

**PART 71 FEDERAL OPERATING PERMIT
STATEMENT OF BASIS**

**South Point Energy Center
Permit No. FM-ROP 07-01**

1. Facility Information

a. Permittee

South Point Energy Center
3779 Courtwright Rd.
P.O. Box 5619
Mohave Valley, AZ 86446

b. Facility location

The South Point Energy Center (SPEC) is located on the Fort Mojave Indian Reservation in Mohave Valley, Arizona.

c. Contact information

Facility Contact and Responsible Official: James Doherty (928) 346-7000

d. Description of operations, products

The facility is a 500 MW natural gas-fired, two-on-one combined cycle electrical generating plant. The primary power generating equipment consists of two combined cycle combustion turbine generating sets (Siemens Westinghouse Model 501FDH) and two duct fired heat recovery steam generators (HRSG) feeding a single steam turbine generator. The turbines are exclusively natural gas-fired and are equipped with selective catalytic reduction (SCR) units.

e. Permitting and/or construction history

EPA issued a Prevention of Significant Deterioration (PSD) permit AZ-98-01 for the construction of the facility on May 24, 1999. Initial startup occurred in March 2001. EPA issued a minor modification of the PSD permit on April 21, 2003. The modification consisted of revising two conditions to increase the emissions limit for carbon monoxide during startup.

EPA issued the initial title V permit to the facility on June 19, 2003. This permit is the first renewal of the initial title V permit.

f. Emission-generating units and activities

Table 1 lists the permitted emission-generating units and activities at the facility.

Table 1. SPEC Emission Units

Emission Unit I.D. No.	Unit Description	Associated Control Equipment
E/U 01	Combined Cycle System 1 (natural gas-fired turbine and heat recovery system generator)	Selective Catalytic Reduction (SCR)
E/U 02	Combined Cycle System 2 (natural gas-fired turbine and heat recovery system generator)	Selective Catalytic Reduction (SCR)
E/U 06	Mechanical-draft cooling tower	Drift Eliminator

g. Potential to emit

Potential to emit (PTE) means the maximum capacity to emit any air pollutant regulated under the Clean Air Act under its physical and operational design. Any physical or operational limitation on the maximum capacity of SPEC 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 part of its design if the limitation is enforceable by EPA. PTE is meant to be a worst case emissions calculation and is used in many, though not all, cases to determine the applicability of federal requirements. Actual emissions may be much lower than PTE, and typically do not represent the PTE of a source. The potential to emit presented in Table 2 below was calculated by SPEC in its permit application.¹

Table 2. Facility-wide PTE (in tons per year)

Unit	Pollutant					
	NO_x	VOC	SO₂	PM₁₀	CO	HAP
E/U 01	135.3	219.5	19.9	72.0	648.0	1.2
E/U 02	135.3	219.5	19.9	72.0	648.0	1.2
E/U 06	n/a	n/a	n/a	12.7	n/a	0
Total	270.6	439.0	39.8	156.7	1296.0	2.4

¹These PTE calculations were provided by SPEC and have not been independently verified by EPA. Without further validation, they should not be overly relied upon for regulatory purposes.

The ancillary equipment at the facility (emergency generator and diesel fire pump) add marginal amounts (less than one ton per year for each criteria pollutant to these totals).

2. Tribe Information

a. General

The Fort Mojave Indian Reservation is located along the Colorado River and covers 23,699 acres of land in Arizona and 5,582 acres in Nevada, and has its Tribal headquarters in Needles, California. The reservation has a population of approximately 1,120 people.

b. Local air quality and attainment status

All areas of the Fort Mojave Indian Reservation are currently designated as attainment or unclassifiable for all criteria pollutants for which a National Ambient Air Quality Standard (NAAQS) has been established.

3. Inapplicable Requirements

a. New Source Performance Standards (NSPS) for Stationary Combustion Turbines (40 CFR Part 60)

The provisions of 40 CFR Part 60, Subpart KKKK apply to stationary combustion turbines with a heat input at peak load equal to or greater than 10.7 gigajoules (10 MMBtu) per hour, which commenced construction, modification, or reconstruction after February 18, 2005. The two gas turbines (E/U 01 and E/U 02) at this facility were constructed in 2001, and have not been modified or reconstructed since then for purposes of NSPS Subpart KKKK. Therefore, the turbines are not subject to the requirements of NSPS Subpart KKKK.

b. National Emission Standards for Hazardous Air Pollutants (NESHAP) for Combustion Turbines (40 CFR Part 63)

The provisions of 40 CFR Part 63, Subpart YYYY apply to any existing, new, or reconstructed stationary combustion turbine located at a major source of hazardous air pollutants (HAP). A major source of HAP emissions is a source that emits or has the potential to emit 10 tpy of a single HAP or 25 tpy of a combination of HAPs.

This facility is an existing minor source of HAP emissions. The potential to emit from this facility is less than 10 tpy of a single HAP and 25 tpy of a combination of HAPs. Therefore, the two turbines (E/U 01 and E/U 02) are not subject to the requirements of NESHAP Subpart YYYY.

c. Compliance Assurance Monitoring (40 CFR Part 64)

Compliance Assurance Monitoring (CAM) applies to emission units with control devices that are subject to an emission limit and have a pre-control potential to emit greater than the major source threshold. This facility has pre-control emissions of NO_x, CO, VOC, and PM₁₀ that are greater than the major source threshold. Because SPEC does not operate control devices for CO and VOC emissions, CAM does not apply to these pollutants. However, SPEC utilizes a drift eliminator in the cooling tower to control PM₁₀ emissions and operates Selective Catalytic Reduction (SCR) systems in the turbines to control NO_x emissions. A drift eliminator is not considered a control device as defined in 40 CFR § 64.1, since the drift eliminators act as a passive control measure prevent release of particulate matter (i.e. drift). CAM does not apply to turbines E/U 01 and E/U 02 for NO_x because the Part 71 permit requires the use of a continuous emissions monitoring system (CEMS) as a compliance determination method in Condition II.D.1. 40 CFR § 64.2(b)(1)(vi) exempts emission limits from triggering CAM if the title V permit requires a “continuous compliance determination method.” A CEMS meets the definition of this term in 40 CFR § 64.1. Therefore, SPEC is exempt from CAM requirements for PM₁₀ and NO_x, and does not require CAM for any of the other regulated pollutants.

4. Applicable Requirements

a. PSD permit AZ-98-01

The PSD permit issued to the facility contains Best Available Control Technology (BACT) emission limits for NO_x, CO, PM₁₀, and VOC, and monitoring, reporting, and record-keeping requirements.

b. All conditions of the PSD permit have been incorporated into the title V permit. When PSD conditions, as incorporated into the title V permit, contain references to conditions in “the PSD Permit,” that reference is to the PSD permit AZ-98-01 and not the title V permit.

c. NSPS for Small Industrial-Commercial-Institutional Steam Generating Units (40 CFR Part 60)

The duct burners are subject to the 40 CFR Part 60, Subpart Dc, and the associated NSPS Subpart A General Provisions. The facility is only permitted to fire its turbines and duct burners on natural gas. Since the emission limits, monitoring, reporting, and record-keeping requirements of Subpart Dc only apply to facilities that burn coal, oil, or wood, there are no requirements from Subpart Dc that apply to SPEC.

d. NSPS for Stationary Gas Turbines (40 CFR Part 60)

The turbines E/U 01 and E/U 02 are subject to the 40 CFR Part 60, Subpart GG, and the associated NSPS Subpart A General Provisions. Please see Section 6 “Monitoring” below for further discussion.

e. Acid Rain Regulations (40 CFR Parts 72 - 76)

SPEC is subject to the acid rain requirements of title IV of the Clean Air Act. The Phase II acid rain permit, which is being combined with the title V permit, requires the facility to have allowances for all the SO₂ it emits in each year. SPEC submitted an acid rain renewal application to EPA on November 21, 2007. This title V permit renewal includes acid rain conditions that incorporate the acid rain application and applicable requirements by reference.

f. NESHAP 40 CFR Part 61, Subpart M - Demolition or Renovation Activity

Based on SPEC’s application, the facility is not currently engaged in the activities regulated under this provision. If SPEC conducts any demolition or renovation activity, the permittee must assure that the project is in compliance with the federal rules governing asbestos including the requirement to conduct an inspection for the presence of asbestos. Including terms related to these requirements in the permit minimizes the need to reopen the permit if SPEC ever conducts any demolition or renovation activity.

g. Stratospheric Ozone and Climate Protection (40 CFR Part 82)

Based on its application, SPEC does not currently engage in the activities regulated under this provision. Including terms related to these requirements in the permit minimizes the need to reopen the permit if the facility does any maintenance, service, repair, or disposal of any equipment containing chlorofluorocarbons (CFCs), or contracts with someone to do this work.

h. Chemical Accident Prevention Program (40 CFR Part 68)

The Chemical Accident Prevention Program requires sources that use or store regulated substances above a certain threshold to develop and submit a risk management plan (RMP) to prevent accidental releases. Based on SPEC’s application, this facility currently has regulated substances above the threshold quantities in this rule and therefore is required to develop and submit an RMP. SPEC has already submitted an RMP to EPA.

i. Table 3. Incorporation of Applicable Requirements into Part 71 Permit

Requirement	Condition/ Section	Condition in Pt. 71 Permit	Description/Notes

Requirement	Condition/ Section	Condition in Pt. 71 Permit	Description/Notes
40 CFR Part 60 NSPS Subpart A	60.1	n/a	applicability (no requirements)
	60.2	n/a	definitions (no requirements)
	60.3	n/a	units and abbreviations (no requirements)
	60.4(a)	II.G.1	submit reports to EPA Regional office
	60.4(b)	n/a	submit reports to delegated agencies (Tribe not delegated authority for NSPS)
	60.5	n/a	applicability determinations (places requirements on EPA, not the facility)
	60.6	n/a	review of plans (places requirements on EPA, not the facility)
	60.7(a)	n/a	notification of construction or reconstruction (the turbines have been already constructed and have not been reconstructed)
	60.7(b)	II.G.2	records of startup, shutdown, malfunction
	60.7(c)	II.H.	CEMS reporting
	60.7(d)	II.H.	report format for CEMS reporting
	60.7(e)	n/a	reporting frequency (PSD permit requires quarterly excess emission reports)
	60.7(f)	II.E.1	maintain monitoring records (excluding requirements for CEMS)
	60.7(g)	n/a	notification required by State/local agency (no such notification required)
	60.7(h)	II.H.	disclaimer that Subpart may clarify/make inapplicable any General Provisions
	60.8	n/a	initial performance test (initial performance test has been conducted)
40 CFR Part 60 NSPS Subpart A	60.9	II.G.3	availability of information
	60.10	n/a	state authority (no requirements)
	60.11(a)	II.G.4	compliance with non-opacity standards

Requirement	Condition/ Section	Condition in Pt. 71 Permit	Description/Notes
	60.11(b)	n/a	compliance with opacity standards (facility not subject to opacity standard)
	60.11(c)	n/a	times when opacity standards apply (facility not subject to opacity standard)
	60.11(d)	II.G.5	good practice to minimize emissions
	60.11(e)	n/a	compliance with opacity standards (facility not subject to opacity standard)
	60.11(f)	n/a	special provisions in Subpart supersede General Provisions (no requirements)
	60.11(g)	II.G.6, IV.B.2	credible evidence
	60.12	II.G.7	circumvention
	60.13	II.H.	CEMS requirements
	60.14	n/a	applies to modification of affected facilities
	60.15	n/a	applies to reconstruction of affected facilities
	60.16	n/a	priority list (no requirements)
	60.17	n/a	incorporation of test methods by reference
	60.18	n/a	requirements for flares (facility does not use flares to comply with an NSPS)
	60.19	II.F.8	general notification and reporting
40 CFR Part 60 NSPS Subpart GG	60.330	n/a	applicability (no requirements)
	60.331	n/a	definitions (no requirements)
	60.332	II.A.3	standard for nitrogen oxides
	60.333	II.B.1	standard for sulfur oxides (fuel sulfur standard)
40 CFR Part 60 NSPS Subpart GG	60.334(a) and (b)	n/a	monitoring of water, fuel for NO _x control (the turbines do not use water injection to control NO _x)
	60.334(c)	II.D.1	CEMS requirement
	60.334(d)		monitoring of water, fuel for NO _x control for

Requirement	Condition/Section	Condition in Pt. 71 Permit	Description/Notes
	through (g)	n/a	turbines constructed after July 8, 2004 (the turbines do not use water injection and were constructed in 2001)
	60.334(h)	II.D.15	monitoring of fuel sulfur content not required if fuel meets definition of natural gas
	60.334(j)	II.D.15	monitoring of fuel sulfur content not required if fuel meets definition of natural gas
	60.335	II.D.6	test methods and procedures
PSD permit AZ-98-01	section I	IV.M.7	expiration of PSD permit
	section II	III.K.1 and III.K.2	notification of commencement of construction and startup
	section III	II.B.8	facility operation
	section IV	II.F.1 and III.H	malfunction
	section V	IV.J	right of entry
	section VI	IV.K.2	transfer of ownership
	section VII	IV.F	severability
	section VIII	III.I	other applicable regulations
	section X	multiple conditions in sections: II.A II.B II.D II.E II.F II.G II.H	special conditions: certification air pollution control equipment fuel use and operation conditions continuous monitoring systems emission limits performance tests recordkeeping and reporting NSPS agency notification
Acid Rain Regulations	40 CFR Parts 72-76	II.C.1 through II.C.4; Attachment A	Acid Rain requirements
Chemical Accident Prevention Program	40 CFR Part 68	III.E.	CAA 112(r)(1) requirements
Asbestos NESHAP	40 CFR Part 61	III.F	Requirements for demolition and renovation at facilities containing asbestos

Requirement	Condition/Section	Condition in Pt. 71 Permit	Description/Notes
	Subpart M		
Stratospheric Ozone Protection	40 CFR Part 82	III.D	Requirements for treatment of class I and II substances

EPA recognizes that, in some cases, sources of air pollution located in Indian country are subject to fewer requirements than similar sources located on land under the jurisdiction of a state or local air pollution control agency. However, in this case, the PSD program and its permitting and control requirements, one of the most robust CAA requirements, was triggered when SPEC first constructed its facility.

To further address the regulatory gap in Indian county, EPA promulgated a Federal Implementation Plan for preconstruction review of major sources in nonattainment areas and of minor sources in both attainment and nonattainment areas, which became effective on August 30, 2011 (76 FR 38748, July 1, 2011). These programs, codified in Parts 49 and 51 of the Code of Federal Regulations, establish pre-construction review requirements for sources that would be incorporated into Part 71 permits. The facility is not currently constructing new emission units or modifying existing emission units in the portion of the facility regulated by EPA. In the future, if the facility constructs new emission units or modifies existing emission units, it may be required to obtain a permit from EPA prior to construction, under the PSD program and/or the new tribal minor source program, depending on the amount of the emission increase, if any, associated with the project.

5. Streamlining NO_x Emission Limits

The two gas turbines at the facility are subject to 40 CFR Part 60, Subpart GG, Standards of Performance for Stationary Gas Turbines. The NO_x limit required by Subpart GG for a turbine with a heat input at peak load greater than 100 million Btu/hour is 75 ppm (40 CFR 60.332(a)(1)). In addition, SPEC is also subject to a BACT emission limit for NO_x from its PSD permit. This limit, 3.0 ppmdv at 15 percent oxygen, is more stringent than what Subpart GG requires. Therefore, EPA is streamlining the two emission limits, and subsuming the 75 ppm NSPS limit to the more stringent BACT limit.

Both the PSD permit and the NSPS General Provision require that an initial source test be conducted within 60 days after achieving the maximum production rate of the affected emission units, but no later than 180 days after the initial startup of equipment. The NSPS does not require any on-going performance testing for NO_x. The PSD permit requires the facility to maintain and operate a CEMS, and to conduct an annual performance test for NO_x. Thus, the monitoring associated with the streamlined emission limit is more stringent than the monitoring required by the subsumed NSPS emission limit, and will be retained in the title V permit.

6. Monitoring

With one exception, the monitoring in the title V permit is identical to the monitoring in the EPA-issued PSD permit. The additional monitoring requirement included in the Title V permit comes from NSPS Subpart GG. Subpart GG was revised on July 8, 2004 and included changes to the monitoring requirements for sulfur content in fuel. Subpart GG revisions state that the owner or operator may elect not to monitor the total sulfur content of the gaseous fuel combusted in the turbine if the gaseous fuel is demonstrated to meet the definition of natural gas in 40 CFR § 60.331(u). The initial permit contains a custom fuel monitoring schedule for sulfur content. For this permit renewal, the custom fuel monitoring schedule has been removed as a result of the Subpart GG revisions and because SPEC has opted to demonstrate compliance with the sulfur content provisions according to 40 CFR § 60.334(h)(3). This provision requires annual fuel sampling per 40 CFR Part 75 Appendix D, Section 2.3.1.4. The monitoring in the permit is summarized in Table 4 below.

Table 4. Monitoring in the title V permit

Requirement	Requirement Condition #	Monitoring from Underlying Requirement	Monitoring Added to Part 71 Permit	Monitoring Condition #
NO _x limits	II.A.1 through II.A.3	CEMS & annual source test	none	II.D.1 & 6
CO limits	II.A.1, 2 & 4	CEMS & annual source test	none	II.D.1 & 6
SO ₂ limits	II.A.1 and 2	annual source test	none	II.D.6
Fuel sulfur content limit	II.B.1	annual fuel sampling plus certification that only natural gas is used	none	II.C.15
VOC limits	II.A.1 and 2	annual source test	none	II.D.6
PM ₁₀ limits	II.A.1, 2 & 5	annual source test	none	II.D.6

6. Use of All Credible Evidence

Determinations of deviations, continuous or intermittent compliance status, or violations of the permit are not limited to the testing or monitoring methods required by the underlying regulations or this permit; other credible evidence (including any evidence admissible under the Federal Rules of Evidence) must be considered by the source and EPA in such determinations.

7. EPA Authority

Title V of the Clean Air Act requires that EPA promulgate, administer, and enforce a Federal operating permits program when a State, local, or Tribal agency does not submit an approvable program within the time frame set forth by title V. Unlike States, Tribes are not required to develop title V operating permits programs for EPA's approval (See 40 CFR § 49.4), and the Fort Mojave Indian Tribe has still not done so. To implement Title V in areas where there is not an EPA-approved State, local or Tribal operating permits programs, such as on the Fort Mojave Indian Reservation, EPA has promulgated regulations codified at 40 CFR Part 71 setting forth the procedures and terms under which the Agency will administer the program. As a result, the 40 CFR Part 71 operating permits program regulations are the Title V regulations that apply to this permit.