

**TECHNICAL REVIEW AND EVALUATION OF APPLICATION FOR
SALT RIVER PROJECT – CORONADO GENERATING STATION
AIR QUALITY TITLE V PERMIT #64169**

I. INTRODUCTION

This Class I, Title V permit renewal is for the continued operation of Salt River Project’s Coronado Generating Station which is located 6 miles northeast of St. Johns off U.S. Highway 191 in St. Johns, Apache County, Arizona. This permit is a renewal of Air Quality Title V Permit #52639.

Company Information

Company Name: Salt River Project Agricultural Improvement and Power District (SRP)
Facility Name: Coronado Generating Station (CGS)
Mailing Address: PO Box 52025, PAB 352
Phoenix, AZ 85072-2025
Facility Location: Six miles Northeast of St. Johns off U.S. Highway 191
St. Johns, AZ 85936
Attainment Classification: Apache County is designated as Unclassifiable/Attainment for the National Ambient Air Quality Standards (NAAQS) for criteria pollutants (Source: 40 CFR §81.303)

II. FACILITY DESCRIPTION

A. Process Description

SRP Coronado operates two coal-fired electric utility steam generating units. The two units have a combined electrical output capacity of 912 gross megawatts (MW). Electrostatic precipitators and wet flue gas desulfurization systems are operated to control particulate matter emissions and sulfur dioxide emissions, respectively. Low-NO_x Burners and Overfire Air are used to control nitrogen oxide emissions.

An auxiliary boiler is used to provide auxiliary steam during startup if main boiler steam or turbine extraction steam is unavailable. Other operations at the plant include a main power building, coal mixing facilities, coal and ash handling facilities, ash disposal area, limestone handling equipment, process water treatment facilities, a forty-three mile railroad spur, water storage reservoirs, a 330 acre evaporation pond for non-recoverable waters, mechanically induced draft cooling towers, 500 kV and 69 kV switchyards and water supply from satellite well fields. The power plant commenced construction on July

25, 1974. Table 1 lists the maximum process rates and operating hours of the main units:

Table 1: Maximum Estimated Process Rates

| Unit | Maximum Hours of Operation | Maximum Steam Output | Nominal Electric Generation (Gross) |
|------------------|--------------------------------------|----------------------|-------------------------------------|
| Unit 1 Boiler | 8,760 | 2,747,000 lbs/hr | 456 MW |
| Unit 2 Boiler | 8,760 | 2,747,000 lbs/hr | 456 MW |
| Auxiliary Boiler | < 10% Annual Average Capacity Factor | 105,000 lbs/hr | --- |

B. Air Pollution Controls

The facility has the following air pollution control equipment installed on emission sources at CGS:

1. Hot-Side Electrostatic Precipitators (ESP)
2. Wet Flue Gas Desulfurization Units
3. Low-NO_x Burners and Overfire Air
4. Selective Catalytic Reduction (Unit 2 only)
5. Baghouses
6. Dust Extractors

Hot-side electrostatic precipitators (ESP) are designed to remove 99.875 percent of the ash from the boiler flue gas. Two ESPs are provided for each unit and divided into two halves. Each half is provided with a single level of six parallel chambers consisting of seven fields each. The fly ash collected in the precipitator hoppers is pneumatically transferred to fly ash storage bins.

Particulate matter emissions from material handling in the coal, fly ash, limestone, and other systems are controlled by baghouses or dust extractors.

Two four-stage horizontal wet flue gas desulfurization (FGD) units are installed and operating on Unit 1 and Unit 2 to reduce SO₂ emissions. Pulverized limestone and/or water treatment slurry is used as the reagents in the absorbers. The limestone handling system includes dust collectors atop the limestone storage silos and conveyance drop points.

There is a selective catalytic reduction (SCR) system with ammonia injection on Unit 2 to reduce nitrogen oxides (NO_x) emissions. For reducing emission of mercury (Hg), SRP is applying calcium bromide to the coal feed. This oxidized mercury during combustion which is then captured in the absorbers. For increasing the capture efficiency of oxidized mercury, powdered activated carbon is injected in the absorbers.

III. EMISSIONS

The facility is classified as a Major Source pursuant to Arizona Administration Code (A.A.C.) R18-2-101.75. The facility’s potential emissions exceed the major source thresholds for NO_x, CO, SO₂, VOCs, PM₁₀, and HAPs pollutants. Table 2 summarizes the potential to emit (PTE) for the facility and Table 3 summarizes the PTE for each emissions unit.

Table2: PTE Facility-Wide Emissions*

| Pollutant | Tons per Year |
|-------------------------------------|---------------|
| PM | 1,415 |
| PM ₁₀ | 1,415 |
| PM _{2.5} | 436 |
| VOC | 141 |
| SO ₂ | 3,337 |
| NO _x | 8,354 |
| CO | 20,772 |
| H ₂ SO ₄ Mist | 222 |
| Federal HAPs | 236 |

Please refer Appendix E, Application Packet for detailed emission calculations.

Table 3 lists the operating parameters of the steam generating units and the auxiliary boiler.

Table 3: Typical Operating Parameters

| Description | Units 1 & 2 Boilers | Auxiliary Boiler |
|---------------------------------------|-----------------------------|-------------------------|
| Maximum Annual Process Rate | 24,063,720,000 lbs (steam) | 919,800,000 lbs (steam) |
| Maximum Hourly Process Rate | 2,747,000 lbs (steam) | 105,000 lbs (steam) |
| Maximum Hourly Theoretical Heat Input | 4,719 MMBtu/hr | 157.34 MM Btu/hr |
| Type of Fuel Used | Coal, Fuel Oil, and Biomass | Fuel Oil |
| Quantity of Fuel Used/Year | 35,040,000 MMBtu | 32,000 barrels of oil |
| Maximum Hourly Use | 4,719 MMBtu | 7,528 lb |
| Higher Heating Value of Fuel (max) | 8,710 Btu/lb | 20,900 Btu/lb |
| Sulfur Content | 0.54% | N/A |

| | | |
|-------------------------|-----|------|
| Density of oil (lb/gal) | N/A | 6.97 |
|-------------------------|-----|------|

IV. COMPLIANCE HISTORY

Since the issuance of the previous permit on December 6, 2011, 4 on-site inspections were conducted. No violation was noted during the inspections. According to ADEQ records, all excess emission reports, quarterly Monitoring reports and Semiannual Compliance Certifications were submitted on time and no violations were noted. Annual performance tests conducted showed compliance with the permit limits.

V. APPLICABLE REGULATIONS

The Permittee has identified the applicable regulations that apply to each unit in its permit application. Table 4 below summarizes the findings of the Department with respect to the regulations that are applicable to each emissions unit. Previous permit conditions are discussed under Section VI of this technical review document.

Table 4: Applicable Regulations

| Unit ID | Start-up date | Control Equipment | Applicable Regulations | Verification |
|------------------|---------------|---|---|---|
| Units 1 & Unit 2 | 7/25/74 | -ESP (2/unit), -Low-NOx Burners, -Wet FGD -SCR on Unit 2 | <u>40 CFR Part 60 Subpart D</u> 60.42(a)(1), (2) 60.43(a)(1) & (c) 60.44(a)(2), (3), & b 60.45(a), (g)(1), (2), & (3) 60.46(b)(1), (2), (3), & (5) 60.46(b)(5) & (d)(1) <u>40 CFR Part 64</u> CAM <u>A.A.C.</u> R18-2-903.1 & 903.3 40 CFR Part 63 Subpart UUUUU | The units commenced construction after August 17, 1971 and are greater than 73 MW capacity. There are standards for PM, SO ₂ , NO _x and Opacity. As of this renewal there are also standards for mercury |
| Auxiliary Boiler | 7/25/74 | None | <u>A.A.C.</u> R18-2-724.A, B, C.1, E, G, J & K 40 CFR Part 63 Subpart DDDDD | The heat input of this unit is 157 MMBtu/hr (<250 MMBtu/hr) and the date of construction is prior to the trigger date (6/9/89) for 40 CFR 60, Subpart Da. Hence, this unit is subject to R18-2-724. The unit is subject to an opacity standard of 15% and SO ₂ standard of 1.0 lb/MMBtu. |

| Unit ID | Start-up date | Control Equipment | Applicable Regulations | Verification |
|-------------------------------------|----------------------|--|--|--|
| Generator and Emergency Fire pumps* | 1977, 1978, and 2013 | None | <u>A.A.C.</u> R18-2-719.A, B, C.1, E, F, I, H, J, K <u>NESHAP</u> 40 CFR 63 Subpart ZZZZ NSPS Subpart IIII | The three engines manufactured before the year 2006 are subject to state requirements. Requirements from NESHAP Subpart ZZZZ are applicable to these engines. NSPS Subpart IIII is applicable to the ICE manufactured in the year 2013. Requirements from NESHAP Subpart ZZZZ are met by its meeting the requirements of NSPS Subpart IIII. |
| Limestone Handling | | Baghouses and Wet Dust Extractors | <u>A.A.C.</u> R18-2-702.B.3 R18-2-720.B.2 R18-2-612 R18-2-722.F R18-2-722.G NSPS OOO | The A.A.C. regulations listed are applicable to existing Lime Manufacturing Plants. Certain sources within the Limestone Handling System are also subject to NSPS OOO. |
| Coal Handling | | Baghouses and Wet Dust Extractors | <u>A.A.C.</u> R18-2-702.B.3 R18-2-716.B, D, E | The regulations listed are applicable to existing Coal Preparation Plants |
| Fly Ash Handling | | Baghouses | <u>A.A.C.</u> R18-2-702.B.3 R18-2-730.A.1.b | The regulations listed are applicable to existing unclassified sources. |
| Cooling Towers | | None | <u>A.A.C.</u> R18-2-702.B.3, A.1.b, D, & G. | The regulations listed are applicable to existing unclassified sources. |
| Fugitive Dust | N/A | Control Measures | <u>A.A.C.</u> R18-2-602, 604, 605, 606, 607, 612, 614, and -702.B.3 | The regulations listed are applicable to non-point sources |
| Abrasive Blasting | N/A | Wet blasting, enclosure or equivalent approved by director | <u>A.A.C.</u> R18-2-702.B.3 & 726 | Relevant requirements applicable to abrasive blasting |
| Spray Painting | N/A | Control measures that attain 96% efficiency | <u>A.A.C.</u> R18-2-702.B.3 & 727 | Relevant requirements applicable to spray painting |

| Unit ID | Start-up date | Control Equipment | Applicable Regulations | Verification |
|-------------------------|---------------|-------------------|--|---|
| Mobile Sources | N/A | Control Measures | A.A.C. R18-2-801, 802, & 804 | These regulations are applicable to all mobile sources regulated under A.A.C. Title 18, Chapter 2, Article 8. |
| Demolition / Renovation | N/A | None | A.A.C. R18-2-1101.A.8 (NESHAPs for asbestos) | Relevant requirements applicable to demolition and renovation operations |

VI. PREVIOUS PERMITS AND CONDITIONS

A. Previous Permits

Table 5 below table lists the previous permits that have been issued to SRP Coronado.

Table 5: List of Previous Permits

| Permit Number / Permit Type | Issued Date | Affected Equipment |
|-----------------------------|---------------|--|
| 52639, Operating Permit | Dec. 6, 2011 | Renewal Permit |
| 55594, Minor Revision | May 11, 2012 | CAM and Periodic Monitoring for Particulate Matter |
| 56569, Minor Revision | Dec. 12, 2012 | Coal refining process and Mercury emission control |
| 57526, Minor Revision | July 8, 2013 | Addition of Diesel Fire Pump |
| 57711, Minor Revision | July 8, 2013 | Replacement of wet dust collectors with Reverse pulse-jet cartridge dust collectors |
| 58514, Minor Revision | Oct. 10, 2013 | Applicability date of NESHAP Subpart UUUUU |
| 59410, Significant Revision | June 10, 2014 | Applicability of MATS rule and applicable requirements from NESHAP Subpart DDDDD for Auxiliary Boiler. |
| 61608, Significant Revision | May 28, 2015 | Requirements from NESHAP Subpart UUUUU |
| 62920, Significant Revision | Dec. 24, 2015 | Revised requirements from NESHAP Subpart UUUUU |

B. Previous Permit Conditions

The following are discussions on the previous permits that have been issued to the source.

CLASS I TITLE V OPERATING PERMIT NO. 52639

| OP #52639, References | Determination | | | | Comments |
|--------------------------|---------------|------|--------|-------------|--|
| | Revise | Keep | Delete | Stream-line | |
| Att. A. | x | | | | Revised with the latest Attachment "A" |
| Attachment "B" | | | | | |
| I.A | x | | | | Requirement of Certified EPA person revised by adding Method-082. |
| I.B, C, and D | | x | | | Facility wide Limitations |
| II.A and B | | x | | | Applicability and Definitions for Unit 1 and Unit 2 Boilers |
| II.C.1 | x | | | | Fuel limitation streamlined by removing used oil |
| II.C.2 | x | | | | Maintaining of records revised to two years in line with the rule. |
| II.C.3, 4, and 5 | | x | | | Condition for Excess Emission and Monitoring System Performance Reports |
| II.D.1.a | | x | | | Condition for emission limitation for PM |
| II.D.1.b and c | x | | | | Conditions for emission limitation for PM revised since the FGD have been installed |
| II.D.1.d and e | | x | | | Condition for emission limitation for Opacity |
| II.D.2 | | x | | | Conditions for Air Pollution Control Requirements renumbered |
| II.D.3.a | x | | | | This condition for MRR revised since the system is already installed |
| II.D.3.b | | | x | | This condition for MRR QA/QC deleted since it is already submitted. |
| II.D.3.c | x | | | | This condition for MRR revised since the system is already installed and renumbered as Condition II.D.3.b |
| II.D.3.d | x | | | | This condition for MRR QA/QC revised since the plan is already approved and renumbered as Condition II.D.3.c |
| II.D.3.e | | | x | | This condition for MRR-performance test deleted since already completed. |
| II.D.3.f and g | | x | | | These conditions for PM CEMS renumbered as Conditions II.D.3.d and e |

| OP #52639, References | Determination | | | | Comments |
|--------------------------|---------------|------|--------|-------------|---|
| | Revise | Keep | Delete | Stream-line | |
| II.D.3.h | | | x | | This condition for PM CEMS Demonstration period deleted since the demonstration has been completed. |
| II.D.3.i and j | | x | | | This condition for COMS renumbered as Condition II.D.3.f and g |
| II.D.3.k and l | | x | | | This condition for COMS requirements renumbered as Condition II.D.3.h and i |
| II.D.4 | | x | | | Condition for Reporting Requirements |
| II.D.5 | x | | | | This condition for performance testing revised suitably. |
| II.D.6 | | x | | | Condition for Permit Shield. |
| II.E | x | | | | This condition for NO _x revised suitably. |
| II.F | | x | | | Condition for CO ₂ |
| II.G | x | | | | This condition for SO ₂ revised suitably. |
| II.H | x | | | | This condition for CO revised suitably. |
| II.I.1 and 2 | x | | | | These conditions for H ₂ SO ₄ emission revised |
| II.I.3 and 4 | | | x | | These conditions deleted since these activities have been completed. |
| II.I.5 | | x | | | Condition for Permit Shield |
| II.J | x | | | | This condition for SO ₂ allowances revised suitably. |
| II.K | | | x | | This condition for Mercury Emission control deleted since A.A.C. R18-2-734 is not applicable. |
| II.L | | | x | | These conditions deleted since these activities have been completed. |
| III | | x | | | Conditions for auxiliary boiler |
| IV | | x | | | Conditions for internal combustion engines |
| V | | x | | | Conditions for Coal Handling |
| VI | | x | | | Conditions for Lime Stone Handling |
| VII | | x | | | Conditions for Fly Ash Handling |
| VIII | | x | | | Conditions for Cooling Towers Handling |
| IX | | | x | | Conditions for Used Oil deleted |
| X | | x | | | Conditions for Fugitive Emissions |

| OP #52639, References | Determination | | | | Comments |
|--------------------------|---------------|------|--------|-------------|---|
| | Revise | Keep | Delete | Stream-line | |
| XI | | x | | | Conditions for Other Periodic Activities |
| XII | | | | x | This Condition for Coal Additive Soda Ash Silo deleted and covered under Condition VII. |
| Attachment "C" | X | | | | Equipment List – revised to reflect new equipment added |
| Attachment "D" | X | | | | Phase II Acid Rain Provisions – revised to reflect the most recent years' data. |

CLASS I TITLE V MINOR REVISION NO. 55594

| MR #55594, References | Determination | | | | Comments |
|--------------------------|---------------|------|--------|-------------|---|
| | Revise | Keep | Delete | Stream-line | |
| Attachment "B" | | | | | |
| II.K | | | x | | This condition for Mercury Emission control deleted since A.A.C. R18-2-734 is not applicable. |
| XII. | | x | | | This Condition for PM correlation renumbered as Condition II.D.3.i.(1). |

CLASS I TITLE V MINOR REVISION NO. 56569

| MR #56569, References | Determination | | | | Comments |
|--------------------------|---------------|------|--------|-------------|---|
| | Revise | Keep | Delete | Stream-line | |
| Attachment "B" | | | | | |
| II.D.3.1.ii | | | x | | This condition related to FGD commencing operation deleted since completed. |
| XII | | | | x | This Condition for Coal Additive Soda Ash and Cement Kiln Silo deleted and covered under Condition VII. |

CLASS I TITLE V MINOR REVISION NO. 57526

| OP #57526, References | Determination | | | | Comments |
|--------------------------|---------------|------|--------|-------------|----------|
| | Revise | Keep | Delete | Stream-line | |
| Attachment "B" | | | | | |

| OP #57526, References | Determination | | | | Comments |
|-----------------------|---------------|------|--------|-------------|---|
| | Revise | Keep | Delete | Stream-line | |
| IV.D.1.ai | | | | x | This Condition for applicability streamlined. |
| IV.E | | x | | | Conditions from NSPS Subpart IIII |

CLASS I TITLE V MINOR REVISION NO. 57711

| OP #57711, References | Determination | | | | Comments |
|-----------------------|---------------|------|--------|-------------|--|
| | Revise | Keep | Delete | Stream-line | |
| Attachment "B" | | | | | |
| VI.A | | x | | | Condition for Applicability |
| VI.B.2 | | x | | | Condition for Air Pollution Control Equipment |
| VI.B.3 | | x | | | Condition for Monitoring Requirements |
| VI.B.4.a | | x | | | Conditions for Recordkeeping and Reporting Requirements |
| VI.B.6.a | | | x | | Testing requirement deleted since test has been completed. |

CLASS I TITLE V MINOR REVISION NO. 58514

| MP #58514, References | Determination | | | | Comments |
|-----------------------|---------------|------|--------|-------------|---|
| | Revise | Keep | Delete | Stream-line | |
| Attachment "B" | | | | | |
| I.E | | | x | | Conditions for Applicability of NESHAP Subpart UUUUU deleted since it is past the date. |

CLASS I TITLE V SIGNIFICANT REVISION NO. 59410

| SP #59410, References | Determination | | | | Comments |
|-----------------------|---------------|------|--------|-------------|----------|
| | Revise | Keep | Delete | Stream-line | |
| Attachment "B" | | | | | |

| SP #59410, References | Determination | | | | Comments |
|-----------------------|---------------|------|--------|-------------|---|
| | Revise | Keep | Delete | Stream-line | |
| I.E | | | x | | Conditions for Applicability of NESHAP Subpart UUUUU deleted since it is past the date. |
| III.E | | x | | | Condition for requirements from NESHAP Subpart DDDDD for auxiliary boiler |

CLASS I TITLE V SIGNIFICANT REVISION NO. 61608

| SP #61608, References | Determination | | | | Comments |
|-----------------------|---------------|------|--------|-------------|---|
| | Revise | Keep | Delete | Stream-line | |
| Attachment "B" | | | | | |
| II.L.1 | | x | | | Conditions for Applicability |
| II.L.2 | | | x | | Condition for compliance date from NESHAP Subpart UUUUU deleted since it is past that date. |
| II.L.3.a.i | | x | | | This definition of Startup renumbered as Condition II.K.2.a |
| II.L.3.a.ii | | | x | | This definition of Startup deleted since not applicable |
| II.L.3.b | | | | | This definition of Shutdown renumbered as Condition II.K.2.b |
| II.L.4 to 11 | | | | x | These Conditions from NESHAP Subpart UUUUU streamlined and renumbered as Condition II.K.3 to 10 |
| II.M | x | | | x | This Condition for Regional Haze Federal Implementation Plan revised in line with the most recent applicable rules from 40 CFR 52.145 and renumbered as Condition II.L. |

CLASS I TITLE V MINOR REVISION NO. 62920

| MP #62920, References | Determination | | | | Comments |
|--------------------------|---------------|------|--------|-------------|---|
| | Revise | Keep | Delete | Stream-line | |
| Attachment "B" | | | | | |
| II.K. | | | x | | This condition for Mercury Emission control deleted since A.A.C. R18-2-734 is not applicable. |

VII. COMPLIANCE ASSURANCE MONITORING (CAM) (40 CFR 64) FOR UNIT 1 AND UNIT 2:

A. Particulate Matter

CAM Plan for PM involve use of the PM CEMS as the sole indicator of compliance with the PM emissions limit. By using only one indicator, exceedance of the emissions greater than 0.028 lbs/MMBtu on a 24-hour rolling average will be considered an excursion

B. Sulfur Oxides

The source 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. The source is subject to a 30-day rolling average SO₂ removal efficiency of at least 95% or a 30-day rolling average SO₂ emissions rate no greater than 0.08 lbs/MMBtu. The Permittee is required to operate a continuous emissions monitoring system (CEMS) for recording emissions of sulfur dioxide. The CEMS will be used as CAM for sulfur dioxide for both units. The monitoring system is required to meet the requirements of 40 CFR 60.13 and 40 CFR 75.

C. Nitrogen Oxides

The units are subject to the nitrogen oxide standard of 0.70 lb/MMBtu heat input in 40 CFR 60.44(a)(3) when burning coal and 0.30 lb/MMBtu in 60.44(a)(2) when burning fuel oil. If burning a combination of coal and fuel oil, the units are subject to the standard calculated by the equation of 40 CFR 60.44(b).

NO_x emission rate from Unit 1 is not to exceed 0.32 lbs/ MMBtu and that from Unit 2 is not to exceed 0.08 lbs/MMBtu on 30-day rolling totals basis. The source is subject to an annual plant-wide rolling total not to exceed 7,300 tons of NO_x emissions.

Compliance test results indicate that the units are able to meet the standard. The Permittee is required to operate a continuous emissions monitoring system (CEMS) for recording emissions of nitrogen oxides. The CEMS will be used as CAM for nitrogen oxide for both units. The monitoring system is required to meet the requirements of 40 CFR 60.13 and 40 CFR 75.

VIII. PERIODIC MONITORING

A. Unit 1 and Unit 2 Boilers

1. Opacity

The units are subject to an opacity standard of 20% under 40 CFR 60.42(a)(2). There is an exception that allows for one six-minute period per hour of not more than 27% opacity. In accordance with 40 CFR 60.11(c), this limitation is exempt during periods of startup, shutdown, or malfunction. The source provided specific definitions for these three categories which are included in the permit conditions.

The Permittee must operate a continuous monitoring system for opacity. This monitor must be used as the periodic monitoring method. The monitoring system must meet the requirements of 40 CFR 60.13 and 40 CFR 60, Appendix B, Performance Specification 1. In accordance with Permit #30732, the Permittee must maintain two sets of opacity filters, one to be used as calibration standards and one to be used as audit standards.

2. Fuel

The Permittee is restricted to burning only coal and Number 2 fuel oil in the boilers. In addition, the Permittee must maintain a record of any change in fuel type.

B. Auxiliary Boiler

1. Opacity

The boiler is subject to the opacity standard of 15% in A.A.C. R18-2-724.J. The Permittee must conduct a weekly survey of visible emissions emanating from Auxiliary Boiler. If the opacity of the emissions observed exceeds 15%, the observer must conduct a certified EPA Reference Method 9 observation. The Permittee must keep records of the initial survey and any EPA Reference Method 9 observations performed. These records must include the emission point observed, location of observer, name of observer, date and time of observation, and the results of the observation. If the observation shows a Method 9 opacity reading in excess of 15%, the Permittee must initiate appropriate corrective action to reduce the opacity below the standard. The Permittee must keep a record of the corrective action performed. The Permittee must monitor and record the number of hours fuel oil is burned continuously in the units.

2. Particulate Matter

This unit is subject to the particulate matter emissions standard in A.A.C. R18-2-724.C.1. Because fuel oil is burned in the boiler, the Permittee must monitor particulate matter emissions by monitoring the fuel burned in the unit. The Permittee must monitor the following information about the fuel supplied through the contractual agreement with the liquid fuel vendor:

- a. Heating value; and
- b. Ash content.

The Permittee must keep on record a copy of the contractual agreement and notify the Director within 30 days of any change in the contractual agreement.

3. Sulfur Oxides

The boiler is subject to sulfur dioxide standard in A.A.C. R18-2-724.E. Because the unit burns fuel oil, the emissions standard is 1.0 lb/MMBtu. The Permittee must keep a record of fuel supplier certification including the following information:

- a. The name of the oil supplier;
- b. The sulfur content and the heating value of the fuel from which the shipment came from; and
- c. The method used to determine the sulfur content of the oil.

The Permittee must make engineering calculations for SO_x emissions using the information from the contract and the following equation for each fuel delivery:

$$\text{SO}_2 \text{ (lb/MMBtu)} = 2.0 \times [(\text{Weight percent of sulfur}/100) \times \text{Density (lb/gal)}] / [(\text{Heating value (Btu/gal)}) \times (1 \text{ MMBtu}/1,000,000 \text{ Btu})]$$

4. Fuel

The Permittee is not allowed to burn high sulfur oil (>0.9% by weight) as a fuel unless it is demonstrated that low sulfur oils aren't available. In addition, Number 2 fuel oil may be burned in the auxiliary boiler.

C. Internal Combustion Engines

1. Subject to State Regulations

a. Opacity

The generators or internal combustion engines are subject to a 40% opacity limitation. The Permittee must conduct a weekly survey of visible emissions emanating from the internal combustion engines. If the opacity of the emissions observed exceeds 40%, the observer must conduct a certified EPA Reference Method 9 observation. The Permittee must keep records of the initial survey and any EPA Reference Method 9 observations performed. These records must include the emission point observed, location of observer, name of observer, date and time of observation, and the results of the observation. If the observation shows a Method 9 opacity reading in excess of 40%, the Permittee must initiate appropriate corrective action to reduce the opacity below the standard. The Permittee must keep a record of the corrective action performed.

b. Particulate Matter

The source is required to monitor the lower heating value of the fuel being combusted in the internal combustion engines. Compliance with this requirement must be demonstrated by maintaining copy of the fuel supplier certification specifying the lower heating value.

c. Sulfur Dioxide

The Permittee is not allowed to burn high sulfur fuel, and is limited to emissions of sulfur dioxide to 1.0 pound per million Btu heat input. The Permittee must maintain records of daily sulfur content and lower heating value of the fuel fired in the internal combustion engines. This may be accomplished by keeping a copy of the fuel supplier certification specifying the sulfur content and lower heating value of the fuel.

d. Hazardous Air Pollutants

The source is required to operate the emergency fire pump (less than 500 hp) engine only for emergency use and up to 100 hours of required maintenance and testing. Of the 100 hours, the source may operate the fire pump up to 50 hours in non-emergency situations. Operation of the engine in accordance with the manufacturer's plan is required. Monitoring involves oil and filter change every 500 hours of operation and inspection of air cleaner every 1000 hours of operation. A non-resettable hour-meter is required to log the operational hours.

2. Subject to NSPS, Subpart III

- a. The Permittee must keep documentation that the engines meet all applicable emission standards.
- b. The Permittee must maintain a record of daily, monthly and rolling 12-month totals of the operating hours of operation of the ICEs to show compliance with the hourly limitation for each of the ICE.
- c. The Permittee must record the time of operation of the ICE and the reason of operating the ICE.

D. Coal Handling

1. Opacity

The coal handling facility is subject to a 20% opacity standard, as stated in A.A.C. R18-2-702.B.3. The Permittee must conduct a weekly survey of visible emissions emanating from the coal handling facility. If the opacity of the emissions observed exceeds the opacity standard, the observer must conduct a certified EPA Reference Method 9 observation. The Permittee must keep records of the initial survey and any EPA Reference Method 9 observations performed. These records will include the emission point observed, location of observer, name of observer, date and time of observation, and the results of the observation. If the observation shows a Method 9 opacity reading in excess of the opacity standard, the Permittee must initiate appropriate corrective action to reduce the opacity below the standard. The Permittee must keep a record of the corrective action performed.

2. Particulate Matter

The source is subject to the particulate matter standard in A.A.C. R18-2-716.B.2. The Permittee must maintain and operate the baghouses and wet dust extractors in accordance with the manufacturer's specification. The Permittee must keep these

specifications on file. Emissions related maintenance work must be recorded.

E. Limestone Handling

1. Opacity

The limestone handling plant is subject to a 20% opacity standard, as stated in A.A.C. R18-2-702.B.3. The Permittee must conduct a weekly survey of visible emissions emanating from the limestone handling facility. If the opacity of the emissions observed exceeds the opacity standard, the observer must conduct a certified EPA Reference Method 9 observation. The Permittee must keep records of the initial survey and any EPA Reference Method 9 observations performed. These records must include the emission point observed, location of observer, name of observer, date and time of observation, and the results of the observation. If the observation shows a Method 9 opacity reading in excess of the opacity standard, the Permittee must initiate appropriate corrective action to reduce the opacity below the standard. The Permittee must record of the corrective action performed.

Certain sources within the Limestone Handling System are also subject to NSPS Subpart OOO. This subpart requires monitoring liquid flow rate and pressure drop for each of the Wet Dust Extractors (DC-12 and DC-13). In addition, this requires the Permittee to conduct quarterly 30-minute visible emissions inspections using EPA Method 22 (40 CFR part 60, Appendix A-7) on the Bin Vent Dust Collectors (DC-14, DC-15, and DC-16).

2. Particulate Matter

The source is subject to the particulate matter standard in A.A.C. R18-2-720.B.2. The Permittee must maintain and operate the Bin Vent Dust Collectors and Wet Dust Extractors in accordance with the manufacturer's specification. The Permittee must keep these specifications on file. Emissions related maintenance work must be recorded.

F. Fly Ash Handling, Coal Additive Soda Ash, and Cement Kiln Silo

1. Opacity

These systems are subject to a 20% opacity standard, as stated in A.A.C. R18-2-702.B.3. The Permittee must conduct a weekly survey of visible emissions emanating from these. If the opacity of the emissions observed exceeds the opacity standard, the observer must conduct a certified EPA Reference Method 9 observation. The Permittee must keep records of the initial survey and any EPA Reference Method 9 observations performed. These records must include the emission point observed, location of observer, name of observer, date and time of observation, and the results of the observation. If the observation shows a Method 9 opacity reading in excess of the opacity standard, the Permittee must initiate appropriate corrective action to reduce the opacity below the standard. The Permittee must keep a record of the corrective action performed.

2. Particulate Matter

The source is subject to the particulate matter standard in A.A.C. R18-2-730.B.1. The Permittee is required to maintain and operate the baghouses in accordance with the manufacturer's specification. Permittee is also required to hold these specifications on file. Emissions related maintenance work must be recorded.

G. Cooling Towers 1 and 2

SRP does not use Chromium-6 in the cooling towers at the Coronado Generating Station. Therefore, they are not subject to MACT for cooling towers under 40 CFR Part 63, Subpart Q.

1. Opacity

The cooling tower is subject to the opacity standard of 20% opacity standard, as stated in A.A.C. R18-2-702.B.3 The Permittee must conduct a weekly survey of visible emissions emanating from the cooling towers. If the opacity of the emissions observed exceeds the opacity standard, the observer must conduct a certified EPA Reference Method 9 observation. The Permittee must keep records of the initial survey and any EPA Reference Method 9 observations performed. These records will include the emission point observed, location of observer, name of observer, date and time of observation, and the results of the observation. If the observation shows a Method 9 opacity reading in excess of the opacity standard, the Permittee must initiate appropriate corrective action to reduce the opacity below the standard. The Permittee must keep a record of the corrective action performed.

2. Particulate Matter

The units are also subject to particulate matter emissions standard under A.A.C. R18-2-730.A.1.

H. Fugitive Emissions

The standards in Article 6 of the Arizona Administrative Code (A.A.C.) are applicable requirements for non-point sources. The following sources will be monitored:

1. Driveways, parking areas, vacant lots
2. Unused open areas
3. Open areas (Used, altered, repaired, etc.)
4. Construction of roadways
5. Material transportation
6. Material handling
7. Storage piles

8. Stacking and reclaiming machinery at storage piles

All of these areas must comply with the opacity limitation of 40%. The control measures for most of these activities include dust suppressants and/or wetting agents and reasonable precautions. To conduct open burning, Permittee must obtain a permit from ADEQ, or the local officer in charge of issuing burn permits.

The Permittee must make a bi-weekly survey of the visible emissions from all non-point sources. The must keep a record of the date on which the survey was taken, the name of the observer, and the results of the survey. If the visible emissions do not appear to exceed the standard, the Permittee must note in the record that the visible emissions were of low opacity, and it did not require a Method 9 to be performed.

If the Permittee finds that on an instantaneous basis the visible emissions are in excess of the opacity standard, then he must make a six-minute Method 9 observation. If this observation indicates opacity in excess of the standard, then the Permittee must report it as excess emissions. In addition, the Permittee must adjust the process equipment or process control equipment to bring the opacity below the standard. If the Permittee finds that the visible emissions is less than the opacity standard, then the Permittee must record the source of emission, date, time, and result of the test.

Monitoring and recordkeeping requirements for the nonpoint sources include a record of the date and type of activity performed, and the type of controls used. Also, monitoring requirements for the applicable open burning rule must be satisfied by keeping all open burn permits on file.

I. Other Periodic Activities

1. Abrasive Sand Blasting

SRP has indicated in the permit application that abrasive sand blasting activities are conducted on-site. The applicable requirements are A.A.C. R18-2-726 and A.A.C. R18-2-702(B) and are included in the permit. Monitoring requirements include:

- a. Date project was conducted;
- b. Duration of project;
- c. Type of control measures employed

J. Spray Painting

SRP has indicated in the permit application that spray painting activities are conducted on-site. The applicable requirements are A.A.C. R18-2-727 and A.A.C. R18-2-702(B) and are included in the permit. A.A.C. R18-2-727(A) and A.A.C. R18-2-727(B) are included in the approved State Implementation Plan (SIP). A.A.C. R18-2-727(C) and A.A.C. R18-2-727(D) are also a part of the approved SIP. They are present in the definitions section

of the SIP as R9-3-101.117. EPA approved SIP provision R9-3-527.C is not present in the amended rule. However, R9-3-527.C is an applicable requirement, and is federally enforceable until the current State SIP is approved by the EPA.

Monitoring requirements include:

1. Date project was conducted;
2. Duration of project;
3. Type of control measures employed;
4. Material Safety Data Sheets for all paints and solvents used in the project.

K. Mobile Sources

The Permittee must keep a record of all emissions related maintenance activities performed on Permittee's mobile sources stationed at the facility as per manufacturer's specifications for the purposes of monitoring and recordkeeping

L. Asbestos Demolition/Renovation

The Permittee must keep a record of all required paperwork on file for the purposes of monitoring and recordkeeping. The required paperwork includes "NESHAP Notification for Renovation and Demolition Activities" form and all supporting documents.

1. Non-vehicle Air Conditioner Maintenance and/or Services

The Permittee must keep a record of all paperwork required by the applicable requirements of 40 CFR 82 - Subpart F on file for the purposes of monitoring and recordkeeping.

IX. TESTING REQUIREMENTS

A. Unit 1 and Unit 2 Boilers

SRP is required to perform annual performance tests for opacity, particulate matter, SO₂ and NO_x in accordance with 40 CFR Part 60, Subpart D.

1. Particulate Matter

The Permittee is required to perform annual tests for particulate matter emissions using EPA Reference Methods 5, 5b, or 17.

2. Sulfur Dioxide

The testing requirements for sulfur dioxide have been removed on account of the fact that they are included in the QA/QC requirements of the Acid Rain provisions for the CEMs.

3. Nitrogen Oxides

The testing requirements for nitrogen oxides have been removed on account of the fact that they are included in the QA/QC requirements of the Acid Rain provisions for the CEMs.

B. Limestone Handling

1. Opacity

Within 60 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup of such facility, the Permittee is required to conduct an initial performance test for opacity for the bin vent filters (DC-14, DC-15, and DC-16).

2. Particulate Matter

Within 60 days after achieving the maximum production rate, but not later than 180 days after the installation of second flue gas desulfurization unit, the Permittee is required to conduct an initial performance test for PM/PM₁₀ for the wet dust extractors (DC-12 and DC-13).

X. INSIGNIFICANT ACTIVITIES

The following table includes a list of activities proposed by SRP Coronado to be insignificant. This table includes an evaluation of whether the activity can be deemed as insignificant pursuant to A.A.C. R18-2-101.68.

The following activities were proposed to be insignificant in the permit application:

| S. No. | Activity | Insignificant | Comment |
|--------|---|---------------|---------------------------|
| 1 | Petroleum product storage tanks containing diesel fuel and fuel oil in tanks of 40,000 gallons or less and tanks containing lubricating oil, transformer oil and used oil. (Provided those tanks >350 gallons are listed with contents and throughput identified in this application) | Yes | A.A.C. R18-2-101.68.a.i |
| 2 | Gasoline tanks of 10,000 gallons or less | Yes | A.A.C. R18-2-101.68.a.ii |
| 3 | Storage and piping of natural gas, butane, propane or liquefied petroleum gas (Provided those tanks >350 gallons are listed with contents and throughput identified in this application) | Yes | A.A.C. R18-2-101.68.a.iii |
| 4 | Piping of fuel oils, used oil and transformer oil (provided the system is described in this application) | Yes | A.A.C. R18-2-101.68.a.iv |

| S. No. | Activity | Insignificant | Comment |
|--------|---|---------------|---------------------------|
| 5 | Storage and handling of drums or other transportable containers where the containers are sealed during storage, and covered during loading and unloading, including containers of waste and used regulated under RCRA (provided the material in the containers is described with the approximate amounts stored) | Yes | A.A.C. R18-2-101.68.a.v |
| 6 | Storage tanks of any size containing exclusively soaps, detergents, waxes, greases, aqueous salt solutions, aqueous solutions of acids that are not regulated air pollutants, or aqueous caustic solutions, provided the permit applicant specifies the contents of each storage tank with a volume of 350 gallons or more. | Yes | A.A.C. R18-2-101.68.a.vi |
| 7 | Electrical transformer oil pumping, cleaning, filtering, drying and the re-installation of oil back into transformers. | Yes | A.A.C. R18-2-101.68.a.vii |
| 8 | Internal combustion engine(ICE)-driven compressors, ICE-driven electrical generator sets, and ICE-driven water pumps used for less than 500 hours per calendar year for emergency replacement or standby service (provided records of hours of operation are kept) | Yes | A.A.C. R18-2-101.68.b |
| 9 | Batch mixers with rated capacity 5 cubic feet or less | Yes | A.A.C. R18-2-101.68.c.i |
| 10 | Powder coating operations. | Yes | A.A.C. R18-2-101.68.c.iii |
| 11 | Equipment using water, water and soap or detergent, or a suspension of abrasives in water for purposes of cleaning or finishing. | Yes | A.A.C. R18-2-101.68.c.iv |
| 12 | Blast-cleaning equipment using as suspension of abrasive in water and any exhaust system or collector serving them exclusively. | Yes | A.A.C. R18-2-101.68.c.v |
| 13 | Plastic pipe welding | Yes | A.A.C. R18-2-101.68.c.vi |
| 14 | Housekeeping activities and associated products used for cleaning purposes, including collecting spilled and accumulated materials at the source, including operation of fixed vacuum cleaning systems specifically for such purposes. | No | A.A.C. R18-2-101.68.d.i |

| S. No. | Activity | Insignificant | Comment |
|--------|---|---------------|---------------------------|
| 15 | Sanding of streets and roads to abate traffic hazards caused by ice and snow. | Yes | A.A.C. R18-2-101.68.d.ii |
| 16 | Street and parking lot striping. | Yes | A.A.C. R18-2-101.68.d.iii |
| 17 | Architectural painting and associated surface preparation for maintenance purposes at industrial or commercial facilities. | Yes | A.A.C. R18-2-101.68.d.iv |
| 18 | Noncommercial (in-house) experimental, analytical laboratory equipment which is bench scale in nature, including quality control/quality assurance laboratories supporting a stationary source and research and development laboratories. | Yes | A.A.C. R18-2-101.68.e.i |
| 19 | Individual sampling points, analyzers, and process instrumentation, whose operation may result in emissions but that are not regulated as emission units. | Yes | A.A.C. R18-2-101.68.e.ii |
| 20 | General office activities, such as paper shredding, copying, photographic activities, and blueprinting, but not to include incineration. | Yes | A.A.C. R18-2-101.68.f.i |
| 21 | Use of consumer products, including hazardous substances as that term is defined in the Federal Hazardous Substances Act (15 U.S.C. 1261 et seq.) where the product is used at a source in the same manner as normal consumer use. | Yes | A.A.C. R18-2-101.68.f.ii |
| 22 | Activities directly used in the diagnosis and treatment of disease, injury or other medical condition. | Yes | A.A.C. R18-2-101.68.f.iii |
| 23 | Installation and operation of potable, process and waste water observation wells, including drilling, pumping, filtering apparatus. | Yes | A.A.C. R18-2-101.68.g.i |
| 24 | Transformer vents. | Yes | A.A.C. R18-2-101.68.g.ii |

XI. LIST OF ABBREVIATIONS

A.A.C..... Arizona Administrative Code
 ADEQ..... Arizona Department of Environmental Quality
 AERMOD..... Air Dispersion Model
 MM Btu/hr..... Million British Thermal Units per hour
 BACTBest Available Control Technology
 CAS Combustion Air Systems

| | |
|--------------------------------------|---|
| CECP | Coronado Emissions Control Project |
| CEMS | Continuous Emission Monitoring Systems |
| CFR | Code of Federal Regulations |
| CGS | Coronado Generating Station |
| CO | Carbon Monoxide |
| COHPAC | Compact Hybrid Particulate Collector |
| CS-ESP | Cold Side Electro Static Precipitator |
| EPA | Environmental Protection Agency |
| ESP | Electrostatic Precipitators |
| FF | Fabric Filter |
| FGD | Flue Gas Desulphurization |
| °F | Degree Fahrenheit |
| GCP | Good Combustion Practices |
| H ₂ SO ₄ | Sulfuric Acid |
| HAP | Hazardous Air Pollutant |
| HS-ESP | Hot Side Electro Static Precipitator |
| lb/hr | Pound per Hour |
| LEAR | Lowest Achievable Emission Rate |
| LNB | Low NO _x Burners |
| LOI | Loss on Ignition |
| NAAQS | National Ambient Air Quality Standard |
| NNSR | Non-attainment New Source Review |
| NO _x | Nitrogen Oxides |
| PM | Particulate Matter |
| PM ₁₀ | Particulate Matter Nominally less than 10 Micrometers |
| PRB | Powder River Basin |
| PSD | Prevention of Significant Deterioration |
| PTE | Potential to Emit or Permanent Total Enclosure |
| RACT | Reasonably Available Control Technology |
| RBLC | RACT/BACT/LAER Clearinghouse |
| SAM | Sulfuric Acid Mist |
| SCR | Selective Catalytic Reduction |
| SIL | Significant Impact Level |
| SO ₂ | Sulfur Dioxide |
| SRP | Salt River Project |
| WESP | Wet electrostatic precipitation |
| VOC | Volatile Organic Compound |