



Navajo Nation Environmental Protection Agency – Air Quality Control/Operating Permit Program
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Detailed Information

Permitting Authority: NNEPA

County: Coconino **State:** Arizona **AFS Plant ID:** 04-005-N0423

Facility: Navajo Generating Station

Document Type: TITLE V PERMIT REOPENING - STATEMENT OF BASIS

PART 71 FEDERAL OPERATING PERMIT
TITLE V PERMIT REOPENING - STATEMENT OF BASIS
Navajo Generating Station
Permit No. NN-ROP-05-06-A

1. Facility Information

a. Permittee

Navajo Generating Station
5 Miles East of Page, off U.S. Highway 98
Page, Arizona 86040

Mailing Address:
P.O. Box 850
Page, Arizona 86040

Managing Participant Name: Salt River Project Agricultural Improvement
and Power District (SRP)*
Mailing Address: P.O. Box 52025, PAB 352
Phoenix, Arizona 85072-2025

*Note: This facility is co-owned by 6 entities. SRP is listed as the managing participant in this permit since they act as the facility operator, and have accepted the responsibility to obtain environmental permits for Navajo Generating Station, including an Acid Rain permit and Part 71 Permit. In addition to SRP, the other 5 co-owners of this facility are:

1. Los Angeles Department of Water and Power (LADWP)
2. Arizona Public Service Company (APS)
3. Tucson Electric Power (TEP)
4. Nevada Power Company (NPC)
5. U.S. Bureau of Reclamation (USBR)

b. Contact Information

| | | |
|-----------------------|-----------------------------------|--|
| Facility Contact: | Paul Ostapuk O&M Manager | Phone: (928) 645-6577 Facsimile: (928) 645-7298 |
| Responsible Official: | Robert K. Talbot Plant Manager | Phone: (928) 645-6217 Facsimile: (928) 645-7298 |

c. Permit Reopening

The federal operating permit program provides for a permit to be reopened for cause under certain circumstances. One of the circumstances requiring reopening, as described in 40 CFR § 71.7(f)(1)(i), NNOPR § 406 and Condition IV.L of the existing permit, is if “Additional applicable requirements under the Act become applicable to a major Part 71 source with a remaining permit term of 3 or more years.” The current permit for the facility was issued on July 3, 2008 and is valid for 5 years from that date. When the permit was issued, US EPA had proposed a Source-Specific Federal Implementation Plan (FIP) for the Navajo Generating Station (NGS) but had not yet issued a final FIP. The Statement of Basis supporting the July 3, 2008 permit renewal provided that “This Part 71 permit renewal will be reopened to include the final version of the FIP when it is promulgated.” Statement of Basis at 2.

U.S. EPA promulgated the FIP for NGS, codified in 40 CFR § 49.24, on March 5, 2010, and it became effective on April 5, 2010. The FIP for NGS has been recodified in 40 CFR § 49.5513. There were more than three years remaining on the permit term as of that date. The FIP established federally enforceable emissions limits for Sulfur Dioxide (SO₂) and Particulate Matter (PM), as well as opacity limits for the boiler stacks, coal storage and handling, and other dust generating activities. The FIP also established related requirements for testing, monitoring, recordkeeping, and reporting. The PM emission limit triggered Compliance Assurance Monitoring (CAM) 40 CFR § 64 requirements because the applicability criteria for each boiler were met pursuant to 40 CFR § 64.2(a). The CAM Plan has been approved by U.S. EPA and NNEPA pursuant to 40 CFR § 64.6.

On May 11, 2010, NNEPA notified NGS of the intent to reopen the NGS Title V Permit to include the FIP requirements. NNEPA is proposing to include two new conditions under Requirements for Specific Units: Conditions II.A (Federal Implementation Plan Requirements) and II.C (CAM Requirements). NNEPA also is proposing to revise Condition IV.C (Compliance Certifications) to include the CAM requirements. Changes also have been made to the Table of Contents and to Condition I (Source Identification) to reflect these proposed additions and revisions.

Finally, NNEPA is proposing to revise Condition IV.C to include a reference to NNOPR § 302(I) as an authorizing provision, in addition to 40 C.F.R. § 71.6(c)(5). The NNOPR provision is enforceable by NNEPA only, as stated in the proposed

revision. The parallel tribal citation does not impact the federal enforceability of the cited Part 71 requirement. It requires a compliance certification to be submitted semiannually rather than annually, which is consistent with 40 C.F.R. § 71.6(c)(5). NNEPA, as the delegated permitting authority, has determined that semiannual rather than annual compliance certification is appropriate because it provides greater assurance that the facility is operating in compliance on an ongoing basis, and the Condition is proposed to be revised accordingly. The other NNOPR provisions referenced in the permit are also enforceable only by NNEPA, and NNEPA intends to clarify this limitation when the permit is renewed.

d. Permitted Emission Units and Control Equipment

The July 3, 2008 Statement of Basis that supports the Title V Permit Renewal contains a complete list of the significant emission units at the facility. The “Control Method” column has been updated to incorporate the installation of LNBs and SOFA on all three existing boilers.

| Unit ID/ Stack ID | Unit Description | Maximum Capacity | Commenced Construction Date | Control Method |
|------------------------------|---|----------------------------------|--|---|
| U1/ Stack S1 | One (1) pulverized coal-fired boiler, using No. 2 fuel oil for ignition fuel. Stack S1 is equipped with SO ₂ , CO, and NO _x CEMS, and a COMS. | 7,725 MMBtu/hr; 750 Net MW | 1970 | LNB/SOFA (2011) FGD system SCBR1 (1999); ESP1 |
| U2/ Stack S2 | One (1) pulverized coal-fired boiler, using No. 2 fuel oil for ignition fuel. Stack S2 is equipped with SO ₂ , CO and NO _x CEMS, and a COMS. | 7,725 MMBtu/hr; 750 Net MW | 1970 | LNB/SOFA (2010) FGD system SCBR2 (1998); ESP2 |
| U3/ Stack S3 | One (1) pulverized coal-fired boiler, using No. 2 fuel oil for ignition fuel. Stack S3 is equipped with SO ₂ , CO and NO _x CEMS, and a COMS. | 7,725 MMBtu/hr; 750 Net MW | 1970 | LNB/SOFA (2009) FGD system SCBR3 (1997); ESP3 |

Note: LNB: Low-NO_x Burner, SOFA: Separated Over-fire Air, FGD: Flue Gas Desulfurization, SCBR: Scrubber, ESP: Electrostatic Precipitator.

e. Emissions Calculations

Please see Appendix A of this document for the revised NO_x and CO calculations for Units U1, U2, and U3 (pages 1 through 4).

f. Potential to Emit

Potential to emit (PTE) means the maximum capacity of a facility to emit any air pollutant (Clean Air Act criteria pollutants or hazardous air pollutants) under its physical and operational design. Any physical or operational limitations on the maximum capacity of this plant to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or on the type or amount of

material combusted, stored, or processed, may be treated as a part of its design if the limitation is enforceable by U.S. EPA or NNEPA. Actual emissions are typically lower than the PTE. The PTE for Units U1, U2 and U3 has been revised to reflect the NO_x and CO emission limitations set in PSD permit AZ 08-01.

| Process/facility | Potential to Emit (tons/year) | | | | | | |
|---------------------------------------|----------------------------------|-------------------|-----------------|-------------------|------------|---------------|--|
| | PM | PM-10 | SO ₂ | NO _x | VOC | CO | HAPs |
| Boiler B1 | 2,030 | 519 | 3,384 | 8,121 | 94.2 | 14,211 | 125 |
| Boiler B2 | 2,030 | 519 | 3,384 | 8,121 | 94.2 | 14,211 | 125 |
| Boiler B3 | 2,030 | 519 | 3,384 | 8,121 | 94.2 | 14,211 | 125 |
| Auxiliary Boilers | 60.7 | 60.7 | 1,444 | 442 | 3.68 | 92.0 | 11.1 |
| Coal Handling | 10.66 | 6.44 | - | - | - | - | - |
| Coal Piles (Fugitive) | 5.43 | 2.57 | - | - | - | - | - |
| Limestone Handling | 4.61 | 2.98 | - | - | - | - | - |
| Limestone Piles (Fugitive) | 4.60 | 2.17 | - | - | - | - | - |
| Fly Ash Handling | 29.2 | 29.2 | - | - | - | - | 0.01 |
| Soda Ash/Lime Handling | 0.26 | 0.26 | - | - | - | - | - |
| Cooling Towers | 19.2 | 19.2 | - | - | - | - | - |
| Unpaved Roads (Fugitive) | 591 | 153 | - | - | - | - | - |
| Emergency Generators | 0.74 | 0.74 | 0.69 | 10.5 | 0.83 | 2.26 | Negligible |
| Other Insignificant Activities* | Less than 5.00 | Less than 5.00 | - | Less than 5.00 | - | - | Negligible |
| PTE of the Entire Source | 6,822 | 1,838 | 11,595 | 24,819 | 292 | 42,727 | 387 |
| Title V Major Source Thresholds | NA | 100 | 100 | 100 | 100 | 100 | 10 for a single HAP and 25 for total HAPs |

*Note: This is an estimate on the PM/PM10 emissions from the welding and blasting operations, and VOC/HAP emissions from the parts cleaning, surface coating operations, and the storage tanks.

2. Prevention of Significant Deterioration (PSD) Applicability

The following requirements summarize the PSD permit AZ 08-01 issued by U.S.EPA on November 20, 2008.

- a. CO emissions from each unit shall not exceed 0.42 lb/MMBtu based on a 30-day rolling average. [PSD permit AZ 08-01 Condition IX.B.1]

- b. NO_x emissions from each unit shall not exceed 0.24 lb/MMBtu based on a 30-day rolling average. [PSD permit AZ 08-01 Condition IX.B.2]
- c. At all times, including periods of startup and shutdown, the Permittee shall, to the extent practicable, maintain and operate the LNB/SOFA system in a manner consistent with good combustion practices to minimize emissions. [PSD permit AZ 08-01 Condition IX.D]
- d. The permittee shall install, operate, maintain, certify, and quality-assure a continuous emission monitoring system (CEMS) for each boiler for CO. [PSD Permit AZ 08-01 Condition IX.E.1]
- e. The permittee shall operate, maintain, and quality-assure according to the requirements of 40 CFR § 75 a CEMS for each boiler for NO_x. [PSD Permit AZ 08-01 Condition IX.E.3]

3. Federal Rule Applicability

- a. This source is subject to the Source-Specific FIP for NGS codified in 40 CFR § 49.24 (recodified in 40 CFR § 49.5513). This rule was proposed on September 12, 2006 and the public notice period closed on November 6, 2006. The FIP was promulgated on March 5, 2010 and became effective on April 5, 2010. A summary of the emission limits in this FIP is included below:
 - (1) The plant wide SO₂ emissions shall not exceed 1.0 lb/MMBtu on a 3 hour plant-wide average, and compliance is based on continuous emission monitoring (CEM).
 - (2) PM emissions shall not exceed 0.060 lb/MMBtu, on a plant-wide basis, averaged from at least three 60 minute sampling runs for each stack, each collecting a minimum sample of 30 dry standard cubic feet.
 - (3) For Units U1, U2, and U3, opacity shall not exceed 20% averaged over a 6 minute period excluding condensed water droplets, and opacity shall not exceed 40% averaged over 6 minutes during absorber upset transition periods.
 - (4) Opacity shall not exceed 20% averaged over a 6 minute period for dust from emission associated with coal transfer and storage and other dust-generating activities, as well as each boiler stack. The permittee shall operate and maintain the existing dust suppression methods for controlling dust from the coal handling and storage facilities. Within ninety (90) days after promulgation of this FIP, the permittee shall submit to the Regional Administrator a description of the dust suppression methods for controlling dust from the coal handling and storage facilities, fly ash handling and storage, and road sweeping activities.

(5) The permittee shall comply with the testing, monitoring, reporting, and recordkeeping requirements specified in 40 CFR § 49.5513(e) and (f).

b. Units U1, U2, and U3 are subject to the SO₂ emission limit specified in Condition II.A.2.a. Pursuant to 40 CFR 52.145(d)(4), the permittee has previously installed SO₂ CEMS on each unit to continuously monitor the SO₂ emissions from Units U1, U2, and U3 in order to comply with 40 CFR 52.145(d)(2). This continuous compliance determination method has been incorporated into this permit as Condition II.A.3.a. Therefore, the SO₂ emissions from Units U1, U2, and U3 are exempt from the CAM requirements of 40 CFR § 64, pursuant to 40 CFR § 64.2(b)(1)(vi).

Units U1, U2, and U3 are subject to the NO_x emission limit specified in Condition II.B.2.b. Pursuant to 40 CFR § 75.10(a)(2), the permittee has previously installed NO_x CEMS on each unit to continuously monitor the NO_x emissions from Units U1, U2, and U3. This continuous compliance determination method has been incorporated into this permit in Conditions II.A.3.a and II.B.5.c. Therefore, the NO_x emissions from Units U1, U2, and U3 are exempt from the CAM requirements of 40 CFR § 64, pursuant to 40 CFR § 64.2(b)(1)(vi).

The FIP for this source has specific PM emission limits for Units U1, U2, and U3. CAM 40 CFR § 64 requirements were triggered because the three following applicability criteria for each boiler were met pursuant to 40 CFR § 64.2(a). Each unit is subject to the PM emission limit promulgated in the FIP, each unit uses a wet limestone scrubber and an Electrostatic Precipitator (ESP) to meet the emission limit and each unit has pre-control device boiler emissions that exceed 100 tons per year and is considered a Title V major source.

On June 7, 2010, the permittee submitted the CAM plan for Units U1, U2, and U3 to U.S. EPA and NNEPA. On December 1, 2010 the permittee submitted an updated CAM plan to address the comments received from U.S. EPA and NNEPA regarding the initial CAM plan review. The requirements contained in 40 CFR § 64.3-64.5 have been met and the CAM Plan has been approved by U.S. EPA and NNEPA pursuant to 40 CFR § 64.6. The following table summarizes the CAM Plan for Units U1, U2, and U3.

| | Electrostatic Precipitator | Wet Limestone Scrubber | Wet Limestone Scrubber | Wet Limestone Scrubber |
|----------------------|---|--|--|--|
| Indicator | Number of chambers/fields in service | Number of Spray levels in service | Wet limestone scrubber exhaust temperature | Wet limestone scrubber on/off |
| Measurement Approach | The number of chambers/fields in service is monitored and logged on a continuous basis. | The number of wet limestone scrubber spray levels in service is monitored on a continuous basis. | The wet limestone scrubber exhaust temperatures are monitored at the absorber outlets prior to the stack | The wet limestone scrubber on/off signal is monitored on a continuous basis. |

| | | | | |
|------------------------------------|---|---|--|--|
| | | | using a J-type thermocouple. | |
| Indicator Threshold | An excursion is defined as follows: When an ESP unit is operating with more than 3 chambers (18 fields) out of service during normal operation of the boiler. | An excursion is defined as follows: When a ESP unit is operating with more than one chamber (6 fields) out of service and less than 2 spray levels are operating in the wet limestone scrubber associated with the same boiler, during normal operations of the boiler. | An excursion is defined as follows: When the wet limestone scrubber exhaust temperatures exceed 145°F for more than one unit, on a 1-hour average basis, during normal operation of the boilers. | An excursion is defined as follows: When the wet limestone scrubber is bypassed for more than one unit, for at least 1 hour, during normal operation of the boilers. |
| Performance Criteria | The monitoring system consists of status bits from the Automatic Voltage Controllers (AVCs), supplemented with operating logs, which indicate the number of chambers/fields that are operational. | The monitoring system consists of a signal indicating the number of wet limestone scrubber spray levels that are operational. | The monitoring system consists of a J-type thermocouple at the wet limestone scrubber exhaust with a minimum accuracy of ±5 percent. | The monitoring system consists of an on/off signal indicating that the wet limestone scrubber is operational. |
| Verification of Operational Status | Not Applicable | Not Applicable | Not Applicable | Not Applicable |
| QA/QC | Monitoring equipment will be maintained and operated according to manufacturer recommendations. | The wet limestone scrubber spray level signal will undergo an annual verification check. | The thermocouple will undergo a quarterly verification check using a standard temperature indicator. | The wet limestone scrubber on/off signal will undergo an annual verification check. |
| Monitoring Frequency | Continuous | Continuous | The wet limestone scrubber exhaust temperature is measured continuously. | The wet limestone scrubber on/off signal is monitored continuously. |
| Data Collection Procedures | The AVC status bits are recorded by the BHA WinDAC Data Acquisition and Control Software, and supplemented with operating logs. | The wet limestone scrubber spray level signal will be recorded on a continuous basis by the data acquisition handling system. | The wet limestone scrubber exhaust temperature will be recorded as an hourly average by a data acquisition handling system. | The wet limestone scrubber on/off signal will be recorded on a continuous basis by the data acquisition handling system. |

| | | | | |
|------------------|----------------|----------------|----------------|----------------|
| Averaging Period | Not Applicable | Not Applicable | 1-Hour average | Not Applicable |
|------------------|----------------|----------------|----------------|----------------|

Summary of Applicable Federal Requirements

| Federal Air Quality Requirement | Current or Future Requirement |
|--|-------------------------------|
| Federal Implementation Plan (40 CFR § 49.5513) | Current |
| PSD Permit AZ 08-01 | Current |
| CAM (40 CFR § 64) | Current |
| Acid Rain Regulations (40 CFR § 72-76) | Current |
| Visibility FIP (40 CFR § 52.145(d)) | Current |
| NSPS for Non-metallic Mineral Processing Plants (40 CFR § 60, Subpart OOO) | Current |
| Asbestos NESHAP (40 CFR § 61, Subpart M) | Current |
| Protection of Stratospheric Ozone (40 CFR § 82) | Current |
| Regional Haze Rule (BART) | Future |

4. NNEPA Authority

Authority to administer the Part 71 Permit Program was delegated to the Navajo Nation EPA by U.S. EPA Region 9 in part on October 13, 2004 and in whole on March 21, 2006. This permit is issued pursuant to the Voluntary Compliance Agreement between the permittee and the Navajo Nation. The permittee shall comply with the terms of this permit and shall be subject to enforcement of the permit by the Navajo Nation EPA, pursuant to the terms of the Voluntary Compliance Agreement. The permittee's agreement to comply is effective upon the permittee's written acceptance of the permit and expires at the end of the permit term, unless the permit is renewed. The permittee's agreement to comply may be withdrawn during the permit term only if the Voluntary Compliance Agreement is terminated or expires as provided in that Agreement.

5. Public Participation

Please see the Public Notice, Public Notice of a Hearing, and Response to Comments for detailed information on public participation (Appendices C, D, and E).

a. Public Notice

As required by NNOPR § 403(A), the reopened portions of the permit are being publicly noticed and made available for public comment. The content, methods, and timing of public notice are described in NNOPR § 403(B)-(D), and include a 30-day public comment period. *See also* 40 CFR § 71.11(d) (equivalent public notice and comment provisions).

As described in 40 CFR § 71.7(f)(2) proceedings to reopen the permit shall affect only those part of the permit for which the cause to reopen exists, therefore NNEPA will

consider comments on the following sections of the permit only:

- II.A Federal Implementation Plan Requirements
- II.C CAM Requirements
- IV.C Compliance Certifications¹

Public notice of this proposed permit action will be provided by mailing a copy of the notice to the permittee, U.S. EPA Region 9, and the affected states (Utah and Arizona). A copy of the notice will also be provided to all persons who submit a written request to be included on the mailing list to the following individual:

Charlene Nelson (Program Supervisor)
Navajo Air Quality Control Program
Operating Permit Program Section
P.O. Box 529
Fort Defiance, AZ 86504
E-mail: charlenenelson@navajo.org

Public notice will be published in a daily or weekly newspaper of general circulation in the area affected by this source.

b. Opportunity for Comment

Members of the public may review a copy of the draft reopened portions of the permit prepared by NNEPA, this statement of basis, and all supporting materials (including the entire draft permit) at:

Navajo Nation Air Quality Control Program
Route 112 North, Bldg No. F004-51
Fort Defiance, AZ 86504

Copies of the draft reopened portions of the permit, this statement of basis, and all supporting materials (including the entire draft permit) can also be obtained free of charge from NNEPA's website:

www.navajonationepa.org/airqty/permits

or by contacting Charlene Nelson at the NNAQCP address listed above or by telephone at (928) 729-4247. All documents will be available for review at the NNAQCP office indicated above during regular business hours.

¹ In addition, NNEPA has used this opportunity to make a revision to the permit in the nature of an administrative permit amendment, which is not subject to public notice and comment. *See* NNOPR § 405(C); *see also* 40 C.F.R. § 71.7(d). The revision incorporates into the part 71 permit the requirements from the preconstruction review permit, PSD permit AZ 08-01 issued by U.S.EPA. *See* 40 C.F.R. § 71.7(d)(1)(v) and Condition II.B, PSD Permit Requirements.

If you have comments on the reopened portions of the permit, which are listed in Section 5(a) above, you must submit them during the 30-day public comment period. All comments received during the public comment period and all comments made at any public hearing will be considered in arriving at a final decision on the permit. The final permit is a public record that can be obtained by request. A statement of reason for changes made to the draft permit and responses to comments received will be sent to persons who commented on the draft permit.

If you believe that any permit conditions listed in Section 5(a) above are inappropriate, you must raise all reasonably ascertainable issues and submit all arguments supporting your position by the end of the comment period. Any supporting documents must be included in full and may not be incorporated by reference, unless they are already part of the administrative record for this permit or consist of tribal, state or federal statutes or regulations, or other generally available referenced materials.

c. Opportunity to Request a Hearing

A person may submit a written request for a public hearing to Charlene Nelson, at the address listed in Section 5(a) above, by stating the nature of the issues to be raised at the public hearing. Based on the number of hearing requests received, NNEPA will hold a public hearing whenever it finds there is a significant degree of public interest in a draft operating permit. If a public hearing is held, NNEPA will provide public notice of the hearing and any person may submit oral or written statements and data concerning the draft permit.

d. Mailing List

If you would like to be added to our mailing list to be informed of future actions on this or other Clean Air Act permits issued on the Navajo Nation, please send your name and address to Charlene Nelson at the address listed in Section 9(a) above.