cataloged substantial adverse impacts to these populations and their critical habitat from the continued operation of the FCPP and Navajo Mine, including impacts from water pollution and the FCPP cooling water intake.²⁹

The Biological Opinion found that entrainment in the coal plant's water intake system, as well as other impacts, would decrease the population viability of Colorado pikeminnow and razorback sucker in the San Juan River basin.³⁰

²⁸ Exhibit 19.

²⁹ *Id.* at pp. 109-114.

³⁰ *Id.* at p. 134.

D. The NPDES Permit

On April 3, 2001 Alexis Strauss, then Director of EPA Region 9's Water Division, issued the previous NPDES permit for the FCPP, NPDES Permit No. NM0000019.³¹ The permit became effective on April 7, 2001, and expired on April 6, 2006.³²

Under the terms of the permit and EPA regulation, the permittee was required to submit a renewal application at least 180 days prior to the expiration of the permit. APS submitted an application for a new NPDES permit on October 5, 2005. After sitting dormant at EPA for over 7 years, on October 30, 2012 EPA acknowledged that "much time has elapsed since [APS] submitted the original application for renewal" and requested an updated application.³³ EPA indicated at that time that it "plan[ne]d to draft and issue a renewed NPDES permit for the APS Four Corners Power Plant in 2013."³⁴

APS submitted a revised permit application on February 15, 2013. On February 19, 2013, EPA stated that it would "draft a proposed renewed NPDES permit within 6 months" after receiving the revised application.³⁵ EPA failed to issue a draft permit by its stated deadline of August 15, 2013. On May 16, 2014, Petitioners issued a 60-day notice of intent to sue letter to EPA alleging, *inter alia*, that EPA had illegally delayed in issuing a final NPDES permit for the FCPP.³⁶

³¹ Exhibit 10, p. 1. The Fact Sheet for the 2001 NPDES permit is attached hereto as Exhibit 20.

³² Exhibit 10, p. 1.

³³ Exhibit 21, p. 1.

³⁴ *Id.*

³⁵ Exhibit 22 hereto, p. 1.

³⁶ Exhibit 23.

On November 13, 2014, EPA released a draft permit and opened a public comment period.³⁷ On February 18, 2015 Petitioners and other conservation organizations submitted timely written comments on EPA's draft permit.³⁸ The public comment period closed on February 18, 2015.

Over three years after the close of the public comment period EPA still had not taken final action on the pending permit application. On February 28, 2018, EPA stated that it "will issue the permit for the Four Corners Power Plant in the immediate future."³⁹ On March 8, 2018, Petitioners asked EPA Region 9 for a more precise schedule for its issuance of the FCPP Permit.⁴⁰ On that same day, EPA's permit engineer responded that it would issue the permit in April 2018.⁴¹ But again, EPA Region 9 failed to render a final decision on the permit application in April 2018. This time, EPA delayed its timeline for acting on the permit application until June 2018.⁴² On May 23, 2018 Petitioners filed suit in federal court seeking an order directing EPA to take final action on the long pending permit application.⁴³ Six days later, on May 29, 2018, EPA illegally waived its legal obligation to conduct a CWA Section 401 water quality certification related to issuance of a final NPDES permit for the FCPP without public notice or comment.⁴⁴ In response to the lawsuit, EPA issued the final permit on June 12, 2018.⁴⁵ It had been over 17 years since EPA updated the NPDES permit for the FCPP.

³⁷ Exhibit 24.

³⁸ Exhibit 12.

³⁹ Exhibit 25, p. 1.

⁴⁰ Exhibit 26, p. 1.

⁴¹ *Id.*

⁴² Exhibit 27, p. 1.

⁴³ Exhibit 11.

⁴⁴ Exhibit 4, p. 7, Response 4.

⁴⁵ Exhibit 1.

E. The Discharges and the Cooling Water Intake

FCPP discharges a suite of pollutants including copper, iron, chlorine, heated water, suspended solids, among others to Morgan Lake, No Name Wash, the Chaco River, and ultimately the San Juan River.

1. The discharge into Morgan Lake, No Name Wash, Chaco River, and the San Juan River.

a. Outfall 001

The FCPP discharges pollutants into Morgan Lake which discharges to No Name Wash, which flows to the Chaco River and then the San Juan River.⁴⁶ The Permit does not regulate discharges into Morgan Lake. Outfall 001 only regulates discharges from the lake to No Name Wash. The flow rate of this discharge is approximately 4.2 million gallons/day.⁴⁷ The permittee discharges from Morgan Lake to No Name Wash in order to reduce total dissolved solid (TDS) build up in the lake, which must be controlled because the lake water is also used for cooling the generation units.⁴⁸ However, the Permit fails to set effluent limits for the discharge of TDS into the lake or from the lake into No Name Wash. The Permit only sets a flow limit of 14.7 million gallons per day from Outfall 001, allows a maximum daily temperature discharge of up to 95 degrees Fahrenheit (35 degrees Celsius) into this effluent dominated stream, and regulates pH.⁴⁹ *Id.* The Permit does not impose any effluent limits for TDS or any other pollutants.

b. The “Internal” Outfalls

⁴⁶ Exhibit 3, p. 2.

⁴⁷ *Id.* at p. 2.

⁴⁸ *Id.*

⁴⁹ Exhibit 1, p. 3.

The draft permit also regulates discharges from the following so-called “internal outfalls”:

i. Internal Outfall 01A: FCPP also discharges condenser cooling water into an effluent channel which flows to Morgan Lake.⁵⁰ This discharge is referred to as “Internal Outfall 01A.” FCPP chlorinates the cooling water to act as a biocide to prevent fouling of the generating units. This permit allows a discharge of 954 pounds per day of Total Residual Chlorine into the effluent channel, and also regulates pH and oil and grease.⁵¹ No other pollutants have effluent limits. The Permit does not regulated discharges from the Internal Outfall 01A into Morgan Lake.

ii. Internal Outfall 01B: This internal outfall was used for disposing of chemical cleaning wastewater to an ash pond. APS claims that Internal Outfall 01B is not in use but wishes to retain the possibility of discharging through the outfall in the future.⁵²

iii. Internal Outfall 01E: This outfall discharges water pollution from the combined waste treatment pond that receives 8-13 million gallons per day of waste streams from various pollution sources at the power plant.⁵³ The wastewater from this pond is channeled into a culvert which is regulated prior to mixing with the condenser cooling water discharged from Internal Outfall 01A. The combined discharges from Internal Outfall 01E and Internal Outfall 01A are then discharged into Morgan Lake. A large component of Internal Outfall 01E is bottom ash transport water. EPA’s new effluent limitation guidelines for coal fired power plants state, “there shall be no discharge of pollutants in bottom ash transport water” beginning as soon as November 1,

⁵⁰ Exhibit 3, p. 2.

⁵¹ Exhibit 1, p. 5.

⁵² Exhibit 3, p. 2.

⁵³ Exhibit 3, pp. 2-3.

2018. *See*, 40 C.F.R. §423.13(k)(1)(i), 80 Fed. Reg. 67896 (November 3, 2015). Despite this prohibition, EPA failed to include provisions in the Permit requiring compliance with the new ELGs because of purported delayed compliance deadlines.⁵⁴

2. The leaking coal ash impoundments

Since at least 1977, the coal ash impoundments at the FCPP have leaked contaminated seepage into the Chaco River Basin.⁵⁵ The Final Environmental Impact Statement documents the history of coal ash seepage into the Chaco River Basin by stating:

Previous studies found two primary areas of groundwater seepage beneath the ash disposal areas, the “north seep” and “south seepage area” (APS 2013). In 1977, APS constructed an open ditch system to collect *seepage water from the ash disposal facilities* as part of the NPDES permits for the FCPP. In 1993 and 2011, extraction wells were installed. These systems are designed to prevent contamination of the Chaco wash. In October 2011, APS constructed a north intercept trench excavated to the Lewis shale formation. A review of groundwater level data and water quality data in three wells located downgradient of the trench show declines in all constituents and groundwater level. APS installed a second south intercept trench to collect groundwater in early 2014. The finished project entailed the construction of two French drains adjoining each other in a north to south direction. Both French drains are 2 miles long and the trenches for the drains were excavated to the Lewis shale formation. The bottom of the trench was filled with a granular media and slotted pipe, to allow the collection of water at two points approximately mid-length in location. Water that is collected at these points is pumped to FCPP’s Lined Decant Water Pond. With the operation of the intercept trenches, continued operation of wet ash ponds and expansion of the DFADAs would have less potential to contaminate local groundwater and water quality in Chaco Wash.⁵⁶

The FEIS makes clear that the discharge into the Chaco River watershed was “from the ash disposal facilities.” EPA was a cooperating agency with regard to the 2015 FEIS.⁵⁷

⁵⁴ Exhibit 4, p. 3, Response 2.

⁵⁵ Exhibit 17, at p. 4.5-61.

⁵⁶ *Id.*

⁵⁷ Exhibit 28, p. 2.

The coal ash seepage is believed to contain mercury, selenium, boron, nickel, uranium, zinc, and total dissolved solids. The coal ash seepage is also expected to exceed pollution concentrations standards enacted to protect human health, livestock, and aquatic life. The Permit acknowledges these coal ash discharges by stating,

“[s]urface seepage intercept systems shall be constructed and operated for existing unlined as ponds. Water collected by these intercept systems shall be returned to the double lines water decant pond. All provisions of the Seepage Monitoring and Management Plan as described in the Special Conditions Section must be implemented.”⁵⁸

While EPA’s so-called “Seepage Monitoring and Management Plan” contains requirements to identify and monitor the coal ash seeps, the Plan contains absolutely no “Management” requirements for the coal ash seeps, such as NPDES permitting, effluent limitations, or elimination of the emergence of the seeps into the Chaco River watershed. EPA’s Permit also fails to rely on the existing monitoring results in the FEIS identifying the coal ash ponds as the source of the discharge and providing monitoring data.⁵⁹

4. The cooling water intake structure

Cooling water intake structures are regulated by EPA upon issuance of an NPDES permit. The 2001 NPDES permit did not regulate the intake structure or require publicly available reporting on the impacts the intake structure is having on endangered fish species.⁶⁰ The 2018 Permit likewise fails to regulate the cooling water intake structure or require submission of immediately available information on impingement and entrainment. Instead, EPA kicks the can down the road until the next permit cycle by stating:

⁵⁸ Exhibit 1, p. 12.

⁵⁹ Exhibit 1, p. 15.

⁶⁰ Exhibit 10.

The Permittee shall submit all the material required under 40 CFR 122.21 (r) (1)-(8) upon submittal of their next renewal application.⁶¹

This regulatory provision requires the operator of existing cooling water intake structures to identify threatened and endangered species in the affected watershed and submit biological data on mortality and impacts to such species. EPA's Permit completely ignores that fact that the U.S. Fish and Wildlife Service has found that Colorado pikeminnow and Razorback sucker exist in the area of the San Juan River impacted by the FCPP.⁶² The Service also found that the project area contains critical habitat for these endangered fish species.⁶³ The cooling water intake system at the FCPP can cause injury or death to these critically endangered native species due to impingement on the intake structure screens and entrainment in the cooling water system itself. EPA has acknowledged that adverse effects to endangered fish species can also result from "entrainment at the APS Weir on the San Juan River."⁶⁴

VI. ISSUES PRESENTED FOR REVIEW

1. EPA erred by concluding that Morgan Lake is not a "water of the United States" subject to the requirements of the CWA.⁶⁵
2. EPA erred by not imposing effluent limitations on the discharge of pollutants into Morgan Lake.⁶⁶

⁶¹ Exhibit 1, p. 12.

⁶² Exhibit 29, p. 6 of pdf.

⁶³ *Id.* at p. 8 of pdf.

⁶⁴ Exhibit 28, p. 2.

⁶⁵ Petitioners preserved this issue for review. See, Exhibit 12, pp. 11-16.

EPA's Response to Comments on this issue can be found at Exhibit 4, pp. 14-18.

⁶⁶ Petitioners preserved this issue for review. See, Exhibit 12, pp. 11-12 and p. 16. EPA's Response to Comments on this issue can be found at Exhibit 4, p. 18.

3. EPA erred by failing to promulgate water quality standards for Morgan Lake and No Name Wash.⁶⁷
4. EPA erred in finding the discharges did not present a “reasonable potential” for violation of a water quality standard.⁶⁸
5. EPA’s Section 401 water quality certification waiver violated substantive and procedural requirements.⁶⁹
6. EPA erred by not imposing requirements of the new ELGs into the Permit.⁷⁰
7. EPA erred by not properly regulating discharges into the Chaco River watershed from the coal ash ponds.⁷¹
8. EPA erred by failing to undertake an impairment analysis required by Section 303(d) of the CWA.⁷²
9. EPA erred by failing to properly regulate the cooling water intake structure and also violated the Endangered Species Act.⁷³

IX. ARGUMENT

⁶⁷ Petitioners preserved this issue for review. See, Exhibit 12, pp. 5-7. EPA’s Response to Comments on this issue can be found at Exhibit 4, pp. 5-6.

⁶⁸ Petitioners preserved this issue for review. See, Exhibit 12, pp. 16-20. EPA’s Response to Comments on this issue can be found at Exhibit 4, pp. 18-23.

⁶⁹ Petitioners preserved this issue for review. See, Exhibit 12, p. 7. EPA’s Response to Comments on this issue can be found at Exhibit 4, p. 7,

⁷⁰ Petitioners preserved this issue for review. See, Exhibit 12, p. 3. Further, the Final ELGs were not formally promulgated until after the close of the public comment period on the Draft Permit. As such, Petitioners can raise this issue for the first time in this Petition. EPA’s Response to Comments on this issue can be found at Exhibit 4, pp. 2-3.

⁷¹ Petitioners preserved this issue for review. See, Exhibit 12, pp. 7-9. EPA’s Response to Comments on this issue can be found at Exhibit 4, pp. 7-10.

⁷² Petitioners preserved this issue for review. See, Exhibit 12, p. 20. EPA’s Response to Comments on this issue can be found at Exhibit 4, pp. 23-24.

⁷³ Petitioners preserved this issue for review. See, Exhibit 12, pp. 25-41. EPA’s Response to Comments on this issue can be found at Exhibit 4, pp. 24-43.

1. EPA erred by concluding that Morgan Lake is not a “water of the United States” subject to the permitting protections of the CWA.

EPA refused to regulate discharges into Morgan Lake based on its erroneous conclusion that Morgan Lake is not a “water of the United States” subject to NPDES permitting.⁷⁴ EPA’s faulty conclusion implicates virtually all conditions of the Permit, including but not limited to the failure to regulate discharges into the lake, as well as discharges from the so-called “Internal Outfalls” into the lake.

First, Morgan Lake is a “water of the Navajo Nation” as defined in the Navajo Nation’s Water Quality Standards, which includes:

all surface waters including, but not limited to, portions of rivers, streams (including perennial, intermittent and ephemeral streams and their tributaries), lakes, ponds, dry washes, marshes, waterways, wetlands, mudflats, sandflats, sloughs, prairie potholes, wet meadows, playa lakes, impoundments, riparian areas, springs, and **all other bodies or accumulations of water, surface, natural or artificial, public or private, including those dry during part of the year, which are within or border the Navajo Nation. This definition shall be interpreted as broadly as possible to include all waters which are currently used, were used in the past, or may be susceptible to use in interstate, intertribal or foreign commerce.**⁷⁵ (emphasis added).

The Navajo Nation has adopted water quality standards for all waters on the reservation.⁷⁶ EPA approved the Navajo Nation’s water quality standards in 2009.⁷⁷ The Navajo Nation’s water quality standards establish water quality classifications and standards for Morgan Lake and designate the lake for the following uses: primary human contact, fish consumption, aquatic and wildlife habitat, and livestock watering.⁷⁸ The activities considered primary human contact include water skiing, which is a use of the

⁷⁴ Exhibit 4, Response to Comments 5 (p. 7); 7 (p. 11); 9 (p. 13), and 10 (pp. 15-16).

⁷⁵ Exhibit 30, §104, XX.

⁷⁶ *Id.*

⁷⁷ Exhibit 31.

⁷⁸ Exhibit 30, p. 27.

lake.⁷⁹ The Navajo Nation water quality standards include both narrative and numerical water quality standards for Morgan Lake.⁸⁰ Morgan Lake has numeric water quality standards for a large variety of organic, inorganic, and physical pollutants.⁸¹ As noted by EPA, Section 402 and 301(b)(1)(C) of the CWA require that NPDES permits contain effluent limits necessary to meet water quality standards.⁸²

Second, Morgan Lake is a “traditional navigable water” because it supports interstate and foreign commerce and commercial waterborne recreation.

Under 40 CFR § 122.2:

Waters of the United States or waters of the U.S. means:

(a) All waters which are currently used, were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;

In May 2011 the U.S. EPA issued “Draft Guidance on Identifying Waters Protected by the Clean Water Act” clarifying the meaning of these traditional navigable waters:

“For purposes of CWA jurisdiction and this guidance, waters will be considered traditional navigable waters if....

- They are waters currently being used for commercial navigation, including commercial waterborne recreation (for example, boat rentals, guided fishing trips, or water ski tournaments); or
- They have historically been used for commercial navigation, including commercial waterborne recreation; or
- They are susceptible to being used in the future for commercial navigation, including commercial waterborne recreation. Susceptibility for future use may be determined by examining a number of factors, including the physical characteristics and capacity of the water to be used in commercial navigation, including commercial recreational navigation (for example, size, depth, and flow

⁷⁹ *Id.*, §205, pp. 12-13.

⁸⁰ *Id.* at Section 202; Table 204.1; Section 206; and p. 27.

⁸¹ *Id.*

⁸² Exhibit 3, p. 5.

velocity.), and the likelihood of future commercial navigation, including commercial waterborne recreation. A likelihood of future commercial navigation, including commercial waterborne recreation, can be demonstrated by current boating or canoe trips for recreation or other purposes. A determination that a water is susceptible to future commercial navigation, including commercial waterborne recreation, should be supported by evidence.

There is extensive interstate commerce on Morgan Lake. Fishing clubs from New Mexico, Colorado and other states regularly hold winter fishing tournaments on the lake.⁸³ Because the Navajo Nation requires a tribal fishing license, Morgan Lake generates extensive interstate commerce.⁸⁴ There is also extensive boating, water skiing and windsurfing on the lake.⁸⁵ As such, Morgan Lake meets the definition of a “traditional navigable water” under the Clean Water Act.⁸⁶

Third, Morgan Lake is a tributary of a Water of the United States because it contributes flow to a traditional navigable water.

Under 40 CFR 122.2:

Waters of the United States or waters of the U.S. means:

(e) Tributaries of waters identified in paragraphs (a) through (d) of this definition;

In May 2011 the U.S. EPA issued “Draft Guidance on Identifying Waters Protected by the Clean Water Act” clarifying the meaning of tributaries:

“EPA and the Corps will assert jurisdiction over tributaries under either the plurality standard or the Kennedy standard, as described below.

⁸³ Exhibits 32-37.

⁸⁴ *Id.* and Exhibit 38.

⁸⁵ Exhibit 39, p. 3. See also,

<http://www.emnrd.state.nm.us/SPD/BOATINGWeb/MorganLake.html>;

<https://www.aps.com/en/communityandenvironment/environment/morganlakewebcam/Pages/home.aspx>

⁸⁶ While EPA argues that “incidental use of the cooling pond does not provide a sufficient nexus to interstate commerce to justify an assertion of federal jurisdiction” the agency provides no evidentiary support for this conclusion in its administrative record. Exhibit 4, p. 16, Response 10.

“For purposes of this guidance, a water may be a tributary if it contributes flow to a traditional navigable water or interstate water, either directly or indirectly by means of other tributaries. A tributary can be a natural, man-altered, or man-made water body. Examples include rivers and streams, as well as lakes and certain wetlands that are part of the tributary system and flow directly or indirectly into traditional navigable waters or interstate waters. A tributary is physically characterized by the presence of a channel with defined bed and bank. The bed of a stream is the bottom of the channel. The lateral constraints (channel margins) are the stream banks. Channels are formed, maintained, and altered by the water and sediment they carry, and the forms they take can vary greatly.”

Morgan Lake contributes flow to the San Juan River via No Name Wash and Chaco River as described in the draft permit (see below).

“Outfall No. 001 discharges from Morgan Lake to the No Name Wash which is tributary to the Chaco River, which in turn drains to Segment 2-401 of the San Juan River. The discharges according to the permit application submitted by APS from Outfall No. 001 are intermittent with an average of 2.5 days per week of discharge for about 6 months in a year. The average flow rate for the discharge is 4.2 million gallons a day. The length of the No Name Wash from Outfall 001 (parshall flume) to the Chaco River is about 2.5 miles and the point where the No Name Wash meets the Chaco River is about 7 miles from where the Chaco eventually meets the San Juan River. APS mostly discharges in order to regulate total dissolved solids (TDS) build up in the lake which is used for once through cooling of the generating units.”

Further, the State of New Mexico estimated that Morgan Lake “discharges typically occur at an average rate of about 22 cfs for weeks at a time” into Chaco Wash and eventually the San Juan River.⁸⁷ Therefore, Morgan Lake is therefore a water protected by the Clean Water Act because it is a man-made lake that is part of a tributary system that flows directly or indirectly into traditional navigable waters or interstate water. EPA’s falsely implies that Morgan Lake is a “closed-cycle cooling system” no connection to interstate traditional navigable water. EPA’s own permit documents refute this false implication because Morgan Lake is tributary to the San Juan River. EPA’s

⁸⁷ Exhibit 62 hereto, p. 24, fn. 23.

new theory that Morgan Lake is a “**closed** cycle cooling system” also contradicts its previous position that FCPP has a “**once through** cooling system.”⁸⁸

Fourth, EPA’s failure to recognize Morgan Lake as a “water of the United States” is arbitrary and capricious because EPA has taken the opposite position in issuing prior NPDES permits. EPA’s previous NPDES permits for the FCPP treated Morgan Lake as a “receiving water.”⁸⁹ In 2008 EPA issued a final permit for the adjacent Navajo Mine which regulates discharges into Morgan Lake from the Navajo coal mine and imposes effluent limitations based on water quality standards for the Lake.⁹⁰ Likewise, the operator APS has previously admitted that Morgan Lake is “a water of the U.S.”⁹¹

EPA takes the position that Morgan Lake is not a water of the U.S. because it is a “man-made water body constructed in upland areas, and which did not impound any existing Water of the United States.”⁹² This is not a factually accurate statement. Morgan Lake does continuously impounds approximately 17-28 million gallons per day of water from the San Juan River, an existing water of the United States, and then discharges between 3-14.6 million gallons per day back into tributaries of the San Juan River.⁹³ Further, as noted above, EPA’s May 2011 Guidance includes man-made lakes in the regulatory realm of “waters of the United States.” Finally, the fact that Morgan Lake was “constructed in upland areas” has no apparent bearing on whether it qualifies as a water

⁸⁸ Exhibit 10, pp. 2-3. Since EPA has taken conflicting positions, it is not entitled to deference.

⁸⁹ Exhibits 46, 47 and 48. EPA’s current failure to treat Morgan Lake as a water of the U.S. violates the anti-backsliding requirements of the CWA. 33 U.S.C. §1342(o); 40 C.F.R. §131.12.

⁹⁰ Exhibit 18.

⁹¹ Exhibit 40, p. 1.

⁹² Exhibit 41.

⁹³ Exhibit 1, p. 34 Attachment D: Wastewater Flow Schematic.

of the United States.⁹⁴ EPA's July 20, 2017 memo fails to cite any legal authority why construction in an upland area is relevant.

No Name Wash is also a "water of the United States." No Name Wash is tributary to the Chaco River which is tributary to the San Juan River, a traditional interstate navigable water. As such, No Name Wash is considered a water of the Navajo Nation as either a "perennial" or "nonperennial" tributary to the San Juan River."⁹⁵ The Navajo Nation has classified this tributary as secondary human contact, fish consumption, aquatic life habitat, and livestock watering.⁹⁶

In summary, both Morgan Lake and No Name Wash are "waters of the United States" and EPA's failure to treat them as such violates the CWA.

2. EPA erred by not imposing effluent limitations on the discharge of pollutants into Morgan Lake.

An EPA Region 9 site inspection report of the FCPP on May 8, 2012 states: "Total Dissolved Solids are built-up in Morgan Lake before being discharged to the receiving water. Elevated TDS may adversely impact downstream beneficial uses, however there is no criterion for TDS in the Navajo Nation Water Quality Standards."⁹⁷ As discussed above, Morgan Lake itself is a "water of the United States" and thus EPA must establish effluent limitations for the discharge of TDS *into* Morgan Lake from the FCPP and the internal outfalls.

In 2004 the Navajo Nation adopted a numerical TDS water quality standards for livestock watering of 2212 mg/l.⁹⁸ Livestock watering is a current use of Morgan Lake, as

⁹⁴ While EPA refuses to recognize Morgan Lake as a "water of the United States", EPA also refuses to state whether Morgan Lake is a man-made "point source" under the CWA.

⁹⁵ Exhibit 30 at p. 24.

⁹⁶ *Id.*

⁹⁷ Exhibit 17 at p. 4.

well as primary contact recreation, aquatic life, and other uses.⁹⁹ Since Morgan Lake is used for livestock watering and aquatic life, these uses must be protected by adopting TDS effluent limits and monitoring requirements into the current permit.

Further, the current lease between the FCPP owners and the Navajo Nation contains the following provision establishing a concentration-based TDS standard:

“Total dissolved solids in the surface return flow ***shall be measured at the plant release point***, and the effect of such release on the total dissolved solids in the river computed. The Lessees and Arizona agree that such water return will not increase the total dissolved solids of the San Juan River as so computed an average of more than 100 parts per million in any three calendar month period, or an average of more than 400 parts per million in any 24-hour period, provided that the river flow passes such point of return averages 200 cfs or more over such three months’ period. If the river averages less than 200 cfs in such a three-month period, such returned water will not increase the total dissolved solids in the river as so computed an average of more than 100 parts per million multiplied by a factor equal to 200 cfs divided by the average actual river flows in cfs in said three-month period.”¹⁰⁰ (emphasis added).

The above lease provision requires monitoring of TDS “at the plant release point” prior to Outfall 001A and requires adoption of an effluent limitation at the same point of release from the plant to ensure that TDS is not increased above the limits established in the lease. EPA’s Permit is defective because it fails to impose TDS effluent limits and monitoring requirements at the point of release of the discharge from the FCPP into Morgan Lake.

3. EPA erred by failing to promulgate water quality standards for Morgan Lake and No Name Wash.

Congress imposed a requirement on EPA to adopt water quality standards as early as October 18, 1972. 33 U.S.C. §1313(b). Under the Act, EPA must “promptly prepare

⁹⁸ Exhibit 43 attached, p. 30.

⁹⁹ Exhibit 30, p. 27.

¹⁰⁰ Exhibit 10, pp. 54-55, ¶35a.

and publish proposed regulations setting forth a revised or new water quality standard...”
33 U.S.C. §1313(c)(4). This includes water quality standards for thermal discharges. 33
U.S.C. §1313(h). While these legislative provisions generally apply to States, EPA must
also comply with these requirements when it has the sole responsibility for promulgation
of water quality standards for tribal waters, such as with Morgan Lake and No Name
Wash. 33 U.S.C. §1313(c)(4)(B); 40 C.F.R. §131.22(b); and, 81 Fed. Reg. 66902, fn 9
(Sept. 29, 2016).

EPA had 17 years since it last issued an NPDES permit for the FCPP to adopt
water quality standards for Morgan Lake and No Name Wash. EPA failed to do so.
EPA’s failure to do so implicates virtually all aspects of its 2018 Permit, including;
including its “reasonable potential” analysis, its waiver of a Section 401 water quality
certifications; and its failure conduct an impairment analysis under Section 303(d) of the
CWA.

In a September 15, 2006 Inspection Report the agency concluded that “U.S. EPA
may opt to use either Navajo Nation or New Mexico standards.”¹⁰¹ EPA subsequently
approved the Navajo Nation’s Water Quality Standards. The Navajo Nation’s Water
Quality Standards include standards and classifications for Morgan Lake and No Name
Wash. EPA could have independently adopted and applied the Navajo Nation’s water
quality standards as its own for these water bodies and applied the standards in this
permit proceeding without violating the Lease provisions.¹⁰² In fact, EPA’s 2018 Permit

¹⁰¹ Exhibit 2, p. 3.

¹⁰² EPA adoption and application of the Navajo Nation water quality standards for
Morgan Lake and No Name Wash would not violate the Lease provision because EPA,
and not the Navajo Nation, would be independently applying these standards in the
permitting process.

relies on both “numeric standards approved in the 2007 Navajo Nation Water Quality Standards both to assess ‘reasonable potential’ for exceedences and to protect ‘downstream’ beneficial uses in the Chaco River” and “on the Navajo Nation narrative water quality standards applicable to the receiving waters”.¹⁰³ EPA fails to explain why it did not adopt or rely on *numerical* Navajo water quality standards established for Morgan Lake and No Name Wash in setting permit limits. EPA also failed to comply with its previous promise to “consider these issues, and how they relate to the lease provisions, in the context of future permitting.”¹⁰⁴

The Permit Fact Sheet states that, “EPA, as the NPDES permit issuing authority, can use any combination of federal, state or *tribal standards* it deems *most protective of the beneficial uses of the receiving water*, pursuant to its Best Professional Judgment (BPJ) as provided by the Clean Water Act.”¹⁰⁵ However, EPA fails to explain why the Navajo Nation’s water quality standards for Morgan Lake and No Name Wash are not most protective of beneficial uses in these receiving waters. For example, as discussed in more detail below, the Navajo Nation’s water quality standards set a maximum allowable increase from ambient temperature resulting from a thermal discharge to 3.0 degrees Celsius for a water body with a warm water aquatic life classification and 1.0 degrees Celsius for a water body with a cold water aquatic life classification. The thermal discharges to Morgan Lake from the FCPP can reach 95 degrees Fahrenheit. During the hot summer months, the ambient daily temperature of the San Juan River near

¹⁰³ Exhibit 3, p. 2, ¶III and p. 7, ¶VII.A.

¹⁰⁴ Exhibits 9 and 31.

¹⁰⁵ Exhibit 3 at p. 4.

Farmington generally fluctuates between 58-68 degrees Fahrenheit.¹⁰⁶ Thus, the thermal discharge from the FCPP power plant can exceed the ambient water temperature by 30 degrees Fahrenheit or greater. EPA's Permit fails to adequately explain why the Navajo thermal discharge water quality standards were not applied to Morgan Lake and No Name Wash and why the standards are not the most protective of beneficial uses.

As noted above, EPA's Permit also states, "the permit writer has relied on the Navajo Nation water quality standards for the 'downstream' Chaco River as a reference tool for defining the likely best targets for numeric and narrative goals that should be used in determining impacts to Morgan Lake."¹⁰⁷ However, EPA's Permit fails to contain an adequate rationale for why a *stream* standard is an appropriate "reference tool" for a **lake**. Lake standards are very different from stream standards. The Navajo Nation Water Quality Standards have unique standards for lakes and reservoirs that don't apply to streams.¹⁰⁸ For example, there are specific standards for chlorophyll a, secchi, phosphorus, nitrogen, and blue green algae not found in stream standards.¹⁰⁹

Finally, EPA's Response to Comments is the first time EPA identified the water quality standards it was relying on in this permit proceeding. Thus, EPA failed to provide public notice in the draft permit thus denying public comment on the specific standards. EPA should have reissued the draft permit for public comment after identifying the water quality standards. EPA's failure to do so violates EPA's public

¹⁰⁶https://waterdata.usgs.gov/nm/nwis/uv?cb_00065=on&cb_00060=on&cb_00095=on&cb_00010=on&cb_00400=on&cb_63680=on&format=gif_default&site_no=09365000

¹⁰⁷ Exhibit 4, p. 6.

¹⁰⁸ Exhibit 30, p. 12, Table 204.1.

¹⁰⁹ *Id.*

notice and comment requirements on a vital component of a permitting decision. 40

C.F.R. §124.10.

4. EPA erroneously concluded that ‘discharges do not present a "reasonable potential" to cause or contribute to an exceedance of water quality standards.

The Fact Sheet for the Permit states:

“In addition to technology-based effluent limitations, the Clean Water Act (CWA) Sections 402 and 301(b)(1)(C) 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 CFR 122.44(3)(1)(i)...Based on an application of these factors to the APS FCPP 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. Therefore, based on sampling data and an evaluation of discharge characteristics, EPA has concluded, consistent with the previous permit, that other than the effluent limitations for pH, TSS, Oil and Grease, which are promulgated under the Steam Electric Power Generation ELGs as described in 40 CFR Section 423, 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.”¹¹⁰

Outfall 01A and Outfall 01E of the FCPP discharge wastewaters into Morgan Lake, which enjoys the following designated uses under the 2007 Navajo Nation Surface Water Quality Standards:¹¹¹

¹¹⁰ Exhibit 3, p. 3.

¹¹¹ Exhibit 30, p. 27.

Table 205.1 (continued) Designated Uses for Navajo Nation Surface Waters

Surface Water Body	Basin	Cataloging Unit	Domestic Water Supply (Dom)	Primary Human Contact (PrHC)	Secondary Human Contact (ScHC)	Agricultural Water Supply (AgWS)	Fish Consumption (FC)	Aquatic & Wildlife Habitat (A&WHbt)	Livestock Watering (LW)
Morgan Lake	San Juan	Chaco		PrHC	ScHC		FC	A&WHbt	LW

Outfall 001 discharges from Morgan Lake to the Chaco River/Chaco Wash a tributary of the San Juan River, which also enjoys numerous designated uses under the 2007 Navajo Nation Surface Water Quality Standards.¹¹²

Because Morgan Lake, Chaco River/Chaco Wash, and the San Juan River enjoy these designated uses, they are protected by a large set of numerical water quality standards for metals and other pollutants that are enriched in discharges from coal-fired power plants.¹¹³ Of particular concern are mercury and selenium. Selenium and mercury levels in fish from Morgan Lake have been found to be elevated to the point where public health advisories have been issued.¹¹⁴

EPA also erroneously concluded that the discharges from the FCPP “do not present a ‘reasonable potential’ to cause or contribute to an exceedance of water quality standards” based on effluent quality analyses that employed detection limits far too high to ascertain whether discharges from the FCPP would impair water quality. The Navajo Nation Water Quality Standard for mercury for water bodies with a designated use of Aquatic & Wildlife Habitat (including Morgan Lake, Chaco River/Chaco Wash and the San Juan River) is 0.001 micrograms per liter (0.001 µg/L) on a long-term (chronic) basis. Yet, the test method that was employed in the priority pollutant scans for outfalls 001, 01A and 01E to ascertain whether discharges from the FCPP would impair water

¹¹² *Id.* at p. 25.

¹¹³ *Id.* at Table 206.1

¹¹⁴ Exhibit 45.

quality (EPA Test Method 200.7) has a detection limit for mercury of 0.2 µg/L – 200 times the applicable water quality standard.¹¹⁵

Similarly, the Navajo Nation Water Quality Standard for selenium for water bodies with a designated use of Aquatic & Wildlife Habitat (including Morgan Lake, Chaco River/Chaco Wash and the San Juan River) is 2 µg/L on a long-term (chronic) basis.¹¹⁶ Yet, the test method that was employed in the priority pollutant scans for outfalls 001, 01A and 01E to ascertain whether discharges from the FCPP would impair water quality has a detection limit for mercury of 100 µg/L – 50 times the applicable water quality standard.¹¹⁷

In addition to these inadequacies with respect to mercury and selenium, the test method that was employed in the priority pollutant scans for outfalls 001, 01A and 01E has a detection limit for **arsenic** of 100 µg/L compared to the water quality standard of 30 µg/L for waters with a designated use of Primary Human Contact, and 10 µg/L for waters with a designated use of Domestic Water Supply (the San Juan River); a detection limit for **antimony** 40 µg/L compared to the chronic water quality standard of 30 µg/L for waters with a designated use of Aquatic & Wildlife Habitat; and a detection limit for **thallium** of 100 µg/L compared to the water quality standard of 1 µg/L for waters with a designated use of Fish Consumption.¹¹⁸

EPA relied largely on the 2012 priority pollutant scan (“PPS”) submitted by the FCPP owners in its determining that there is no reasonable potential for water quality

¹¹⁵ Exhibit 50, p. 14.

¹¹⁶ The federal water quality criteria for selenium is 5ug/l. *See*, Exhibit 49.

¹¹⁷ Exhibit 50 at p. 14.

¹¹⁸ *Id.*

standards to be violated by discharges from FCPP.¹¹⁹ As stated above, EPA's reliance on the 2012 PPS is arbitrary and capricious because the FCPP owners did not employ appropriate minimum detection limits to determine whether there could be a reasonable potential for a violation of water quality standards. The use of inappropriate detection limits violates the terms of the 2001 NPDES Permit for the FCPP, the permit in affect at the time the PPA was performed.¹²⁰

Finally, all waters of the Navajo Nation are protected by the following narrative water quality standard:¹²¹

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

“1. Cause injury to, are toxic to, or otherwise adversely affect human health, public safety, or public welfare.

“2. Cause injury to, are toxic to, or otherwise adversely affect the habitation, growth, or propagation of indigenous aquatic plant and animal communities or any member of these communities; of any desirable non-indigenous member of these communities; of waterfowl accessing the water body; or otherwise adversely affect the physical, chemical, or biological conditions on which these communities and their members depend.”

The Permit is defective because it fails to include any analysis of how permitted discharges would impair narrative water quality standards in Morgan Lake despite the following evidence that such discharges have and are causing water quality impairments:

“There have been several investigations into the quality of water or fish collected from Morgan Lake (Sanchez 1972, 1973; Blinn et al. 1976, Westinghouse Electric Corporation 1975; Geotz and Abeyta 1987; USFWS 1988; Esplain 1995, Bristol et al. 1997; and this study). Sanchez (1972) reported on the quality of water, sediment and invertebrates collected from 1966 to 1972. In 1973, a fish kill occurred during August 10 through 17, 1973. An estimated 33,674 fish ranging in total length from 5 to 24 inches (127 to 609 mm) were lost during the die-off (Sanchez 1973). A blue-green algal bloom and high surface water temperatures

¹¹⁹ Exhibit 50.

¹²⁰ Exhibit 10, p. 7, §E.1.b.

¹²¹ Exhibit 30 at § 202.

(32.2 to 40C) were thought to be contributing factors. In 1975, the Northern Arizona University was contracted to evaluate the probable causes of previous fish kills in the lake (Blinn et al. 1976). Blinn et al. (1976) identified the relationship between bluegreen (Cyanophyta) algal blooms, elevated water temperatures, early summer warming, and anoxic conditions. Westinghouse Electric Corporation (1975) also reported on the quality of Morgan Lake fish collected during 1973 and 1975. Management of the lake was changed to reduce the potential for frequent fish kills.”¹²²

Under Table 204.1 “Numeric Targets for Lakes and Reservoirs” of the Navajo Nation Surface Water Quality Standards 2007, Lakes designated for use as Primary Human Contact may not contain more than 20,000 blue-green algae per milliliter. No analysis is provided in the record for the draft permit showing how the hot water discharges from Outfall 01A, which were measured at 42.4 degrees Celsius (108.3 degrees Fahrenheit) during the summer,¹²³ will affect levels of blue-green algae in Morgan Lake.

The Permit is defective because it fails to include any analysis of how permitted discharges would comply with the numerical water-quality standard for temperature contained in the Navajo Nation Surface Water Quality Standards 2007, reproduced below.¹²⁴

F. Temperature: The maximum allowable increases in ambient water temperature, expressed in degrees Celcius, due to a thermal discharge are as follows:

A&WHbt (warm water)	A&WHbt (cold water)
3.0	1.0

This does not apply to a stormwater discharge.

If Morgan Lake is considered a warm water body permitted discharges from the FCPP should not increase the ambient water temperature of Morgan Lake by more than 3°

¹²² Exhibit 51 at page 12.

¹²³ Exhibit 52, p. 17 of pdf.

¹²⁴ Exhibit 30, Section 206 (F); p. 15.

Celsius.¹²⁵ Under Navajo Nation Surface Water Quality Standards 2007 at § 209: “A wastewater mixing zone is a defined and limited part of a surface water body with defined boundaries adjacent to a point source of pollution, in which initial dilution of wastewater occurs, and in which certain numeric water quality standards may apply. Mixing zones shall be limited to perennial streams, lakes and reservoirs. All mixing zones shall have defined boundaries, beyond which applicable water quality standards shall be met. In no instance shall mixing zones constitute more than 10% of the surface area of a lake or reservoir ...”¹²⁶ Therefore, any permitted discharges from the FCPP that increase the ambient water temperature of Morgan Lake by more than 3° Celsius must be limited to a defined boundary of Morgan Lake that comprises 10% or less of this water body. The ambient temperature of Morgan Lake should be the temperature of water diverted to the lake from the San Juan River. This temperature normally ranges from 58-68 degrees Fahrenheit during the warmest times of the year.¹²⁷ EPA’s Permit fails to undertake an analysis assuring compliance with this temperature standard or explain why this standard is not more protective of beneficial uses in the lake.

EPA’s reasonable potential analysis also fails to provide a rational basis for its conclusion that the discharges from FCPP do not present a reasonable potential for violating temperature water quality standards in No Name Wash and/or the Chaco River. Again, the above cited temperature standards apply to both No Name Wash and the Chaco River. EPA admits that its “reasonable potential” analysis relies on “no data for the ambient levels of various priority and nonpriority pollutants in the receiving waters

¹²⁵ Exhibit 30 at § 205 A

¹²⁶ Exhibit 30.

¹²⁷ https://waterdata.usgs.gov/nm/nwis/uv?cb_00065=on&cb_00060=on&cb_00095=on&cb_00010=on&cb_00400=on&cb_63680=on&format=gif_default&site_no=09365000

downstream of the discharge location.”¹²⁸ Without such data, there is no rational basis for EPA’s conclusion that there is “no reasonable potential for the discharge to cause or contribute to exceedences of applicable standards and criteria.”¹²⁹ Further, USGS data for monitoring site #09367938 on the Chaco River was readily available to EPA.¹³⁰ This monitoring site had been previously determined by the federal government “to be representative of baseline conditions within the Chaco River” upstream of the Navajo Tribal Coal Lease and Morgan Lake.¹³¹ The temperature data from July 1977-August 1982 shows a range from 1.5-27.5 degrees Celsius (34.7- 81.5 degrees F). Even at the warmest temperature, it is clear that a discharge from Morgan Lake at 95 degrees F has a reasonable potential of exceeding the Navajo Nation’s 3 degree Celsius maximum increase allowed by a thermal discharge.

For the reasons stated above, EPA’s “reasonable potential” analysis is fatally flawed and must be reversed by this Board.

5. EPA also violated its Section 401 water quality certification requirements.¹³²

EPA may not issue a federal NPDES permit without a prior Clean Water Act Section 401 certification. 33 U.S.C. §1341(a). The EPA Administrator has the duty to

¹²⁸ Exhibit 53, p. 2.

¹²⁹ *Id.*

¹³⁰ https://nwis.waterdata.usgs.gov/nwis/qwdata/?site_no=09367938&agency_cd=USGS&inventory_output=0&rdb_inventory_output=file&TZoutput=0&pm_cd_compare=Greater%20than&radio_parm_cds=all_parm_cds&format=html_table&qw_attributes=0&qw_sample_wide=wide&rdb_qw_attributes=0&date_format=YYYY-MM-DD&rdb_compression=file&submitted_form=brief_list

¹³¹ Exhibit 54, p. 77.

¹³² Petitioners file a protective appeal on this issue. Because EPA’s action under Section 401 of the CWA is not a “final permit decision issued under §124.15 [of 40 C.F.R.]” Petitioners believe that the original jurisdiction for a challenge to EPA’s Section 401 decision may lie in U.S. District Court.

process a 401 certification request when water quality standards have been established, but no government entity has authority to issue a certification. *Id.* and 40 C.F.R. §121.21(b). Such is the case here where the Navajo Nation has promulgated water quality standards but cannot independently enforce the standards against the FCPP because the operators forced the Nation to sign the contractual waiver against regulating the plant. The 401 Certification request must be initiated *by the applicant* and the request must include specific information required by regulation. 40 C.F.R. §121.22. The Regional Administrator must provide public notice and comment to various parties, including interested “conservation organizations” as well as an opportunity for a public hearing. 40 C.F.R. §121.23. The Regional Administrator may only act on a 401 certification request after “considering the complete description, the record of hearing...and such other information and data as the Regional Administrator deems relevant...” 40 C.F.R. §121.24. As will be discussed below, EPA violated virtually every CWA Section 401 duty. Since EPA cannot issue a valid NPDES Permit under CWA Section 402 without a prior valid Section 401 certification, EPA’s entire permit is invalid and must be reversed by this Board.

First, there is no evidence in the administrative record that the applicant filed a written 401 certification request with the EPA. Instead, it appears that EPA’s permit writer Gary Sheth initiated the 401 certification request.¹³³ More specifically, on May 29, 2018 at 1:10 pm PST--just 6 days after Petitioners filed suit against EPA in the federal Court of Appeals to force final action on the long ignored permit application—permit writer Sheth sent an email to Elizabeth Goldman, a physical scientist in EPA Region 9’s

¹³³ Exhibit 55.

wetland section, requesting that she issue a 401 certification related to the Permit.¹³⁴ There is no evidence in the administrative record that the 401 Certification request complied with the requirement that the request be initiated by the applicant and that it contain the information required by 40 C.F.R. §121.22. Less than 24 hours later on May 30, 2018 at 11:55 a.m, Ms. Goldman¹³⁵ waived the 401 Certification requirement. There is no evidence in the administrative record that EPA Region 9 complied with the public notice and comment requirements of 40 C.F.R. §121.23. There is also no rationale or written explanation in the administrative record that serve as the basis for Ms. Goldman's 401 Certification waiver. As such, EPA appears to have violated the requirement to consider all information before it prior to rendering a decision on the Section 401 Certification request. Further, EPA's draft permit never indicated that the agency would be waiving its Section 401 water quality certification duties. In fact, EPA's draft permit was completely silent on the Section 401 water quality certification issue.¹³⁶ As such, the public never had an opportunity to submit comments on EPA's waiver of Section 401.

6. EPA erred by failing to impose the new ELGs requirements.

EPA's new effluent limitation guidelines for coal fired power plants state, "there shall be no discharge of pollutants in bottom ash transport water" beginning as soon as November 1, 2018. *See*, 40 C.F.R. §423.13(k)(1)(i), 80 Fed. Reg. 67896 (November 3, 2015). EPA erred by failing to include this prohibition, and other provisions of the new

¹³⁴ *Id.*

¹³⁵ There is no evidence in the administrative record that Ms. Goldman is delegated the authority to render decisions on 401 certifications on behalf of EPA Region 9. Instead, the regulations require that the Regional Administrator undertake such duties. 40 C.F.R. §121.24.

¹³⁶ Exhibit 24.

ELGs, into the Permit. EPA should have included this prohibition into the Permit on the date the provision becomes effective or through a compliance schedule.

EPA is blatantly disregarding the requirements of the agency's own rule. The statement that the effective date of the 2015 rule has not yet passed is not true. The 2015 rule was effective as of January 2016. See 80 Fed. Reg. at 67,838. The actions taken by EPA have extended the compliance dates by two years — but the operative regulations in 40 CFR part 423 are on the books now and require permitting authorities to establish compliance dates in the next permit renewal for each facility. This is clear in the text of Part 423 itself and was also spelled out in more detail in the preamble to the 2015 rule. See 80 Fed. Reg. at 67,883

7. EPA erred by not properly regulating discharges into the Chaco River watershed from the coal ash ponds.

Section 301 of the Clean Water Act mandates that all “discharge of pollutants” be subject to a permit or otherwise comply with the CWA. 33 U.S.C. §1311(a). The term “discharge of pollutant” is defined as “any addition of any pollutants to navigable waters from any point source...” 33 U.S.C. §1362(12). The term “point source” is defined to include “any discernable, confined and discrete conveyance...from which pollutants are **or may be discharged.**” 33 U.S.C. §1362(14)(emphasis added). EPA's Permit is deficient because it fails to require permitting for seepage from the coal ash ponds into the Chaco River watershed.

An October 4, 2007 EPA Region 9 site inspection report of FCPP revealed seepage from the FCPP coal ash disposal facilities along the eastern bank of the Chaco

River.¹³⁷ These seeps have been previously documented to be emanating from the FCPP coal ash facilities. These seeps are more fully described in a letter from APS to OSM dated April 3, 2013.¹³⁸ The May 8, 2012 EPA Inspection Report also states:

Sanitary, fly ash and FGD blowdown wastewater is not regulated in the NDPEs Permit. Although there is no discrete outfall from the fly ash ponds, the ponds do have a potential to discharge to Waters of the U.S. through subsurface leaching.¹³⁹

The lease between the Navajo Nation and the owners of the FCPP specifically allows the discharge of coal ash seepage into Chaco River and its tributaries.¹⁴⁰ More specifically, the Lease states:

“In addition, the Company shall have the right to dispose of waste water on the Reservation by permitting waste water from the power plant to flow from the ash disposal area into the Chaco Wash.”¹⁴¹

This lease provision makes it clear that the Navajo Nation has authorized the discharge of wastewater from the ash disposal areas into surface waters. The FCPP power plant and related coal ash ponds are man-made point sources. Pollutants “are or may be discharging” from these point sources into navigable waters. 33 U.S.C. §1362(14). As such, EPA has a duty to subject the historic and existing seepage from the coal ash facilities to NPDES permitting requirements. EPA’s Permit fails to comply with this obligation. The Permit fails to undertake a best professional judgment (“BPJ”) analysis of pollutants discharging from the coal ash facilities, fails to impose technology based effluent limits (“TBELs”) for pollutants discharging from the coal ash facilities, and fails to impose water quality based effluent limits (“WQBELs”) for pollutants discharging

¹³⁷ Exhibit 56.

¹³⁸ Exhibit 57.

¹³⁹ Exhibit 56 at p. 5.

¹⁴⁰ Exhibit 6 hereto, p. 6, ¶(2)c.

¹⁴¹ *Id.*

from the coal ash facilities. Instead of imposing effluent limitations and monitoring requirements on the seepage, the Permit contains the following conditions to deal with the substantial problem of seepage from coal ash disposal facilities at the FCPP, a problem that has been documented for at least the past 10 years.

“2. Surface Seepage

“Surface seepage intercept systems shall be constructed and operated for existing and future unlined ash ponds. Water collected by these intercept systems shall be returned to the ash ponds, or evaporation ponds. All provisions of the Seepage Monitoring and Management Plan as described below in the Special Conditions Section must be implemented.

“Part III. SPECIAL CONDITIONS

“A. Seepage Management and Monitoring Plan

A Seepage Monitoring and Management Plan shall be established and implemented to determine the source of and pollutants in seepages below all ash ponds that receive or received coal combustion residue either currently or in the past. The Plan shall be established and submitted to EPA within 120 days of the issuance of this permit. The Plan shall at a minimum do the following:

1. Identify all seeps within 100 meters down gradient of such impoundments;
2. Conduct sampling (or provide summary of current data if sufficient and valid) of seepages for boron, mercury, nickel, selenium, uranium, zinc and total dissolved solids.
3. Provide information about number of flows observed and range of flows observed.
4. Provide information about exceedances of any human health, livestock, or chronic or acute aquatic life standards as established in the 2007 NNWQS in the samples collected for analysis.”

EPA’s proposed Seepage Monitoring and Management Plan is likewise deficient.

Although preparation of the Seepage Monitoring and Management Plan is a time bound requirement (120 days), the timeframe for the obligation to construct and operate surface seepage intercept systems for existing and future unlined ash ponds is not specified in the Permit. As such, the Plan is unenforceable, arbitrary, and capricious. The Seepage Plan is also deficient because it only requires the FCPP owners to “[i]dentify all seeps within 650 meters down gradient of such impoundments.” The language of the Seepage Plan must

be amended to trace the flow of all seeps from their source to the point where they either terminate or reach a receiving water. The Seepage Plan should require a calculation of flow for all seeps as they enter any receiving water and also require a full suite of water quality sampling of all seeps that enter receiving waters. The Seepage Plan should require monthly monitoring of flow and water quality and require that the FCPP owners submit to EPA such information in monthly Discharge Monitoring Reports. The Permit should have also specified either that the obligation to finalize construction and operation surface seepage intercept systems is subject to the 120 day deadline, or impose a separate short deadline for the applicant to do so. The Seepage Plan should also require the FCPP owners to produce all existing studies on the hydrological connection of the coal ash facilities with all waters of the United States. The Seepage Plan should also require monthly water quality sampling immediately upstream and downstream in the receiving water both before and after any influence by any seepage. The Seepage Plan should also require the FCPP owners to conduct dye testing or some other technical study to definitively confirm the hydrologic connection between the coal ash facilities and the receiving waters.

As described above, EPA has arbitrarily failed to subject the seepage from the coal ash facilities to CWA permitting requirements. Because these discharges have never been subject to NPDES permitting, they may constitute “new” or “increased” discharges that are subject to both anti-degradation review and impaired waters limitations. EPA’s administrative record for this proceeding is silent and inadequate on both these issues.

8. EPA failed to conduct an impairment analysis under CWA Section 303(d).

Section 303(d) of the Act requires an identification of waters for which effluent limitations are not stringent enough to implement water quality standards. 33 U.S.C. §1313(d)(1)(A). This requirement also applies to thermal discharges. 33 U.S.C. §1313(d)(1)(B). If a state fails to submit approvable terms to meet water quality standards, the EPA must promulgate such loads and terms. 33 U.S.C. §1313(d)(2).

Despite having 17 years to undertake such analysis, EPA failed to determine whether Morgan Lake, No Name Wash, the Chaco River, and the San Juan River are meeting water quality standards and whether loads and conditions must be established to bring these waters in compliance with such standards, including for thermal discharges. EPA's Permit fails to determine whether the FCPP discharges impact any impaired waters and whether more stringent effluent limitations should be placed in the permit as part of a Total Maximum Daily Load. EPA's Permit is defective because it fails to perform such an analysis and include any such effluent limitations.

9. EPA erred by not properly regulating the cooling water intake structure and violated the ESA.

i. EPA failed to properly regulate the cooling water intake structure.

Under 40 CFR Part 125, Subpart J—Requirements Applicable to Cooling Water Intake Structures for Existing Facilities Under Section 316(b) of the Clean Water Act, the following provisions apply:

40 CFR §125.94(a):

“a) Applicable Best Technology Available for Minimizing Adverse Environmental Impact (BTA) standards. (1) **On or after October 14, 2014, the owner or operator of an existing facility with a cumulative design intake flow (DIF) greater than 2 mgd** is subject to the BTA (best technology available) standards for impingement mortality under paragraph (c) of this section, **and** **entrainment under paragraph (d) of this section** including any measures to

protect Federally-listed threatened and endangered species and designated critical habitat established under paragraph (g) of this section.

40 CFR §125.94(d) states:

“BTA standards for entrainment for existing facilities. The Director **must** establish BTA standards for entrainment for each intake on a site-specific basis. These standards must reflect the Director's determination of the **maximum reduction in entrainment** warranted after consideration of the relevant factors as specified in §125.98. The Director may also require periodic reporting on your progress towards installation and operation of site-specific entrainment controls.”

40 CFR §125.98(f) states:

“(f) Site-specific entrainment requirements. The Director must establish site-specific requirements for entrainment after reviewing the information submitted under 40 CFR 122.21(r) and §125.95. These entrainment requirements must reflect the Director's determination of the maximum reduction in entrainment warranted after consideration of factors relevant for determining the best technology available for minimizing adverse environmental impact at each facility. These entrainment requirements may also reflect any control measures to reduce entrainment of Federally-listed threatened and endangered species and designated critical habitat (e.g. prey base). The Director may reject an otherwise available technology as a basis for entrainment requirements if the Director determines there are unacceptable adverse impacts including impingement, entrainment, or other adverse effects to Federally-listed threatened or endangered species or designated critical habitat.

(1) The Director must provide a written explanation of the proposed entrainment determination in the fact sheet or statement of basis for the proposed permit under 40 CFR 124.7 or 124.8. The written explanation must describe why the Director has rejected any entrainment control technologies or measures that perform better than the selected technologies or measures, and must reflect consideration of all reasonable attempts to mitigate any adverse impacts of otherwise available better performing entrainment technologies.

(2) The proposed determination in the fact sheet or statement of basis must be based on consideration of any additional information required by the Director at §125.98(i) and the following factors listed below. The weight given to each factor is within the Director's discretion based upon the circumstances of each facility.

(i) Numbers and types of organisms entrained, including, specifically, the numbers and species (or lowest taxonomic classification possible) of Federally-listed, threatened and endangered species, and designated critical habitat (e.g., prey base);

EPA's duty to make a site-specific determination of the best technology available that would attain the maximum reduction in entrainment for the FCPP is not dependent on receipt of further information from the applicant. 40 CFR §125.98 (g) states:

“(g) Ongoing permitting proceedings. In the case of permit proceedings begun prior to October 14, 2014. Whenever the Director has determined that the information already submitted by the owner or operator of the facility is sufficient, the Director may proceed with a determination of BTA standards for impingement mortality and entrainment without requiring the owner or operator of the facility to submit the information required in 40 CFR 122.21(r). The Director's BTA determination may be based on some or all of the factors in paragraphs (f)(2) and (3) of this section and the BTA standards for impingement mortality at §125.95(c). In making the decision on whether to require additional information from the applicant, and what BTA requirements to include in the applicant's permit for impingement mortality and site-specific entrainment, the Director should consider whether any of the information at 40 CFR 122.21(r) is necessary.”

The following correspondence between the US EPA and the permit applicant relevant to the issue of best technology available for minimizing impacts due to entrainment¹⁴²:

From: Sheth, Gary
Sent: Tuesday, June 10, 2014 1:08 PM
To: Michele.Robertson@aps.com
Subject: RE: Questions about Morgan Lake Intake

Hi Michele,

Please provide a full description of the intake structure, mechanism, and process for intake of water from the San Juan River to Morgan Lake. Please include information about the exact location of the intake structure, design capacity, average intake volume, as well as any measures in place to minimize entrainment and impingement of biota resulting from the intake of water.

Thanks,

Gary Sheth
NPDES Permits Office (WTR-5)

¹⁴² Exhibit 58.

The answer in the record from the permit applicant that is relevant to the issue of best technology available for minimizing impacts due to entrainment is reproduced below:

From: Michele.Robertson@aps.com
Sent: Friday, August 08, 2014 11:16 AM
To: Sheth, Gary
Cc: Pamela.Norris@aps.com
Subject: RE: Questions about Morgan Lake Intake
Attachments: removed.txt

Gary,

I apologize for the delay in responding to your request. Here is the information on the river station intake.

Morgan Lake Intake

The intake structure on the San Juan River consists of two 10- by 10-foot intake bays, placed perpendicularly to the flow of the river. These intake bays are located just upstream of the APS Weir. The weir includes a control gate that provides the ability to control water depths at the intake location. The intakes are screens with an approximately 1-inch by 3-inch opening. Approach velocities toward the screens are approximately 0.38 foot per second. No fish collection or return facilities are associated with the intake

The administrative record is lacking in the collection and presentation of data, information, and discussion of fish impingement/entrainment and whether the FCPP intakes reflect the best technology available that would attain the maximum reduction in entrainment. Maintaining the intake flow velocity to below 0.5 feet per second will reduce losses due to impingement, but not entrainment. Intake structures with screens having a mesh size of 1-inch by 3-inches, and no fish collection or return facilities, is well short of best technology available that would attain the maximum reduction in entrainment. For example, fine mesh screens with a mesh size of less than 1/5 inch (less than 5 millimeters) would significantly reduce losses from entrainment of eggs, larvae and juvenile forms of fish by the FCPP.¹⁴³

¹⁴³ U.S. EPA (2004) "Technical Development Document for the Final Section 316(b) Phase II Existing Facilities Rule: Chapter 4: Efficacy of Cooling Water Intake Structure

It should be noted that the FCPP owners began collection of data on fish impingement and/or entrainment in 2005.¹⁴⁴ The Conservation Organizations issued a Freedom of Information request to EPA requesting certain information submitted by APS to the agency on fish impingement/entrainment and intake structure alternatives.¹⁴⁵ Despite apparently receiving such information from APS, EPA was unable to produce these documents to the Conservation Organizations.¹⁴⁶ There is no evidence in the record for this permitting proceeding that EPA has requested the results of any fish impingement/entrainment studies, impacts on threatened or endangered species, or any intake structure alternatives from the FCPP owners. This information is vital to a determination of BTA at the FCPP. This data is especially important due to the verified presence of several threatened and endangered fish species living in the San Juan River in the vicinity of the FCPP intake structures and discharge point.

ii. To reduce impingement and entrainment losses, the NPDES permit should place a cap on water intake from the San Juan River to reflect the applicant's retirement of three units

According to the permit Fact Sheet:

“Plant’s total generation capacity was originally 2100 megawatts, but following the shutdown of Units 1, 2, and 3 (which occurred on December 30, 2013) the capacity is now 1540 megawatts. ...

“D. Cooling Water Regulation

“APS operates a closed-cycle recirculating system, circulating from around 1000 up to about 1,700 million gallons a day (MGD) through Morgan Lake, a man-made cooling water impoundment. The applicant withdraws up to a maximum of 48 MGD of water from the San Juan River as make-up water to replenish losses

Technologies." http://water.epa.gov/lawsregs/lawsguidance/cwa/316b/upload/Cooling-Water_Phase-2_TDD_2004.pdf

¹⁴⁴ Exhibit 59.

¹⁴⁵ Exhibit 60.

¹⁴⁶ *Id.*

that have occurred due to blowdown, drift, evaporation within Morgan Lake and the cooling system. Currently the San Juan River intake system is equipped with a weir and a channel with a gate. If the water in the river is too low at the intake screens to supply the pumps, the gate in the channel is lowered. The gate and the weir together increase the level at the intake screens to supply the pumps. The intake screens are periodically changed out for cleaning.”

The administrative record for the Draft permit contains the following additional information:

Impacts of Units 1-2-3 Shutdown

It is estimated that the shutdown of units 1-2-3 will occur about mid-year 2013. The shutdown of these three units will impact some of the water and wastewater discharges. These include:

1. The closed cycle recirculating cooling water volume will decrease by about 30%.

Because the applicant has retired more than 25% of its total generation capacity, a withdrawal of up to 48 MGD from the San Juan River is no longer necessary.

Impingement and entrainment losses are proportional to the amount of water intake from the San Juan River. As a means of attaining the maximum reduction in impingement/entrainment as required by Section 316(b) of the Clean Water Act, the Permit should have imposed a 30% reduction on the applicant’s intake of water from the San Juan River to a rate not more than is necessary for the applicant’s reduced need for cooling water.

iii. EPA also Failed to Comply With the Endangered Species Act.

The Endangered Species Act (“ESA”) implements a Congressional policy that “all Federal Departments and agencies shall seek to conserve endangered species and threatened species.” 16 U.S.C. § 1531(c)(1). An “endangered species” is a species of plant or animal that is “in danger of extinction throughout all or a significant portion of

its range,” while a “threatened species” is one which is likely to become endangered within the foreseeable future. 16 U.S.C. § 1532(6), (20).

At the heart of Congress’s plan to preserve endangered and threatened species is Section 7 of the ESA, which 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) imposes two obligations upon federal agencies. The first is *procedural* and requires that agencies consult with the FWS to determine the effects of their actions on endangered or threatened species and their critical habitat. *See* 16 U.S.C. § 1536(b). The second is *substantive* and requires that agencies insure that their actions not jeopardize endangered or threatened species or their critical habitat. *See* 16 U.S.C. § 1536(a)(2); *see also*, *Florida Key Deer v. Paulison*, 522 F.3d 1133, 1138 (11th Cir. 2008).

The requirements of the ESA are triggered by “any ‘agency action’ which may be likely to jeopardize the continued existence of the species or its habitat.” 16 U.S.C. § 1536(a). 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; 50 C.F.R. § 402.02. When there exists a chance that such species “may be present,” the agency must conduct a biological assessment (“BA”) to determine whether or not the species “may be affected” by the action. *See* 16 U.S.C. § 1536(c). 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. 51 Fed. Reg. at 19926. If a “may affect” determination is made, “formal consultation” is required and a biological opinion (“BO”) must be prepared.

In determining whether an agency action jeopardizes listed species or adversely modifies critical habitat, the Services must “evaluate the current status of the listed species” and “[e]valuate the effects of the action and cumulative effects on the listed species or critical habitat.” 50 C.F.R. §§ 402.14(g)(2)-(3). This requires the Services to distinguish between the pre-action condition of all affected species and critical habitat and the direct, indirect, and cumulative effects of the agency’s action:

“Effects of the action” include both direct and indirect effects of an action that will be added to the “environmental baseline.” The environmental baseline includes “the past and present impacts of all Federal, State or private actions and other human activities in the action area” and “the anticipated impacts of all proposed Federal projects in the action area that have already undergone formal or early section 7 consultation.”

Nat’l Wildlife Fed’n v. Nat’l Marine Fisheries Serv., 422 F.3d 782, 790 (9th Cir. 2005) (citing regulatory definitions found at 50 C.F.R. § 402.02). This environmental baseline includes the existence of structures such as dams and power plants, but does not include fish kills or other adverse effects resulting from the *operation* of such structures and facilities, where such ongoing operation is within the control of the action agency.

Issuance of a (discretionary) NPDES permit is a federal action subject to the requirements of ESA section 7. *See National Association of Home Builders v. Defenders of Wildlife*, 551 U.S. 644, 666-68 (2007) (CWA, ESA, and implementing regulations require consultation and jeopardy determination for discretionary permit issuance).

On April 8, 2015 USFWS issued its Final Biological Opinion.¹⁴⁷ The BO found that OSMRE’s proposed operation of the FCPP “is likely to adversely affect” both the Colorado pikeminnow and the razorback sucker,¹⁴⁸ and that its proposed action will adversely modify biological features for both these listed fish species.¹⁴⁹ These jeopardy and adverse modification findings result from several adverse impacts, including but not limited to entrainment of razorback sucker at the APS weir, release of non-native fish from Morgan Lake, and impaired passage of Colorado pikeminnow at the APS weir.¹⁵⁰ The APS Weir will have adverse effects on critical habitat for Colorado pikeminnow.”¹⁵¹

iv. Impingement and Entrainment Will Jeopardize Colorado Pikeminnow and Razorback Sucker and Adversely Modify Critical Habitat

Operation of water intake structures will adversely modify critical habitat for Colorado pikeminnow and kill and injure adult and larvae Colorado pikeminnow and razorback sucker through impingement and entrainment. Considered alongside the current status of the fish and an environmental baseline of jeopardy from mercury and selenium contamination, operation of intake structures will jeopardize the continued existence of listed species.

The APS Weir at RM 163.3 is located in designated critical habitat for Colorado pikeminnow and upstream of designated critical habitat for razorback sucker.¹⁵² The weir

¹⁴⁷ EPA seeks to rely on the BO despite the fact it was issued after the close of the draft permit comment period. Exhibit 19. EPA’s Response to Comments relies on and refers to the B.O. rather than the B.A. by asserting the BO “is the currently operative document reflecting the completed ESA consultations on the Energy Project.” Exhibit 4, Response 21, p. 31.

¹⁴⁸ Exhibit 19 at p. 1.

¹⁴⁹ *Id.* at p. 116.

¹⁵⁰ *Id.* at p. 66.

¹⁵¹ *Id.* at p. 114.

¹⁵² Exhibit 19 at pp. 109-116.

extends across the San Juan River and impeding its flow, bank to bank. The weir diverts water from the San Juan River into two 10 by 10 ft. intakes. Each intake is covered by 1 by 3 inch wire mesh screen. The intakes run in two modes at all times of day, extracting either 31 (17,000 gpm, 24.5 million gpd) or 71 (32,000 gpm, 46 million gpd) cubic feet of river water per second. The former mode runs from October to May; the latter, higher flow, from May to October.

The weir adversely modifies critical habitat for Colorado pikeminnow by impeding migration within critical habitat:

[t]he weir lies within the critical habitat for Colorado pikeminnow, and may affect, and is likely to adversely affect the function of the habitat for the conservation and recovery of the species, as this structure may impede the migration of Colorado pikeminnow within its critical habitat (Listing Factor A, USFWS 2002a, b).g Factor A, USFWS 2002a, b).¹⁵³

Larval or adult Colorado pikeminnow and razorback sucker can be killed or injured when entrained or impinged. Death from impingement and entrainment can occur immediately or later as a result of injuries sustained during contact with a cooling water intake system. EPA defines impingement and entrainment as follows:

Impingement takes place when organisms are trapped against intake screens by the force of the water being drawn through the cooling water intake structure. The velocity of the water withdrawal by the cooling water intake structure may prevent proper gill movement, remove fish scales, and cause other physical harm or death of affected organisms through exhaustion, starvation, asphyxiation, and descaling.

Entrainment occurs when organisms are drawn through the cooling water intake structure into the cooling system. Organisms that become entrained are typically relatively small, aquatic organisms, including early life stages of fish and shellfish. As entrained organisms pass through a facility's cooling system they may be subject to mechanical, thermal, and at times, chemical stress.¹⁵⁴

¹⁵³ *Id.*

¹⁵⁴ Final Rule: National Pollutant Discharge Elimination System-Final Regulations to Establish Requirements for Cooling Water Intake Structures at Phase II Existing

The BO acknowledge that intakes will entrain and kill endangered Colorado pikeminnow.¹⁵⁵

Here, the proposed action will adversely modify critical habitat for Colorado pikeminnow and kill and injure adult, juvenile and larvae Colorado pikeminnow and razorback sucker through impingement and entrainment. Considered alongside the current status of the fish, including an environmental baseline of jeopardy from mercury and selenium contamination, *any* impingement or entrainment at intake structures will jeopardize the continued existence of Colorado pikeminnow and razorback sucker. EPA/FWS must therefore prescribe in the BO “reasonable and prudent alternatives” that avoid jeopardy from impingement and entrainment. 50 C.F.R. § 402.14(i)(1)(ii).

v. EPA/FWS must require closed-cycle or dry cooling technology in a reasonable and prudent alternative(s) (RPA).

Closed-cycle cooling systems recirculate cooling water in low- profile towers, reducing water withdrawals and fish kills between 95 and 98 percent over once-through cooling systems. In its Clean Water Act 316(b) rulemaking process, analyses and comments thereto, EPA has at its disposal, and must make available to FWS in this instance, extensive information on the benefits of closed-cycle cooling technology for river fish, including San Juan River endangered fish. Commenters provided as reference information for closed-cycle cooling systems comments provided by Riverkeeper et al. to

Facilities, 69 Fed. Reg.41,576, 41,586 (Jul. 9, 2004) [hereinafter “2004 Cooling Water Intake Structures at Phase II Rule”].

¹⁵⁵ Exhibit 19 at pp. 110-113, and p. 144.

EPA's rulemaking.¹⁵⁶ In that rulemaking, EPA analyzed and concluded the effectiveness of closed-cycle cooling system for reducing impingement or entrainment:

In evaluating technologies that reduce impingement or entrainment mortality as the possible basis for section 316(b) requirements, EPA assessed a number of different technologies. Based on this technology assessment, EPA concluded that closed-cycle cooling reduces impingement and entrainment mortality to the greatest extent.¹⁵⁷

In this case, EPA's discretion in carrying out its duty under the Clean Water Act must be exercised in a manner that neither jeopardizes the recovery or survival of listed species nor adversely modifies critical habitat. *See, e.g., Am. Rivers, Inc. v. U.S. Army Corps of Eng'rs.*, 421 F.3d 618, 631 (8th Cir. 2005) (“[T]he FCA does not mandate a particular level of river flow or length of navigation season, but rather allows the Corps to decide how best to support the primary interest of navigation in balance with other interests. . . . Because the Corps is able to exercise its discretion in determining how best to fulfill the purposes of the reservoir system's enabling statute, the operation of the reservoir system is subject to the requirements of the ESA.”).

Because closed-cycle and dry cycle cooling systems would sharply reduce or eliminate endangered fish kills in the San Juan River, installation of those technologies at Four Corners Power Plant would avoid the likelihood of jeopardizing the continued existence of listed species and avert the destruction or adverse modification of critical habitat. EPA/FWS must therefore require the installation and use of those technologies in a reasonable and prudent alternative to the proposed action. By reducing or eliminating river water withdrawals within designated critical habitat, the use of closed-cycle or dry cooling technology at the Four Corners Power Plant can sharply reduce or eliminate

¹⁵⁶ Exhibit 61 hereto (Riverkeeper Comments on 316(b) rule).

¹⁵⁷ 76 Fed. Reg. at 22,207.

endangered fish kills, adverse modification of critical habitat, and jeopardy to Colorado pikeminnow and razorback sucker.

The BO must suggest “reasonable and prudent alternative” that could be taken by the action agency to avoid such jeopardy. 16 U.S.C. § 1536(b)(3)(A). § 402.14(h)(3). “[R]easonable and prudent alternatives” are alternative actions identified during formal consultation that (1) can be implemented in a manner consistent with the intended purpose of the action, (2) can be implemented consistent with the scope of the action agency’s legal authority, (3) are economically and technologically feasible, and (4) would avoid the likelihood of jeopardizing the continued existence of listed species and/or avert the destruction or adverse modification of critical habitat.

In this case, and as discussed elsewhere in these comments, the requirement of closed-cycle cooling system at Four Corners Power Plant is entirely consistent with the intended purpose of the action; closed-cycle cooling systems can cool electric generating facilities with fewer environmental impacts, and fewer impacts to endangered species and designated critical habitat, than once-through cooling systems. Requiring a closed-system cooling system at Four Corners Power Plant is also well within EPA's legal authority to regulate facilities using cooling water intake structures (CWISs) under Section 316(b) the Clean Water Act (CWA), and it is entirely within the U.S. Fish and Wildlife Service’s authority to regulate federal actions to avoid jeopardy to endangered species or adverse modification of critical habitat under the Endangered Species Act. 16 U.S.C. § 1536(a)(1), (a)(2).¹⁵⁸ The Riverkeeper comments on the Section 316(b) rule provide extensive discussion and analysis demonstrating the technical and economic

¹⁵⁸ Exhibit 61.

feasibility of installing closed-cycle cooling systems on existing facilities. Finally, insofar as: (1) existing direct, indirect and cumulative impacts create baseline conditions, such as contamination of endangered fish with mercury, that jeopardize endangered fish and adversely modify critical habitat; and, (2) operation of the APS weir and intakes would further contribute to jeopardy of Colorado pikeminnow and razorback sucker by adversely modifying critical habitat and injuring and killing endangered fish through impingement and entrainment, requiring installation and use of a closed-cycle or dry cooling system at Four Corners Power Plant in the context of a reasonable and prudent alternative to the proposed action would avoid the likelihood of jeopardizing the continued existence of listed species and/or avert the destruction or adverse modification of critical habitat.

X. CONCLUSION

For the reasons discussed herein, we ask the Board to declare EPA's Permit arbitrary, capricious, illegal, and unsupported by the facts and evidence. We ask that the Board rescind and remand the Permit to EPA for revision consistent with Petitioners' requested relief. With the following limited exceptions, Petitioners request that the Board rescind and remand the entire Permit back to EPA and re-impose the requirements of the 2001 Permit. The only provisions of the Permit we request remain in effect are conditions Part I, B. 2. & B.3 and Part III A. Given EPA's over 12 year delay in updating the 2001 permit, we also request that the Board order EPA to issue a new draft permit within 6 months of the Board's Order and a final permit within 10 months of the Board's Order.

XI. REQUEST FOR ORAL ARGUMENT

For the reasons stated herein, the issues presented in this Petition raise significant public health and environmental concerns. The issues presented herein also raise significant issues of environmental injustice. Petitioners request oral argument.

STATEMENT OF COMPLIANCE WITH WORD LIMITATION

This Petition for Review complies with the requirement that it not exceed 14,000 words, excluding caption, table of contents, table of authorities, statement of compliance with word limitations, table of attachments, and certificate of service.

7/16/2018

Respectfully submitted,

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TABLE OF ATTACHMENTS

EXHIBIT #	DOCUMENT
1	6/12/18 Permit NN0000019
2	6/12/18 cover letter to Permit
3	Undated Fact Sheet to Permit
4	Permit Response to Comments
5	Navajo Nation Press Release 7% Share
6	FCPP Lease Provision
7	September 1978 Lease
8	April 1985 Lease
9	EPA Decision Document TAS
10	2001 NPDES permit
11	Petitioners' Mandamus lawsuit
12	Petitioners' 2/15/15 comment letter
13	Declaration of Dailan Long
14	Declaration of Mike Eisenfeld
15	Declaration of Taylor McKinnon
16	Morgan Lake email
17	Final EIS Section 4.5, at p. 4.5-61 excerpt
18	Navajo Mine Permit
19	Biological Opinion
20	2001 NPDES permit fact sheet
21	EPA letter dated Oct. 30, 2012
22	EPA letter dated Fe. 19, 2013
23	Petitioners' May 16, 2014 Intent to Sue
24	EPA's 2014 Draft Permit
25	EPA's Response to Comments on Navajo Mine permit
26	Petitioners' email to EPA 3/8/18
27	EPA email delaying issuance of permit
28	EPA Memo dated 11/10/2014.
29	USFS Memo dated 9/2/14
30	Navajo Nation 2007 water quality standards
31	EPA letter dated 3/26/09
32	Morgan Lake Fishing Tournament
33	Morgan Lake Fishing Tournament
34	Morgan Lake Fishing Tournament
35	Morgan Lake Fishing Tournament
36	Morgan Lake Fishing Tournament
37	Morgan Lake Fishing Tournament
38	Navajo Nation Fishing Regs
39	Navajo Nation Fishing

40	APS letter dated 1/4/05
41	EPA WOTUS Memo dated 7/20/17
42	EPA Inspection Report 5/8/12
43	Navajo Nation Water Quality Standards 2004
44	EPA inspection report 9/15/06
45	Fish Consumption Advisory
46	1983 NPDES permit
47	1988 NPDES Permit
48	1993 NPDES Permit
49	EPA selenium water quality criteria
50	Priority Pollutant Screen
51	NNLFWQ Report
52	Form C
53	EPA Reasonable Potential Analysis
54	Cumulative Hydrologic Impact Analysis
55	401 certification determination
56	EPA inspection report 10/4/07
57	APS letter 2013
58	Emails with APS 2014
59	Fish Impingement Study
60	EPA FOIA Response
61	Riverkeeper 316(b) Comment Letter
62	New Mexico Technical Assessment

CERTIFICATE OF SERVICE

I hereby certify that copies of the foregoing Petition for Review and Attachments in the matter of In Re: Four Corners Power Plant NPDES Permit No. NN0000019 issued June 12, 2018 were served, by the method indicated, on the following persons this 16th day of July 2018:

Mike Stoker, Regional Administrator
U.S. Environmental Protection Agency
Region 9
75 Hawthorne Street
San Francisco, CA 94105-3901
(By U.S.P.S. Priority Mail)

Neil Brown
Department Manager
Environmental Operations
Arizona Public Service Company
400 North 5th Street, M.S. 9303
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DATE: 7/16/2018

s/ John M. Barth