



TECHNICAL SUPPORT DOCUMENT

TECHNICAL SUPPORT DOCUMENT

AIR QUALITY PERMIT NO. 53399

ARIZONA PUBLIC SERVICE COMPANY-CHOLLA GENERATING STATION

I. INTRODUCTION

This Class I renewal permit issued to Arizona Public Service Company (APS) for continued operation of Cholla Generating Station located near Joseph City in Navajo County, Arizona. This permit renews and supersedes Operating Permit No. 33500.

A. Company Information

Facility Name: Cholla Generating Station

Mailing Address: P.O. Box 188
Mail Station 4451
Joseph City, Navajo County, AZ 86032

Facility Address: 4801 Cholla Lake Road
Joseph City, Navajo County, AZ 86032

B. Attainment Classification

The facility is located in an area that is classified as an attainment area for all criteria pollutants.

C. Learning Sites Evaluation

In accordance with ADEQ's "Environmental Permits and Approvals Near Learning Sites" Policy, the Department is required to evaluate if any nearby learning sites would be adversely impacted by the facility. Learning sites consist of all existing public schools, charter schools and private schools at the K-12 level, and all planned sites for schools approved by the Arizona School Facilities Board. The learning sites policy was established to ensure that the protection of children at learning sites is considered before a permit approval is issued by ADEQ.

The Department identified two learning site within two miles of the facility.

APS Cholla conducted dispersion modeling analysis during their previous permit application after implementation of new control systems. The modeling results documented compliance with the National Ambient Air Quality Standards (NAAQS) for criteria pollutants and Arizona Ambient Air Quality Guidelines (AAAQG) for the hazardous air pollutants (HAPs). Since this modeling analysis, the facility has not made changes that resulted in increase in the potential emissions. Therefore the learning sites should not have any adverse impacts from the continued operation of the facility.

II. PROCESS DESCRIPTION

The Cholla generating station consists of four coal-fired steam generating units, associated air pollution control devices and auxiliary equipment necessary to produce approximately 1160 megawatts of electricity. Units 1, 2 and 3 are owned by APS and Unit 4 is owned by PacifiCorp. All four units are operated by APS. Unit 1 was completed in 1962, Units 2 and 3 were completed in 1978 and 1980, and Unit 4 was placed in commercial operation in 1981. The maximum process rates and operating hours of the steam units at the Cholla generating station are summarized in Table 1.

Table 1: Maximum process rates¹ and operating hours

Emission Unit	Hours/yr	Gross MW	Gross MW-hr/yr
Steam Boiler Unit 1	8,760	125	1,095,000
Steam Boiler Unit 2	8,760	305	2,671,800
Steam Boiler Unit 3	8,760	305	2,671,800
Steam Boiler Unit 4	8,760	425	3,723,000

¹ The maximum process rates listed in the table are estimates and should not be used as operating limits of any kind.

A. Process Description

Cholla generating station is a Steam Electric Station, Standard Industrial Code (SIC) 4911 Electric Generation, consisting of four units (Units 1, 2, 3 and 4) which are coal-fired steam boilers with Source Classification Code (SCC) #1-01-002-26. Pulverized coal is tangentially fired into the dry bottom furnace of each unit. Separated over-fire air is applied to Unit 1. Separated closed coupled over-fired air (OFA) is applied to Units 2, 3 and 4. Historically, coal had been obtained from the McKinley Mine near Gallup, New Mexico. Due to planned closure of McKinley Mine, APS has transitioned to a new supplier of coal. Since 2010, the Lee Ranch and El Segundo mines near Grants, New Mexico, are the principle coal suppliers to the Cholla generating station. The coal is transported to the Cholla generating station via trains and unloaded at a “coal handling” facility which includes a Coal Preparation Plant that directs coal to the four units and a main coal pile. Two track feeders systems, “old” and “new”, are used to unload coal directly to any of the four units, the main coal pile or any combination thereof. The main coal pile contains approximately a 45 day supply of coal. Coal unloaded at the coal handling facility is released through the bottom of the train rail cars to one of two large grates known as grizzlies. The coal collected below the grizzly at the old track feeders is loaded to a coal conveying belt which travels to coal crusher tower #1 where, the coal can be crushed and directed to the Unit 1 silos or to coal crusher tower #2 where it can be conveyed to the silos for Units 2, 3, or 4. The coal collected below the grizzly at the new track feeders is loaded to a coal conveying belt which travels to coal crusher tower #2. The crusher tower reduces the size of the coal before transporting the coal to Unit 1 (via crusher tower #1) or to the transfer tower #2 which sends it to the main pile or sends the coal to Units 2, 3, and 4 via the transition tower. Reclaim off of the bottom of the main pile goes to transfer tower #2 (via crusher tower #2) and is transported to Units 1-4. The crusher/transfer towers coal conveyor belts feed the top of coal silos of each steam boiler unit silos. All unit silos feed coal gravitationally to feeders which supply each pulverizer where the coal is ground to the consistency of talcum-powder before firing in the furnace. Emergency diesel generators are located at Units 2, 3, and 4 for purposes of safely shutting a Unit down in a loss of off-site power situation.

All four units at the Cholla generating station combust bituminous/sub-bituminous coal to heat high purity water to create super-heated steam which is used as the thermodynamic medium that drives the turbines/generators to produce electricity. Unit 1 uses natural gas as the warm-up/stabilization fuel and Units 2, 3 and 4 use diesel fuel #2. All warm-up/ stabilization fuels are fired less than one percent of total unit operating time. Historical operating data indicate this to be approximately 0.7 percent of total heat input on Unit 1 and approximately 0.3 percent on

Units 2, 3 and 4. Condenser cooling for Units 1 and 2 are provided by Cholla Reservoir, while Unit 3 and 4 have mechanical draft cooling towers with Unit 3 receiving make-up water from the reservoir and Unit 4 mainly from the well field and from the reservoir as an alternate source.

Unit 4 has a used oil burning system which injects on-spec used oil and/or used oil fuel into the furnace for energy recovery purposes, and is co-fired with coal and performed on a periodic basis. The total heat input from this activity is typically less than 0.1 percent of total heat input to Unit 4 on an annual basis. Diesel fuel is used in the emergency generators located at Units 2 through 4.

B. Coal Supply

The four Units at the Cholla generating station typically burn 3.5 to 4.0 million tons of coal annually or about 70% of the total potential burn rate of approximately 5.6 million tons.

Table 2 presents the typical characteristics of the coal.

Table-2: Coal Characteristics

Coal Data	Lee Ranch/ El Segundo
Sulfur	1.01%
Btu/lb	9,154
SO ₂ in coal (lb/MMBtu)	2.21
Ash	17.30%
Moisture	15.50%

C. Air Pollution Control Equipment

Cholla generating station currently utilizes fabric filters at Units 1, 3 and 4, and a mechanical dust collector and Venturi flooded disc scrubbers Unit 2 for control of particulate matter emissions. Cholla has proposed to replace the mechanical dust collector with a fabric filter on Unit 2. For sulfur dioxide emissions removal, Unit 1 utilizes a tray tower absorber with lime reagent. Unit 2 utilizes Venturi flooded disc scrubbers/absorbers with lime reagent. Units 3 and 4 use sulfur dioxide spray tower absorbers with lime reagent for the control of SO₂. APS has proposed to replace the scrubber on Unit 2 with a new flue-gas desulfurization unit. All four units are retrofitted with low-NO_x burners and over-fire air system to control NO_x emissions.

Table 3: Current Air Pollution Controls

Equipment	PM	SO _x	NO _x
Unit 1	Baghouse	2 tray tower absorbers with lime reagent; 90% SO ₂ removal	Low NO _x burners
Unit 2	Primary - Mechanical dust collector, estimated 70% efficiency Secondary - Venturi flooded disc scrubber,	Four-module venturi flooded-disc scrubbers/ absorber with Lime reagent; 90% SO ₂ removal	Low NO _x burners

Equipment	PM	SO _x	NO _x
	98% particulate removal Proposed Installation – Fabric Filter		
Unit 3	Baghouse	SO2 Spray Tower Absorber	Low NO _x burners
Unit 4	Baghouse	SO2 Spray Tower Absorber	Low NO _x burners
Fly ash Silo	Baghouse	N/A	N/A
Lime Silo	Baghouse	N/A	N/A
Lime Slaker Vent	Wet scrubber	N/A	N/A
Coal Handling Facility	Baghouse or wetting systems with chemical suppressant	N/A	N/A

IV. EMISSIONS

As described in Section I, the Cholla operation burns fossil fuel to produce electricity. The fossil fuel combustion results in emissions of a number of criteria air pollutants which mainly include particulate matter (PM)/particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers (PM₁₀), sulfur dioxide (SO₂), nitrogen oxides (NO_x), carbon monoxide (CO), and volatile organic compound (VOC). Table 4 summarizes potential to emit (PTE) of criteria air pollutants and hazardous air pollutants. For detailed emissions calculations refer to the permit application.

Table 4: Potential To Emit Summary

Pollutant	PTE (tons per year)	PTE after Unit 2 SO ₂ Control upgrade (tons per year)
PM _{2.5}	666.4	666.4
PM/PM ₁₀	2,507	2507
SO ₂	7,817	6659
NO _x	9,770	9770
VOCs	2	2
CO	1,262	1262
HAPs	35	35
GHG	58279550	58279550

Proposed Unit 2 Upgrades – APS Cholla has proposed to upgrade the Unit 2 SO₂ controls with a new FGD. The upgrades will reduce the facility wide PTE as noted in the above table. The upgrades will not result any increases in GHG gases and hence does not trigger PSD applicability.

V. APPLICABLE REQUIREMENTS

APS-Cholla has identified all applicable regulations that apply to its facility in Attachment A of the permit application. The permit is a renewal of the Title V Permit No. 33500 and incorporates all regulations that were determined applicable in that permit.

NSPS Applicability – All 4 units at the Cholla Generating Station were built after August 17, 1971 and before September 18, 1978, and therefore all 4 units are subject to the New Source Performance Standards (NSPS) Subpart D requirements. However, in the early 1980s, APS modified the SO₂ control equipment on Unit 2 without a proper permit modification. As a result, ADEQ and APS Cholla entered into a consent order that subject Unit 2 to the SO₂ limits and monitoring requirements of Subpart Da. Therefore, Unit 2 is subject to Subpart Da for SO₂ only and Subpart D for the other pollutants.

Unit 2 Pollution Control Equipment Operation – When APS Cholla made modifications to their control equipment, EPA also negotiated a Consent Decree (CD) on September 5, 1991, where APS Cholla was required to obtain a permit for the changes. In the CD, EPA established operational practices for the control equipment associated with Unit 2. The CD specified APS Cholla to place the Venturi scrubbers and absorbers in service within one hour of the boiler-induced draft fans and forced draft fans were placed in service and before fires were ignited in the boiler. And the venturi scrubbers and absorbers to remain in service after the fired in the boiler were put off and not take the boiler out of service until just before the draft fans and induced draft fans were turned off. These definitions are being carried forward from the previous permit.

Part 68 Applicability – APS Cholla does not store any listed chemicals on-site in any process in excess of threshold amounts to trigger the requirements of Part 68 - Chemical Accidental Prevention Programs.

Electric Steam Generating Utility (EGU) MACT – EPA finalized the EGU MACT on April 16, 2012. This renewal permit will be reopened to incorporate the new requirements.

VI. PREVIOUS PERMIT AND PERMIT REVISIONS

A. PREVIOUS PERMITS

Table 5: PREVIOUS PERMITS

Permit No.	Issue Date	Application Basis
33500	May 3, 2006	Class I Operating Permit
41787	April 6, 2007	Class I Significant Permit Revision
46353	April 11, 2008	Class I Significant Permit Revision
50379	July 14, 2010	Class I Significant Permit Revision
49962	October 14, 2010	Class I Significant Permit Revision

B. PERMIT REVISIONS

1. In April 2007, APS was issued Significant Permit Revision No. 41787 to implement voluntary emissions reduction projects at Cholla, including retrofitting all four boilers with low NO_x burners (LNBS) and over-fire air systems.
2. Significant Permit Revision No. 46353 issued on April 11, 2008, included physical changes to APS Cholla's coal preparation plant for optimization of the coal handling operations.

3. Significant Permit Revision No. 50379 issued on July 14, 2010, incorporated the company's early mercury control strategy, as required by the Consent Order (Docket #A-19-09) entered between the Arizona Department of Environmental Quality (ADEQ) and APS-Cholla Generating Station on February 18, 2009. Additionally, this permit revision streamlined the compliance assurance monitoring (CAM) requirements for particulate matter for Units 1, 3 and 4.
4. Significant Permit Revision No. 49962 issued on October 14, 2010, removed bubbled emission limits for Unit 2 and Unit 3, and provided separate emission limitations for these units. In addition, the pounds per hour limits for CO during periods of startup, shutdown and malfunction were incorporated. The permit revision also consolidated and streamlined all the requirements in Permit #33500, and subsequent revision #s 41787, 46353 and 50379.

C. CHANGES TO PREVIOUS PERMIT CONDITIONS

Table 6: Previous Permit Conditions

Condition # in permit no. 33500	Determination				Comments
	Deleted	Kept	Revised	Streamlined	
Attachment "A"			x		Added applicability of NSPS and NESHAP for internal combustion engines
Attachment "B"					
Condition I & II		x			
Section III.B			x		Added requirement to replace mechanical dust collectors with fabric filters and lime slurry Flue Gas Desulfurization on Unit 2.
Section III.C.			x		Clarified requirement for COMS at fabric filter outlet.
Section IV through XIV		x			
Section XV			x		Added applicability of mercury reduction requirements to Unit 2 upon installation of the fabric filter. Added use of mercury sorbent trap as an option to show compliance with mercury emissions reduction.
Attachment "C"			x		The equipment list is updated to reflect all the changes in Permit Revision No. 46353, and removal of redundant equipment.
Attachment "D"			x		This Section for acid rain provisions is revised to reflect current SO ₂ allowance allocations and NO _x emission limitations on all boilers.

VII. PERIODIC MONITORING REQUIREMENTS

A. Steam Unit 1

Opacity: Unit 1 is subject to 20% opacity limit in accordance with A.A.C. R18-2-702.B.3. Cholla is required under A.A.C. R18-2-313.C.1.a to maintain and operate a continuous monitoring system for opacity. The monitoring system is required to meet the requirements of A.A.C. R18-2-313.D.1, which references to 40 CFR 60.13 and 40 CFR 60, Appendix B, Performance Specification 1.

SO₂: The unit is subject to the sulfur dioxide standard of 1.0 lb/MMBtu heat input under A.A.C. R18-2-703.G.1 while burning coal. Cholla is required under A.A.C. R18-2-313.C.1.b to maintain and operate a continuous monitoring system (CEMS) for sulfur dioxide. The monitoring system is required to meet the requirements of 40 CFR 60.13 and 40 CFR 75, Appendix A through C. The source is also required to meet 80% SO₂ removal efficiency through the use of the control device. SO₂ concentrations at inlet and outlet of the control device are monitored by CEMS to determine compliance with the SO₂ removal efficiency.

NO_x: There is no standard for NO_x emissions from Unit 1 as it was built before May 30, 1972. NO_x monitoring is not required, except for 40 CFR 76 NO_x standards which requires compliance CEMS. The unit is fitted with low-NO_x burners and over-fire air systems to reduce emissions of NO_x.

PM: The unit is subject to the particulate matter emissions standard set forth in A.A.C. R18-2-703.C.1. The unit also has potential pre-control device PM emissions that are greater than 100 tons per year, the major source threshold, and pursuant to 40 CFR 64.2(a), the compliance assurance monitoring (CAM) is required. In conjunction with the low-NO_x burners and the baghouse, Cholla shall follow the monitoring approach presented in Table 7.

B. Steam Unit 2

Opacity: Unit 2 is subject to an opacity standard of < 20% except for one six-minute period per hour of not more than 27% opacity. Cholla is required under 40 CFR 60.45(a) to maintain and operate a continuous monitoring system for opacity. The monitoring system is required to meet the requirements of 40 CFR 60.13 and 40 CFR 60, Appendix B, Performance Specification 1.

SO₂: The unit is subject to the sulfur dioxide standard of 0.8 lb/MMBtu heat input and 90% removal efficiency. Cholla is required to maintain and operate a SO₂ continuous monitoring system consistent with Subpart Da requirements at inlet and outlet of the sulfur dioxide control device that will be utilized to determine compliance with the sulfur dioxide emission and removal efficiency limit. The SO₂ CEMS is required to meet the requirements of 40 CFR 60.13, 40 CFR 60, Appendix F, and 40 CFR 75, Appendix A through C.

NO_x: The unit is subject to the NO_x standard of 0.70 lb/MMBtu heat input in 40 CFR 60.44(a)(3) while burning coal. Cholla is required under 40 CFR 60.45(a) to maintain and operate a continuous monitoring system for NO_x. The monitoring system is required to meet the requirements of 40 CFR 60.13 and 40 CFR 75, Appendix A through C. The unit is fitted with low-NO_x burners and over-fire air systems to reduce emissions of NO_x.

PM: The unit is subject to the particulate matter emissions standard of 0.10 lb/MMBtu set forth in 40 CFR 60.42(a)(1). The unit also has potential pre-control device PM emissions that are greater than 100 tons per year, the major source threshold, and pursuant to 40 CFR 64.2(a), CAM is required. The flooded disc pressure drop (Δp) and slurry flow are

selected to be primary performance indicator of the Unit 2 Venturi scrubbers. Using Δp and slurry flow data, Cholla is to calculate block 1-hour average excluding periods of boiler startup and shutdown. If at any point, excluding periods of startup and shutdown, the block 1-hour average Δp is less than 15 inches of water column or the block 1-hour average slurry flow is equal to or less than 4,000 gallons per minute per pump, then an excursion has occurred and Cholla needs to (1) record and report the excursion and (2) record the operational status of Unit 2 boiler (i.e. load change increase or decrease).

APS Cholla has proposed to replace the existing controls with a fabric filter equipment to control PM emissions. The CAM indicators applicable to Unit 1,3 &4 will apply to Unit 2 as well.

C. Steam Unit 3

Opacity: Unit 3 is subject to an opacity standard of < 20% except for one six-minute period per hour of not more than 27% opacity. Cholla is required under 40 CFR 60.45(a) to maintain and operate a continuous monitoring system for opacity. The monitoring system is required to meet the requirements of 40 CFR 60.13 and 40 CFR 60, Appendix B, Performance Specification 1.

SO₂: Unit 3 is subject to an SO₂ emissions limit of 0.8 lbs/MMBtu. Cholla is required to maintain and operate a SO₂ continuous monitoring system consistent with Subpart Da requirements at inlet and outlet of the sulfur dioxide control device that will be utilized to determine compliance with the sulfur dioxide emission and removal efficiency limit. The SO₂ CEMS is required to meet the requirements of 40 CFR 60.13, 40 CFR 60, Appendix F, and 40 CFR 75, Appendix A through C.

NO_x: The unit is subject to the NO_x standard of 0.70 lb/MMBtu heat input in 40 CFR 60.44(a)(3) while burning coal. Although Cholla is exempted from installation of a continuous NO_x monitoring system under 40 CFR 60.45(b)(3), periodic monitoring for NO_x emissions is required under A.A.C. R18-2-306.A.3.c. The Acid Rain Program NO_x CEMS will be used to meet the periodic monitoring requirement. For QA/QC purpose, the monitoring system is required to meet the requirements of 40 CFR 60.13 and 40 CFR 75, Appendix A through C. The unit is fitted with low-NO_x burners and over-fire air systems to reduce emissions of NO_x.

PM: The unit is subject to a standard of 0.10 lb/MMBtu set forth in 40 CFR 60.42(a)(1). The unit also has potential pre-control device PM emissions that are greater than 100 tons per year, the major source threshold, and pursuant to 40 CFR 64.2(a), CAM is required. Using COMS data, Cholla is to calculate block 1-hour average opacities excluding periods of boiler startup, shutdown, and malfunction. If at any point, excluding periods of boiler startup, shutdown, and malfunction, the opacity average exceeds 8%, then Cholla will initiate mandatory investigation within 30 minutes, including inspection of the clean side of each in-service baghouse compartment for signs of dusting. Records of investigation and corrective action taken are required to be maintained.

D. Steam Unit 4

Opacity: Unit 4 is subject to an opacity standard of < 20% except for one six-minute period per hour of not more than 27% opacity. Cholla is required under 40 CFR 60.45(a) to maintain and operate a continuous monitoring system for opacity. The monitoring system is required to meet the requirements of 40 CFR 60.13 and 40 CFR 60, Appendix B, Performance Specification 1.

SO₂: The unit is subject to the sulfur dioxide standard of 0.8 lb/MMBtu heat input in A.A.C. R18-2-903.1 while burning coal. Cholla is required under 40 CFR 60.45(a) to maintain and

operate a continuous monitoring system for sulfur dioxide emissions. The monitoring system is required to meet the requirements of 40 CFR 60.13 and 40 CFR 75, Appendix A through C.

NOx: The unit is subject to the NOx standard of 0.70 lb/MMBtu heat input in 40 CFR 60.44(a)(3) while burning coal. Although Cholla is exempted from installation of a continuous NOx monitoring system under 40 CFR 60.45(b)(3), periodic monitoring for NOx emissions is required under A.A.C. R18-2-306.A.3.c. The Acid Rain Program NOx CEMS will be used to meet the periodic monitoring requirement. For QA/QC purpose, the monitoring system is required to meet the requirements of 40 CFR 60.13 and 40 CFR 75, Appendix A through C. The unit is fitted with low-NOx burners and over-fire air systems to reduce emissions of NOx.

PM: Unit 4 is subject to a standard of 0.10 lb/MMBtu set forth in 40 CFR 60.42(a)(1). The unit also has potential pre-control device PM emissions that are greater than 100 tons per year, the major source threshold, and pursuant to 40 CFR 64.2(a), the compliance assurance monitoring (CAM) is required. Using COMS data, Cholla is to calculate block 1-hour average opacities excluding periods of boiler startup, shutdown, and malfunction. If at any point, excluding periods of boiler startup, shutdown, and malfunction, the opacity average exceeds 8%, then Cholla will initiate mandatory investigation within 30 minutes, including inspection of the clean side of each in-service baghouse compartment for signs of dusting. Records of investigation and corrective action taken are required to be maintained.

Cholla is required to follow the monitoring approach presented in Table 7.

E. Other Point, Non-Point and/or Fugitive PM Emission Sources

Pursuant to A.A.C. R18-2-306.A.3.c, Cholla is required to conduct periodic monitoring at those other particulate matter emission sources for which the applicable requirement does not require periodic testing or instrumental or non-instrumental monitoring. These include all point, non-point and/or fugitive PM emission sources at the cooling towers 3 and 4, coal preparation plant, fly ash handling facility, lime handling and slaking facility, fugitive dust sources, and internal combustion engines. The periodic monitoring is carried out through a visual observation plan that identifies a central lookout station or multiple observation points as follows:

Point #1: Personnel overpass located at coal handling (North East area of plant)

Sources observed include coal unloading, coal crushers, coal stacking, coal reclaiming, Unit 1 coal handling/silo baghouse exhaust, coal transfer tower #1, all coal drop points from coal unloading to Unit 1 silos, to transition tower, and to coal stacker, Unit 1 flyash handling system, flyash silo baghouse exhaust, lime silo baghouse exhaust, lime slaking wet scrubber exhaust, coal storage pile, main entrance roadway and main south/north plant road.

Point #2: North of Unit 3 weld shop and south of Unit 2/3 diesel generators

Sources observed include Unit 2/3 diesel generators, Unit 2 and 3 flyash handling.

Point #3: South east corner of Unit 4 auxiliary bay

Sources observed include Unit 2, 3, and 4 coal handling system baghouse exhausts, Unit 4 diesel generator, Unit 4 Eastern flyash handling, main East/West plant roadway.

Point #4: South West corner of Unit 4 Auxiliary Bay

Sources observed include Unit 3 and 4 cooling tower, laydown areas, Unit 4 Western flyash handling.

The plan requires Cholla to make a weekly survey of the visible emissions at the above described vintage points. If there are no visible emissions, then Cholla is required to record the date, time, and results of the survey. If Cholla finds that on an instantaneous basis the visible emissions are in excess of the applicable opacity limit, then a six-minute Method 9 observation is required to be made. If this observation indicates opacity in excess of the applicable opacity limit, then Cholla is required to report it as excess emissions. If Cholla finds that the visible emissions are less than the applicable opacity limit, then Cholla is required to record the source of emission, date, time, and result of the observation.

F. Internal Combustion Engines

APS Cholla operates 3 diesel-fired emergency engines of capacity over 500hp and manufactured in the 1970s. The NSPS requirements are applicable to those engines manufactured after 2006. NESHAP requirements exempt existing emergency engines over 500 hp at a major source of HAPs. Hence only the Arizona Administrative Code (AAC) requirements, R18-2-719 are applicable. The engines are limited to 40% opacity requirement and sulfur content of less than 0.9% by weight. APS-Cholla is required to conduct weekly visible emissions observation when the engine is operating.

VIII. MERCURY REQUIREMENTS

A. Background

On February 18, 2009, ADEQ and APS entered into a Consent Order (Docket A-19-09) which required APS to implement an interim mercury control strategy without interfering with APS's ability to comply with the State Mercury Standard beginning on December 31, 2016, and the eventual Maximum Achievable Control Technology (MACT) standard that will address mercury emissions from Existing Utility Steam Generating Units. The plan provided for the voluntary implementation of an early mercury control strategy expected to achieve total mercury emissions reductions that over time will be substantially similar to the emissions reductions that would be realized by complying with the State Mercury Standard. The alternative plan called for one of the two options in Section II.A.17 of the consent order. As these alternative strategies provide for the early implementation of a control strategy, they would be designed to result in total reductions in mercury emissions over the period January 1, 2011 through December 31, 2015, that are substantially similar to the reductions that would result from enforcement of the State Mercury Standard.

B. Control of Mercury Emissions

Units 1, 3 and 4 are equipped with fabric filter bag houses and wet absorbers, and Unit 2 is equipped with mechanical dust collector, venturi scrubbers and absorbers. Operation of fabric filter baghouses and absorbers provide significant mercury removal. Native mercury removal is a function of fly ash build up on the surface of fabric filter bag and gas flow rate. Also, mercury in oxidized state is highly water soluble, and is captured in wet flue gas desulfurization (FGD) systems. The sample testing for mercury indicated 89% mercury removal in Units 1, 3 and 4, and 30% removal in Unit 2. The facility-wide mercury removal, with assumed 0% removal from Unit 2, is expected to be significantly above the 50% target reduction level identified in the Consent Order.

IX. COMPLIANCE ASSURANCE MONITORING (CAM) REQUIREMENTS

The CAM requirements for Unit 1, 3, and 4 are listed in Table 7. The CAM requirements for Unit 2 will apply upon the installation of the fabric filter.

Table 7: CAM Plan for Fabric Filter Baghouse

General Criteria	Performance indicator	Stack opacity at each of Steam Boiler Units 1, 2, 3 and 4 stacks	Induction draft (ID) fan suction pressure at each of Steam Boiler Units 1, 3, and 4, and at Unit 2 upon installation of fabric filter.	Individual baghouse compartment magnahelic differential pressure gage readings
	Measurement Approach	Opacity values from the Continuous Opacity Monitor (COM) at each boiler unit are monitored.	This is a direct indication of the condition of the baghouse filters for each boiler unit.	Each baghouse compartment is equipped with a magnahelic differential pressure gauge that continuously measures the differential air pressure across the compartment.
	Indicator range(s) and excursion definition	An excursion is defined as block 1-hour opacity average that exceeds 8%, excluding periods of boiler startup, shutdown, and malfunction. An excursion requires investigation of the compartment pressure differential values for decreases in differential pressure. Repairs or adjustments are made as necessary. A log of the corrective action(s) will be maintained.	An excursion is defined as an ID fan suction pressure reading that exceeds a unit specific pressure level in inches water column or a sudden drop of more than 1.0 inch in the ID fan suction pressure, excluding periods of boiler startup, shutdown, and malfunction.	An excursion is defined as a differential pressure value of more than ½ inch of water column above the resting or cleaning mode pressures, excluding periods of boiler startup, shutdown, and malfunction. Investigation is initiated to locate the cause.
Performance Criteria	Data representativeness	An increase in visible emissions (opacity) under steady-state operating conditions is an indirect indication of an increase in particulate matter emissions.	A high pressure indicates bags may be clogged and particulate matter may be being forced through the bag fabric. A sudden decrease in fan suction pressure indicates a possible bag break or seal loss. Particulate removal rates should remain consistent until a problem is detected.	From the standpoint of particulate removal efficiency, only a reading indicating a loss of compartment integrity shows a reduction in the overall efficiency of the baghouse. Readings indicating a compartment is clogged may not indicate degradation of overall baghouse particulate removal efficiency, but do signal the need for investigation.
	Verification of monitoring status	Effective upon commissioning of service of a fabric filter control device at each affected boiler unit.	Effective upon commissioning of service of a fabric filter control device at each affected boiler unit.	Effective upon commissioning of service of a fabric filter control device at each affected boiler unit.
	QA/QC practices	The COM equipment and data quality assurance is in conformance with 40 CFR Part 60 Appendix B & F.	Annual calibration of ID fan suction pressure gauges.	Annual calibration of the baghouse magnahelic gages. Operators check magnahelics on routine rounds each shift. The most frequent problem identified is plugged sensing lines which are cleared upon detection.
	Monitoring frequency	Continuous recording of opacity.	Continuous, with hourly recording of pressure values.	Cell magnahelic values recorded once per shift.
	Data collection procedures	The opacity monitor continuously records the average for each one (1) minute interval.	Operator records readings on the log sheet hourly.	Magnahelic readings are recorded once per shift. Once per week the operator records the in-service, reverse air cleaning, and at rest magnahelic readings on each cell, and notes any discrepancies. Plant management reviews this data to identify issues that need to be addressed immediately and those that can be added to the next scheduled maintenance work list.
	Averaging period	Block one hour.	N/A	N/A

X. TESTING REQUIREMENTS

Cholla is required to conduct annual performance tests for stack emissions of opacity, particulate matter, sulfur dioxide, and nitrogen oxides from all steam boiler units to demonstrate, on an annual basis, compliance with the respective emissions standards, except for nitrogen oxides emissions from unit 1 stack where there is no applicable standard for NO_x emissions. Compliance with opacity standards is determined using EPA Reference Method 9. Performance tests for all pollutants are conducted using the procedures and methods contained in the Arizona Testing Manual or 40 CFR 60, Appendices A through F.

XI. USED OIL OR USED OIL FUEL BURNING

Unit 4 also co-fires with coal a small quantity of on-site generated used oil and/or used oil fuel for energy recovery purposes. Total heat input from this activity is typically less than 0.1 percent of total heat input to Unit 4 on an annual basis. The oil burned is required to be on specification as follows. To assure the standard to be met, Cholla is required to run sample testing semiannually for the used oil prior to burning. The flash point of the oil may not fall below 100 °F and the oil may not have following constituents in excess of the following allowable levels:

Arsenic	5 ppm
Cadmium	2 ppm
Chromium	10 ppm
Lead	100 ppm
PCBs	2 ppm
Total Halogens	1000 ppm

XII. INSIGNIFICANT ACTIVITIES

Following is a list of insignificant activities identified by APS Cholla:

No.	Insignificant Activities	Pollutants	Verification	Comments
1	Scale Inhibitor Storage Tank	HEDP	yes	A.A.C. R18-2-101.54.j
2	Scale Inhibitor Storage Tank	HEDP,ZN&PHOSPHONATE	yes	A.A.C. R18-2-101.54.j
3	Condensate Storage Tanks	PM-10	yes	A.A.C. R18-2-101.54.j
4	Aux. Cooling System Clam Treatment	CLAM-TROL CT-1	yes	A.A.C. R18-2-101.54.j
5	Chemical Day Tanks (3 Tanks/unit)	NH3, PO4, N2H4	yes	A.A.C. R18-2-101.54.j
6	Lake Intake Clam Treatment	CLAM-TROL CT-1	yes	A.A.C. R18-2-101.54.j
7	Stack Gas Analyzers+ Gas Cylinders	SO2,NO,FLUE GAS	yes	A.A.C. R18-2-101.54.i
8	Potable Water Head Tanks	CHLORINE	yes	A.A.C. R18-2-101.54.j
9	Service Water Tanks	CONTAINS WELL WATER	yes	A.A.C. R18-2-101.54.j
10	De-aerator Tanks	TRACE BOILER CHEMICALS	yes	A.A.C. R18-2-101.54.j
11	Turbine Lube Oil Tanks	OIL VAPORS (VOC'S)	yes	A.A.C. R18-2-101.54.j
12	Turbine Lube Oil Vapor Extractors	OIL VAPORS (VOC'S)	no	A.A.C. R18-2-730.G
13	Generator Seal Oil Vapor Extractors	OIL VAPORS (VOC'S)	no	A.A.C. R18-2-730.G
14	Equip. Lube Oil Storage Tanks	OIL VAPORS (VOC'S)	yes	A.A.C. R18-2-101.54.c
15	Sedi. Pond Transfer Pump Vents	VOC'S	yes	A.A.C. R18-2-101.54.j
16	Sludge Tanks(1)	PM-10	yes	A.A.C. R18-2-101.54.j
17	Demister Water Tank	PM-10	yes	A.A.C. R18-2-101.54.j
18	Diesel Fuel Storage Tank (Small)	FUEL OIL (VOC'S)	yes	A.A.C. R18-2-101.54.j
19	Fuel Oil Storage Tank (Large)	FUEL OIL (VOC'S)	yes	A.A.C. R18-2-101.54.j
20	Gasoline, Diesel Storage Tank(ast)	GAS, DIESEL (VOC'S)	yes	A.A.C. R18-2-101.54.b, c
21	Acid and Caustic Tanks (Empty)	H2SO4, NAOH	yes	A.A.C. R18-2-101.54.j
22	Acid Tank	H2SO4	no	A.A.C. R18-2-730.G
23	Glycol Storage Tank	GLYCOL	yes	A.A.C. R18-2-101.54.j
24	Glycol Expansion Tank(2)	GLYCOL	yes	A.A.C. R18-2-101.54.j
25	Process Water Tank	PM-10	yes	A.A.C. R18-2-101.54.j

No.	Insignificant Activities	Pollutants	Verification	Comments
26	Boiler Feed Pump Seal Water Tank	PM-10	yes	A.A.C. R18-2-101.54.j
27	Vacuum Pumps	PM-10	yes	A.A.C. R18-2-101.54.j
28	Air Ejectors	PM-10	yes	A.A.C. R18-2-101.54.j
29	Absorber Feed Pumps Bearings	LUBE OIL VAPORS(VOC'S)	yes	A.A.C. R18-2-101.54.j
30	Scrubber Feed Pumps	LUBE OIL VAPORS(VOC'S)	yes	A.A.C. R18-2-101.54.j
31	Fire Water Diesel Pumps(2)	DIESEL FUMES(VOC'S)	yes	A.A.C. R18-2-101.54.j
32	Fire Water Tanks (2)	WATER	yes	A.A.C. R18-2-101.54.j
33	Fly Ash Blowers Oil Reservoirs	LUBE OIL VAPORS(VOC'S)	yes	A.A.C. R18-2-101.54.j
35	Locomotives(2)	DIESEL FUEL VAPORS (VOC'S)	no	A.A.C. R18-2-802
36	Street Cleaner	PM-10, VOC'S	no	A.A.C. R18-2-802
37	Road Grader from Childs/Irving Plant	PM-10, VOC'S	no	A.A.C. R18-2-802
38	Boiler Blowdowns	BOILER CHEMICALS	yes	A.A.C. R18-2-101.54.j
39	Gland Steam Condenser Exhausters	STEAM	yes	A.A.C. R18-2-101.54.j
40	Coal Silo Vent Exhaust Fan	COAL DUST(PM-10)	no	A.A.C. R18-2-716.B.1
41	Reagent Feed Tanks Pumps(4)	VOC'S	yes	A.A.C. R18-2-101.54.j
42	Reagent Storage Tank Pumps (2)	VOC'S	yes	A.A.C. R18-2-101.54.j
43	Elemental Sulfur Tank	PM-10	yes	A.A.C. R18-2-101.54.j
44	Elemental Sulfur Tank Pump	VOC'S	yes	A.A.C. R18-2-101.54.j
45	Bottom Ash Trans., Makeup Tank	PM-10,VOC'S	yes	A.A.C. R18-2-101.54.j
46	Pyrite Transfer Tank	PM-10	yes	A.A.C. R18-2-101.54.j
47	EHC Reservoir	EHC FLUID VAPORS(VOC'S)	yes	A.A.C. R18-2-101.54.j
48	Chlorine Gas Tanks	CL2 GAS	no	112(r)
49	Lime Slaking Vent Wet Scrubber	CAO(PM-10)	no	A.A.C. R18-2-730.A.1
50	Cooling Towers	PM-10,CL2,H2SO4,DEFOAM	no	A.A.C. R18-2-730.A.1
51	Painting Hood	PM-10, VOC'S	no	A.A.C. R18-2-730.F
52	Bathroom Vents	NON-METHANE HYDROCR.	yes	A.A.C. R18-2-101.54.j
53	Aerosol Paints/brushes	VOC'S	no	A.A.C. R18-2-730.F
54	Woodworking	PM-10	yes	A.A.C. R18-2-101.54.j
55	Maintenance Shop Activities	PM-10, VOC'S	yes	A.A.C. R18-2-101.54.j
56	Electric Water Heaters		yes	A.A.C. R18-2-101.54.j
57	Electric Space Heaters		yes	A.A.C. R18-2-101.54.j
58	Battery Charging Areas	H2SO4	yes	A.A.C. R18-2-101.54.j
59	Breakers		yes	A.A.C. R18-2-101.54.j
60	Lab Chemicals	HOOD VENTS	yes	A.A.C. R18-2-101.54.i
61	Kitchen Hoods	VOC'S	yes	A.A.C. R18-2-101.54.j
62	Charcoal Grills	PM-10,VOC'S	yes	A.A.C. R18-2-101.54.j
63	Welding Hood Exhaust	PM-10	yes	A.A.C. R18-2-101.54.j
64	Mercury Recovery Hood	HG	yes	A.A.C. R18-2-101.54.j
65	Pulveriser Pyrite Chutes(5)	PM-10	yes	A.A.C. R18-2-101.54.j
66	Insulation Shop Vent	PM-10	yes	A.A.C. R18-2-101.54.j
67	Boiler Casing Leaks	PM-10, SO2, NOX	yes	A.A.C. R18-2-101.54.j
68	Bottom Ash Transfer Sump	PM-10, BOILER CLEANING	yes	A.A.C. R18-2-101.54.j
69	Coal Lab Vent	PM-10	yes	A.A.C. R18-2-101.54.i
70	Misc. Steam Vents(6 -8)	BOILER CHEMICALS	yes	A.A.C. R18-2-101.54.j
71	Natural Gas Line Vents	VOC'S	yes	A.A.C. R18-2-101.54.j
72	Parts Cleaners	EPA 2000 (VOC'S)	yes	A.A.C. R18-2-101.54.j
73	Welding Rod Fumes	PM-10	yes	A.A.C. R18-2-101.54.j
74	Acetylene Cylinders	ACETYLENE	no	112(r)
75	Boiler Drains and Vents	PM-10	yes	A.A.C. R18-2-101.54.j
76	Lake Intake Closed Sump	VOC'S	yes	A.A.C. R18-2-101.54.j
77	Lake Intake Trash Rakes	VOC'S	yes	A.A.C. R18-2-101.54.j
78	Paint Shop Hood	PM-10, VOC'S	no	A.A.C. R18-2-730.F
79	Locomotive Building Vent	VOC'S	yes	A.A.C. R18-2-101.54.j
80	Satellite Oil/haz Waste Areas	VOC'S	yes	A.A.C. R18-2-101.54.j
81	Lube Rack(s), Lube Building Vent	VOC'S	yes	A.A.C. R18-2-101.54.j
82	Oil Drip Racks	VOC'S	yes	A.A.C. R18-2-101.54.j
83	Portable Heaters, Propane Tanks	VOC'S	yes	A.A.C. R18-2-101.54.j
84	Track Straightener Machine	VOC'S	yes	A.A.C. R18-2-101.54.j
85	Coal Crusher Tower Lube System	VOC'S	yes	A.A.C. R18-2-101.54.j
86	Cooling Towers Fan Motors Vents-18	VOC'S	yes	A.A.C. R18-2-101.54.j

No.	Insignificant Activities	Pollutants	Verification	Comments
87	Unit Condensate Pump Vents(2)	VOC'S	yes	A.A.C. R18-2-101.54.j
88	Electrical Hydraulic Control System Vent	VOC'S	yes	A.A.C. R18-2-101.54.j
89	Boiler Feed Pump(s) Oil Cooling Vents(2)	VOC'S	yes	A.A.C. R18-2-101.54.j
90	Instrument Air Compressor Vents	VOC'S	yes	A.A.C. R18-2-101.54.i
91	Station Air Compressors	VOC'S	yes	A.A.C. R18-2-101.54.j
92	Turbine Oil Cooling Vent(2)	VOC'S	yes	A.A.C. R18-2-101.54.j
93	Closed Cooling Water Tank Vent	PM-10	yes	A.A.C. R18-2-101.54.j
94	ID/FD Fans Oil Cooling Vents	VOC'S	yes	A.A.C. R18-2-101.54.j
95	Air Preheater Vents	VOC'S	yes	A.A.C. R18-2-101.54.j
96	Air Preheater Guide Bearing Vents	VOC'S	yes	A.A.C. R18-2-101.54.j
97	O/W Separators (2)	VOC'S	yes	A.A.C. R18-2-101.54.j
98	Control Room Bathroom Vents	NON-METHANE HYDROCARBONS	yes	A.A.C. R18-2-101.54.j
99	Laboratory Hoods	PM-10, VOC'S	yes	A.A.C. R18-2-101.54.j
100	Bathroom Vents by Labs	N-M HYDROCARBONS	yes	A.A.C. R18-2-101.54.j
101	Electric & Instrument Battery Charging	H2SO4	yes	A.A.C. R18-2-101.54.j
102	Main Transformers(Plus the Two Following Items)	VOC'S	yes	A.A.C. R18-2-101.54.j
103	Stand -By/Auxiliary Transformers	VOC'S	yes	A.A.C. R18-2-101.54.j
104	Switchyard Transformers/gear	VOC'S	yes	A.A.C. R18-2-101.54.j
105	Sewage Treatment Plant (No incinerator)	CL2, H2S, VOC'S	yes	A.A.C. R18-2-101.54.j
106	PWS Hypochlorinators	CL2	yes	A.A.C. R18-2-101.54.j
107	Rotary Blower Pump Vent	VOC'S	yes	A.A.C. R18-2-101.54.j
108	Degasifier Transfer Pump Vent(2)	VOC'S	yes	A.A.C. R18-2-101.54.j
109	Cooling Water Sump Pump Vents(2)	VOC'S	yes	A.A.C. R18-2-101.54.j
110	PWS Booster Pump Vent	VOC'S	yes	A.A.C. R18-2-101.54.j
111	Electro-dryer Pump Vent	VOC'S	yes	A.A.C. R18-2-101.54.j
112	Flammable Storage Cabinets	VOC'S	no	112(r)
113	Glycol Feed Pumps Vents	VOC'S	yes	A.A.C. R18-2-101.54.j
114	Glycol Circ. Pumps Vents(2)	VOC'S	yes	A.A.C. R18-2-101.54.j
115	Clear Well Sump Pump	VOC'S	yes	A.A.C. R18-2-101.54.j
116	Seal Oil Pumps(3)	VOC'S	yes	A.A.C. R18-2-101.54.j
117	Turbine Lube Oil Pumps(3)	VOC'S	yes	A.A.C. R18-2-101.54.j
118	AC Equipment	CFC'S /HCFC'S	yes	A.A.C. R18-2-101.54.j
119	Misc. Lube Oil Vents	VOC'S	yes	A.A.C. R18-2-101.54.j
120	Feedwater Heater Shell Side Vents	PM-10	yes	A.A.C. R18-2-101.54.j
121	Ash Sluice Vents (3)	PM-10	yes	A.A.C. R18-2-101.54.j
122	Mech. Dust Collectors	PM-10	no	Permitted activity
123	Filter Cleaning Bldg.	PM-10	yes	A.A.C. R18-2-101.54.j
124	Scrubber Control Room Vent	PM-10	yes	A.A.C. R18-2-101.54.j
125	Absorber Tank	PM-10 (LIME)	no	A.A.C. R18-2-730.A.1
126	Absorber Feed Pump (3)	VOC'S	yes	A.A.C. R18-2-101.54.j
127	Absorber Feed Pump(4), Scrubber Feed Pump(4)	VOC'S	yes	A.A.C. R18-2-101.54.j
128	Quencher Feed Pump(2)	VOC'S	yes	A.A.C. R18-2-101.54.j
129	Portable Welders	PM-10	yes	A.A.C. R18-2-101.54.j
130	Absorber Area Sump Pump Vent (2)	VOC'S	yes	A.A.C. R18-2-101.54.j
131	Sludge Disposal Pumps (4)	VOC'S	yes	A.A.C. R18-2-101.54.j
132	Flyash Hopper Diffuser Blowers (2)	VOC'S	yes	A.A.C. R18-2-101.54.j
133	Warehouses (2) Bathroom Vents	N-M HYDROCARBONS	yes	A.A.C. R18-2-101.54.j
134	WAREHOUSES (2) BLDG VENTS	PM-10	yes	A.A.C. R18-2-101.54.j
135	Bechtel Construction Bldg. Br Vents	N-M HYDROCARBONS	yes	A.A.C. R18-2-101.54.j
136	Auto Shop Bathroom Vents	N-M HYDROCARBONS	yes	A.A.C. R18-2-101.54.j
137	General Water Bldg. Vent	PM-10, VOC'S	yes	A.A.C. R18-2-101.54.j
138	Slurry Disposal Bldg. Vents	PM-10, VOC'S	yes	A.A.C. R18-2-101.54.j
139	Slurry Disposal Pumps Vents	VOC'S	yes	A.A.C. R18-2-101.54.j
140	Bottom Ash Disposal Vents	VOC'S	yes	A.A.C. R18-2-101.54.j

No.	Insignificant Activities	Pollutants	Verification	Comments
141	Coal Handling Bldg. Vents	N-M HYDROCARBONS, PM-10	yes	A.A.C. R18-2-101.54.j
142	Paint Shop Bldg. Vent	PM-10, VOC'S	no	A.A.C. R18-2-730.F
143	E&I Room Vents	H2SO4	yes	A.A.C. R18-2-101.54.j
144	Machine Shop Vent	PM-10,VOC'S	yes	A.A.C. R18-2-101.54.j
145	Maintenance Bldg. Vents	PM-10, VOC'S	yes	A.A.C. R18-2-101.54.j
146	Maintenance Bathroom Vents	N-M HYDROCARBONS	yes	A.A.C. R18-2-101.54.j
147	Planning Bldg. Bathroom Vents	N-M HYDROCARBONS	yes	A.A.C. R18-2-101.54.i
148	Admin. Bldg. (Old) Bathroom Vents	N-M HYDROCARBONS	yes	A.A.C. R18-2-101.54.j
149	Admin. Bldg. (New) Bathroom Vents	N-M HYDROCARBONS	yes	A.A.C. R18-2-101.54.j
150	Admin. Bldg (Old) Water Heater Vents		yes	A.A.C. R18-2-101.54.j
151	Admin. Bldg (New) Water Heater Vents		yes	A.A.C. R18-2-101.54.j
152	Nonroad generators/pumps	VOC'S	yes	A.A.C. R18-2-101.54.j
153	Stack Test Sampling Trailer	SO2, NOX, PART.	yes	A.A.C. R18-2-101.54.i
154	Guard Houses (2)	N-M HYDROCARBONS	yes	A.A.C. R18-2-101.54.j
155	Security Building Bathroom Vents	N-M HYDROCARBONS	yes	A.A.C. R18-2-101.54.j
156	Microwave Building Vent	VOC'S	yes	A.A.C. R18-2-101.54.j
157	Unit 1 Sedi Pump Vent	VOC'S	yes	A.A.C. R18-2-101.54.j
158	Unit 2,3, &4 Batch Oil Tank	VOC'S	yes	A.A.C. R18-2-101.54.j
159	Soot Blowing Air Compressors	PM-10, VOC'S	yes	A.A.C. R18-2-101.54.j
160	Building and Yard Maintenance Fac.	PM-10,VOC'S	yes	A.A.C. R18-2-101.54.a
161	500 Kv Control Building Vent	N-M HYDROCARBONS	yes	A.A.C. R18-2-101.54.j
162	Bulldozer Maintenance Shed	VOC'S	yes	A.A.C. R18-2-101.54.j
163	Cathodic Protection System	CL2	yes	A.A.C. R18-2-101.54.j
164	Freon Recovery Equipment	CFC's/HCFC'S	no	A.A.C. R18-2-602 (a) & (b)
165	Accidental Releases	VARIOUS	no	CAA 112(r)
166	Spray Painting - Architectural Appl.	PM-10,VOC'S	no	A.A.C. R18-2-727
167	Sand Blasting	PM-10	no	A.A.C. R18-2-726

XIII. LIST OF ABBREVIATIONS

A.A.C.	Arizona Administrative Code
AAAQGs	Arizona Ambient Air Quality Guidelines
APS	Arizona Public Service
ADEQ	Arizona Department of Environmental Quality
BACT	Best Available Control Technology
CAM	Compliance Assurance Monitoring
CEMS	Continuous Emission Monitoring System
CO	Carbon Monoxide
COMS	Continuous Opacity Monitor System
CFR	Code of Federal Regulations
GHG	Green House Gases
lb	Pound
LNB	Low NO _x Burner
MMBtu	Million British Thermal Units
NAAQS	National Ambient Air Quality Standards
NO _x	Nitrogen Oxide
NSPS	New Source Performance Standards
NESHAP	National Emission Standards for Hazardous Air Pollutants
PM	Particulate Matter
PM ₁₀	Particulate Matter Nominally less than 10 Micrometers
PM _{2.5}	Particulate Matter Nominally less than 2.5 Micrometers
PTE	Potential to Emit
PSD	Prevention of Significant Deterioration
SO ₂	Sulfur Dioxide
USEPA	United States Environmental Protection Agency
VOC	Volatile Organic Compounds