

SECTION 1. STANDARD PERMIT APPLICATION FORM



Maricopa County
Air Quality Department

Return all applications to: **One Stop Shop**
501 N. 44th Street, Suite 200
Phoenix, AZ 85008
Phone (602) 372-1341 Fax (602) 372-1078

STANDARD PERMIT APPLICATION FORM

(As required by A.R.S. § 49-480, and Chapter 3, Article 3, Arizona Administrative Code)

1. Permit to be issued to: (Business license name of organization that is to receive permit)
Arizona Public Service Company (APS)
2. Mailing Address: 400 North 5th St, Mail Station 9303
City: Phoenix State: AZ ZIP: 85004
3. Plant Name (if different from item #1 above):
West Phoenix Power Plant
4. Name (or names) of Owner or Operator:
Arizona Public Service Company
Phone: _____
5. Name of Owner's Agent:
Anne Carlton
Phone: _____
6. Plant/Site Manager or Contact Person:
Andre Bodrog
Phone: 602-250-1253
7. Proposed Equipment/Plant Location Address:
4606 West Hadley Street
City: Phoenix County: MARICOPA ZIP: 85043
Indian Reservation (if applicable): N/A
Section/Township/Range: A01020900
Latitude: 33° 26' 30" Longitude: 112° 09' 30" Elevation: 1050 ft.
8. General Nature of Business: Electrical Power Generation
Standard Industrial Classification Code: 4911
9. Type of Organization: Corporation Individual Owner
 Partnership Government Entity (Government Facility Code: _____)
 Other: _____
10. Permit Application Basis:
 New Source Revision Renewal of Existing Permit
 Portable Source General Permit (Check all that apply.)
For renewal or modification, include existing permit number:
Date of Commencement of Construction or Modification:
V95 013
- Is any of the equipment to be leased to another individual or entity?
 Yes No
11. Signature of Responsible _____
Official of Organization _____
Official Title of Signer: Plant Manager
12. Typed or Printed Name of Signer: Andre Bodrog
Date: _____ Phone Number: 602-250-1253

Company Name and Location: West Phoenix Power Plant 4606 W. Hadley St Phoenix, AZ 85043

Emission Sources

Regulated Air Pollutant Data

Emission Point Discharge Parameters

Emission Point		Chemical Composition of Total Stream	Air Pollutant Emission Rate		UTM Coordinates of Emission Point			Stack Sources					Nonpoint	
Number	Name	Regulated Air Pollutant Name	#/Hr	Tons/Year	Zone	East (Meters)	North (Meters)	Height Above Ground (feet)	Height Above Structure (feet)	Exit Date			Sources	
										Dia (ft)	Vel (fps)	Temp (°F)	Length (ft)	Width (ft)
1	CC1 no. 1 exhaust stack (natural gas)	CO	86	277.8	12	392,601	3,700,696	54	30	11 x 17	70.4	350		
		NO _x	357	1084.1										
		SO ₂	0.5	1.6										
		PM ₁₀	6.9	22.4										
		TSP	6	22.4										
		VOC	2.2	7.1										
		Total HAPs	0.4	1.8										
2	CC2 no. 2 exhaust stack (natural gas)	CO	86	277.8	12	392,601	3,700,696	54	30	11 x 17	70.4	350		
		NO _x	357	1084.1										

		SO ₂	0.5	1.6										
		PM ₁₀	6.9	22.4										
		TSP	6	22.4										
		VOC	2.2	7.1										
		Total HAPs	0.4	1.8										
3	CC3 no. 3 exhaust stack (natural gas)	CO	25		12	392,601	3,700,696	85	30	11 x 17	70.4	350		
		NO _x	34											
		SO ₂	1											
		PM ₁₀	7											
		TSP	7											
		VOC	6											
		Total HAPs	0.4	1.8										
4	CC4 no. 4 exhaust stack (natural gas)	CO	12.5		12	392,601	3,700,696	120		14	45.3	215		
		NO _x	34.2											
		SO ₂	0.46											
		PM ₁₀	5.2											
		TSP	5.2											
		VOC	1.5											
		Total HAPs	0.4	1.6										

5	CC5 no. 5 exhaust stack (natural gas)	CO	52.8		12	392,601	3,700,696	175		15	46	206		
		NO _x	48.6											
		SO ₂	2.1											
		PM ₁₀	10.3											
		TSP	10.3											
		VOC	5.4											
		Total HAPs	1.7	7.4										
3,4, & 5	CC3, CC4, CC5, and Cooling Towers (CC4 & CC5) combined permitted annual emission limits	CO		184.2										
		NO _x		405.1										
		SO ₂		16.3										
		VOC		56.1										
		PM/PM ₁₀		108.3										
6	CT1 no. 6 exhaust stack (natural gas)	CO	75	280.0	12	392,601	3,700,696	32	20	10.5 x 22	108.4	850		
		NO _x	290	1100.0										
		SO ₂	0.43	1.6										
		PM ₁₀	6	22.0										
		TSP	6	22.0										
		VOC	1.9	7.1										

		Total HAPs	0.94	3.5										
7	CT2 no. 6 exhaust stack (natural gas)	CO	75	280.0	12	392,601	3,700,696	32	20	10.5 x 22	108.4	850		
		NO _x	290	1100.0										
		SO ₂	0.43	1.6										
		PM ₁₀	6	22.0										
		TSP	6	22.0										
		VOC	1.9	7.1										
		Total HAPs	0.94	3.5										
	Cooling Tower (CC1,2,&3)	CO			12	392,601	3,700,696							
		NO _x												
		SO ₂												
		PM ₁₀	5.6	24.5										
		VOC												
		Total HAPs												
	Cooling Tower (CC4)	CO			12	392,601	3,700,696							
		NO _x												

		SO ₂												
		PM ₁₀	2.5											
		VOC												
		Total HAPs												
	Cooling Tower (CC5)	CO			12	392,601	3,700,696							
		NO _x												
		SO ₂												
		PM ₁₀	2.1											
		VOC												
		Total HAPs												
	Clayton Boiler	CO	7.9	34.6	12	392,601	3,700,696	15	0	15	46	206		
		NO _x	9.4	41.2										
		SO ₂	0	0										
		PM ₁₀	0.7	3.1										
		VOC	0.5	2.3										
		Total HAPs	1.1	4.7										

SECTION 2. DESCRIPTION

This document is being submitted pursuant to Rule 210 of the Maricopa County Air Pollution Control Regulations (MCAPCR), and constitutes an application by APS for a Title V Permit Renewal to the West Phoenix Power Plant Title V Air Quality Operating Permit (V95-006).

The current power generating units include five combined cycle units and two simple cycle combustion turbines (CT). The power generating units are supported by three cooling towers and one auxiliary boiler. All power generating units use natural gas as their sole fuel. Natural gas is obtained from Kinder Morgan Natural Gas Company and is delivered at a city gate just east of the property.

The West Phoenix power generating units serve several functions for APS. The power generating units can be used to meet local and system load demands and can be used for voltage control. According, the units are operated on an as-needed basis, 24 hours per day throughout the year.

Combined Cycle Units (5)

The combined cycle units use a combination of combustion and steam turbines to generate electrical power. Compressed air is used in conjunction with fuel combustion to drive the combustion turbines. Waste heat from the combustion turbine is used to produce steam in a heat recovery steam generator (HRSG). Steam from the HRSG is used to drive a steam turbine. The utilization of waste heat increases the efficiency of the combined cycles. The five combined cycle units at West Phoenix are designated as CC1, CC2, CC3, CC4, and CC5 (A and B). CC5 is a two on one combined cycle. This designates a power block consisting of two combustion turbines and one steam generator. CC5A and CC5B designate the use of dual combustion turbines in CC5. There are continuous emission monitoring at the emission points CC3, CC4, CC5A and CC5B.

Combustion Turbines (2)

The simple cycle combustion turbines consist of a high efficiency axial compressor, a combustion chamber and a reaction type turbine. The turbine is coupled to and drives an air cooled generator. Each CT has a nominal generating capability of 55 mw.

Cooling Towers (3)

Because the combined cycle units steam turbine to produce a portion of the power, a cooling tower is required for condensing steam back to a liquid. One cooling tower supplies circulating water to the condensers on CC1, CC2, CC3. CC4 and CC5 have separate and independent cooling towers.

Auxiliary Boiler (Clayton Boiler)

The Clayton boiler provides auxiliary steam fro the brine concentrator when CC5 A and CC5B are not in operation.

SECTION 3. DESCRIPTION OF PRODUCTS

The sole product of West Phoenix Power Plant is electrical power. The SIC code for the power plant is 4911.

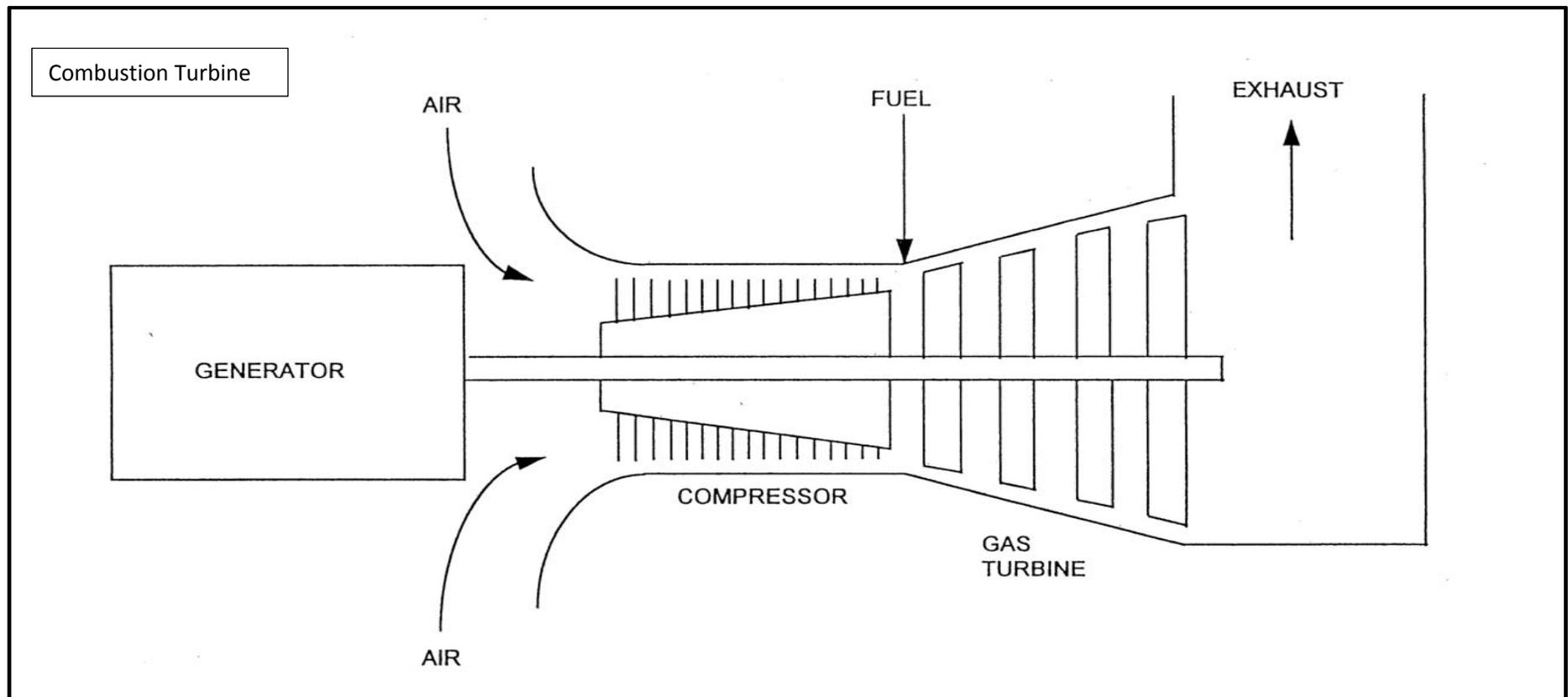
SECTION 4. DESCRIPTION OF ALTERNATE OPERATING SCENARIOS

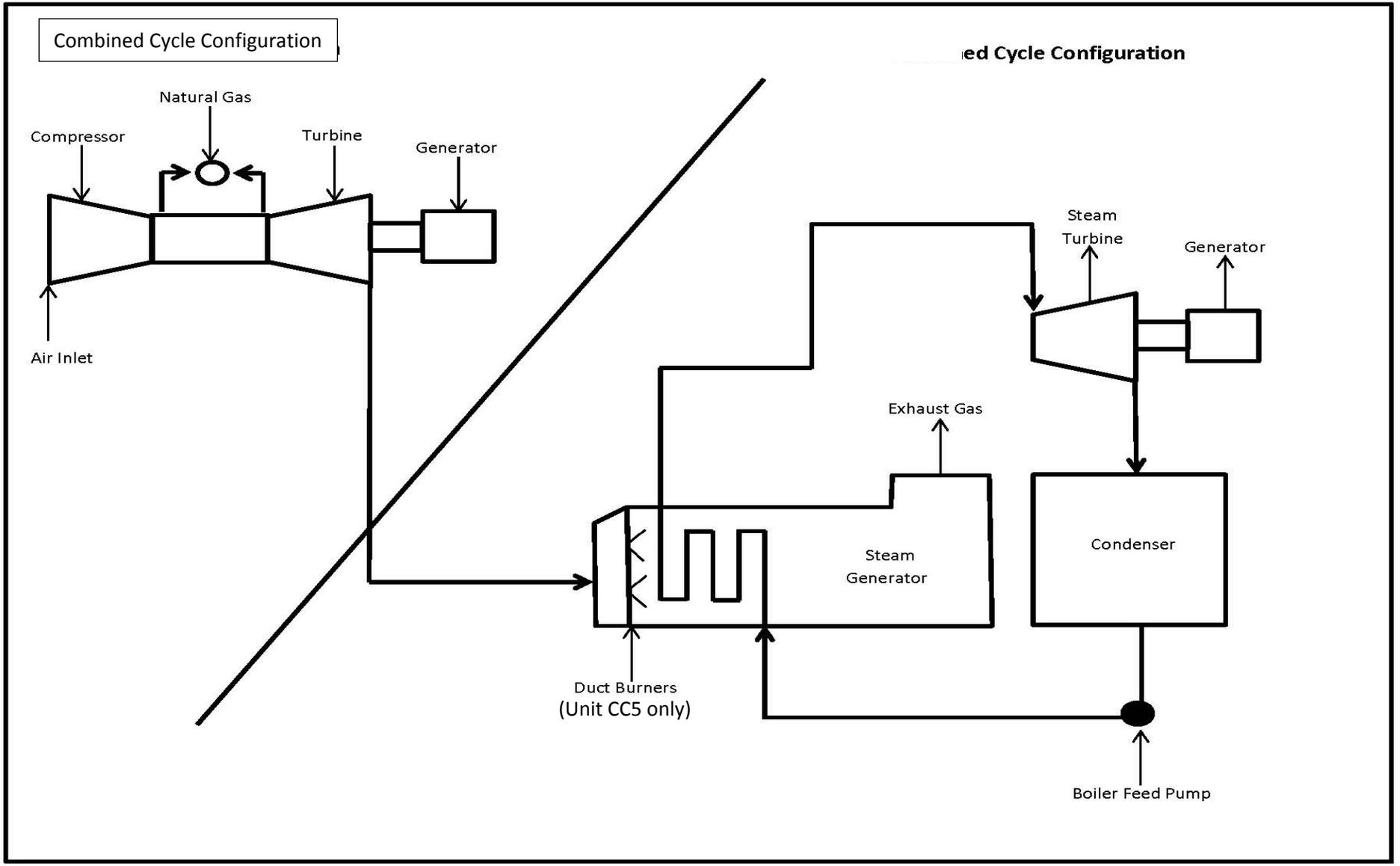
The combustion turbines (CT) combust pipeline natural gas to produce electricity. The CTs may be operated simultaneously or one at a time at a capacity factor of 0 -100% each. Excess heat from the CTs is captured in the HRSG and used to create steam to drive the steam turbines (ST). At times when additional heat is required to obtain the full benefit of CC5's STs , duct burners may be operated.

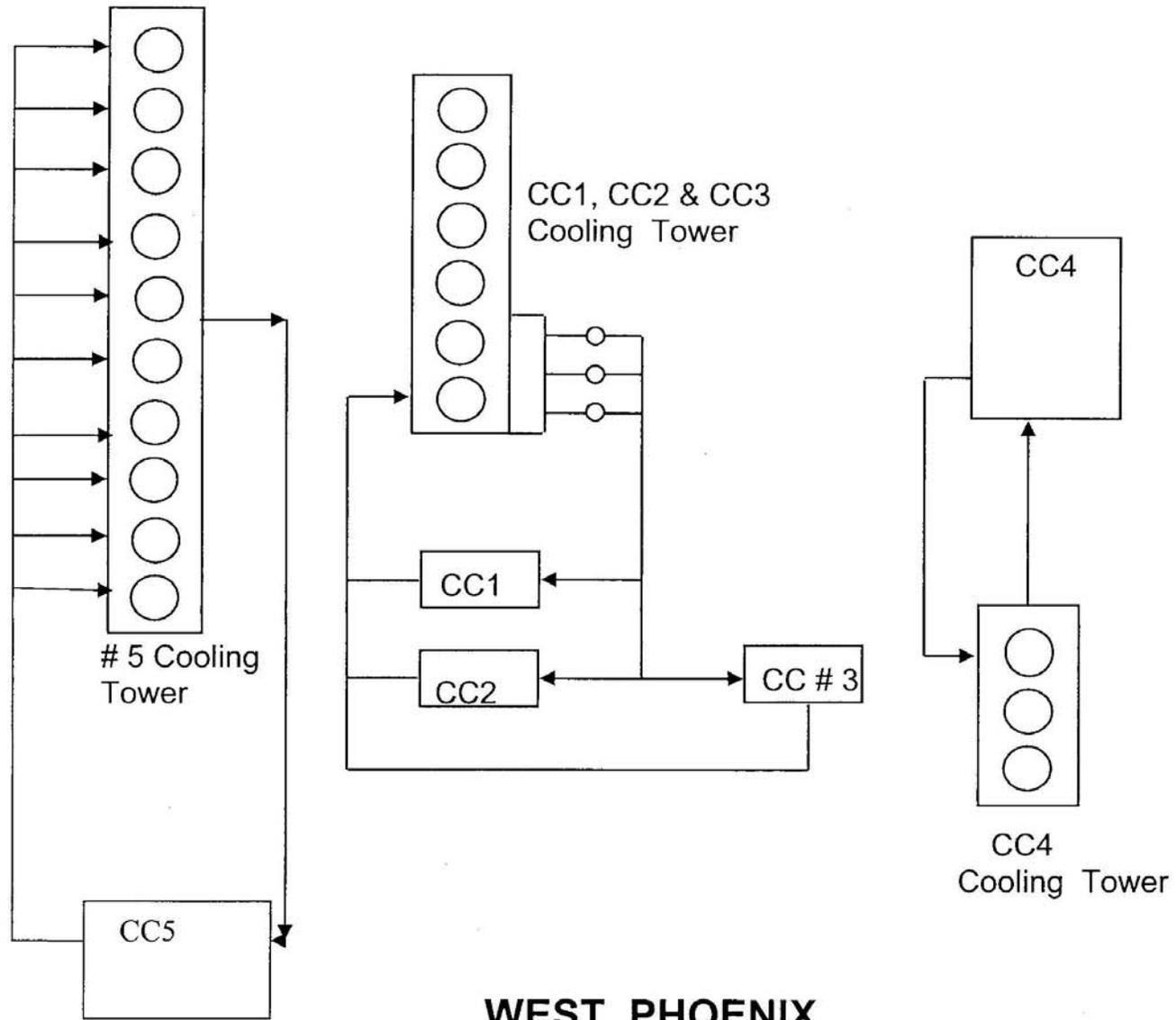
SECTION 5. DESCRIPTION OF ALTERNATE OPERATING SCENARIO PRODUCTS

There are no alternate operating scenario products.

SECTION 6. PROCESS FLOW DIAGRAMS







**WEST PHOENIX
COOLING TOWERS**

SECTION 7. MATERIAL BALANCES

No material balances are used to estimate air emissions from the combustion turbines.

SECTION 8. EMISSION RELATED INFORMATION

The Standard Permit Application Form, found in Section 1 of this permit renewal application, includes the Emission Sources portion of the form from Appendix B of the Maricopa County Air Pollution Control Regulations. Additional emission related information.

SECTION 9. APPLICABLE REQUIREMENTS

County Requirements Maricopa County Air Pollution Control Regulations

Regulation I, General Provisions

Rule 100		General Provisions and Definitions (2/2/16 revision)
	§104	Circumvention
	§105	Right of Inspection of Premises
	§106	Right of Inspection of Records
	§ 301	Air Pollution Prohibited
	§ 501	Reporting Requirements
	§ 502	Data Reporting
	§ 503	Emission Statements Required as Stated in the Act
	§ 504	Retention of Records
	§ 505	Annual Emissions Inventory Report

Rule 130		Emergency Provisions (7/26/00 revision)
	§400	Administrative Requirements

Rule 140		Excess Emissions (9/5/01 revision)
	§400	Administrative Requirements
	§500	Monitoring and Records

Regulation II**Permits and Fee**

Rule 200		Permit Requirements (2/3/16 revision)
	§ 301	Permits Required
	§ 302	Title V Permit
	§ 305	Dust Control Permit
	§ 306	Subcontractor Registration
	§ 307	Permit to Burn
	§ 309	Standards for Applications
	§ 311	Prohibition – Permit Modification
	§ 312	Permit Posting Required
	§ 408	Testing procedure
	§ 409	Fees

Rule 210		Title V Permit Provisions (2/3/16 revision)
	§ 302	Permit Contents
	§ 305	Compliance Plan; Certification
	§ 400	Administrative requirements
	§ 401	Fees Required
	§ 402	Permit Term
	§ 403	Source Changes Allowed Without Permit Revisions
	§ 404	Administrative Permit Amendments
	§ 405	Minor Permit Revisions
	§ 406	Significant Permit Revisions
	§ 407	Permit Shields

Rule 240		Permits For New Major Sources And Major Modifications To Existing Major Sources (2/3/16revision)
	§ 306	Offsets and Net Air Quality Benefit Standards
	§ 305	Requirements for Non-attainment Areas
	§ 308	Requirements for Attainment Areas

Rule 241		Permits for New Sources and Modifications to Existing Sources (2/3/16 revision)
	§ 301	Best Available Control Technology (BACT) Requirements
	§ 302	Reasonably Available Control Technology (RACT) Required

Rule 270		Performance Tests (11/15/93 revision)
	§ 300	Standards
	§ 301	Performance Tests Required (approved test methods)
	§301.1	Applicable Procedures and Testing Methods
	§ 301.2	Opacity determined by Reference Method 9 of the AZ Testing Manual
	§ 400	Administrative requirements
	§ 401	Performance Tests Required
	§ 402	Testing Criteria
	§ 403	Testing Conditions
	§ 404	Notice of Testing
	§ 405	Testing Facilities Provided
	§ 406	Minimum Testing Required
	§ 407	Compliance with the Emission Limits
	§ 408	Additional Testing

Rule 280		Fees (5/26/10 revision)
	§ 301	Title V Permit Fees

Regulation III Control of Air Contaminants

Rule 300		Visible Emissions (3/12/08 revision)
	§ 301	Limitations – Opacity/General: Opacity ≤ 20%
	§ 302	Exceptions
	§ 501	Compliance Determination – Opacity

Rule 310		Fugitive Dust from Dust Generating Operations (1/27/10 revision)
	§ 301	General Requirements for Dust Generating Operations
	§302	Permit Requirements for Dust Generating Operations
	§ 303	Visible Emissions Requirements for Dust-Generating Operations
	§ 304	Stabilization Requirements for Dust-Generating Operations
	§ 306	Trackout, Carry-Out , Spillage, and/or Erosion
	§ 308	Project Information Sign for Dust-Generating Operations
	§ 401	Dust Control Permit Requirements
	§ 402	Dust Control Plan Requirements
	§ 501	Compliance Determination
	§ 502	Recordkeeping
	§ 503	Records Retention
	§ 504	Test Methods Incorporated by Reference

Rule 312		Abrasive Blasting (7/2/03 revision)
	§ 301	Limitations

Rule 312		Abrasive Blasting (7/2/03 revision)
	§ 302	Requirements for Unconfined Blasting
	§ 303	Requirements for Confined Blasting
	§ 305	Opacity Limitation
	§ 306	Wind Event
	§ 501	Recordkeeping and Reporting
	§ 502	Records Retention
	§ 503	Opacity Observations
	§ 504	Test Methods

Rule 314		Open Outdoor Fires and Indoor Fireplaces at Commercial and Institutional Establishments (7/25/12 revision)
	§ 301	Prohibition – Open Outdoor Fires
	§ 303	Open Outdoor Fires not Required to Obtain a Burn Permit

Rule 315		Spray Coating Operations (11/17/99 revision)
	§ 302	Exemptions
	§ 501	Test Methods

Rule 320		Odors and Gaseous Air Contaminants (7/2/03 revision)
	§ 300	Standards
	§ 302	Material Containment Required
	§ 303	Stack height
	§ 304	Limitation – Hydrogen Sulfide
	§ 305	Permit Conditions – High Sulfur Oil
	§ 306.1	Steam Plants Using Low Sulfur Oil – After May 30, 1972

Rule 320	Odors and Gaseous Air Contaminants (7/2/03 revision)
§ 308	Limitation – Nitrogen Oxides from Electrical Power Plants

Rule 322	Power Plant Operations (10/17/07 revision)
§ 104	Partial Exemptions
§ 220	Natural Gas Curtailment
§ 301	Limitations – Particulate Matter
§ 302	Limitations – Opacity
§ 303	Limitations – Sulfur in Fuel
§ 304	Limitations – Nitrogen Oxides
§ 305	Limitations – Carbon Monoxide
§ 307	Emergency Fuel Use Notification
§ 500	Monitoring and Records

Rule 323	Fuel Burning Equipment From Industrial/Commercial/Institutional (ICI) Sources (10/17/07 revision)
§ 301	Limitations – Particulate Matter
§ 302	Limitations – Opacity
§ 303	Limitations – Sulfur in Fuel
§ 304	Limitations – Nitrogen Oxides
§ 305	Limitations – Carbon Monoxide
§ 500	Monitoring and Records
§ 501	Recordkeeping and Reporting
§ 503	Compliance Determination

Rule 330		Volatile Organic Compounds (9/25/13 revision)
	§ 302	Limits/Non-Complying Solvents,
	§ 305	Equipment Cleanup
	§ 306	Containment and Disposal
	§ 307.2	Exemptions
	§ 502	Determination of Compliance
	§ 503.1	Recordkeeping and Reporting
	§ 503.2	Recordkeeping and Reporting
	§ 503.4	Recordkeeping and Reporting
	§ 504	Test Methods

Rule 331		Solvent Cleaning (9/25/13 revision)
	§ 301	Solvent Handling Requirements
	§ 302	Equipment Requirements for All Cleaning Machines
	§ 303	Operating & Signage Requirements
	§ 304	Non-Vapor Cleaning/Degreasing
	§ 305	Non-Vapor Batch Cleaning Machines
	§ 501	Recordkeeping and Reporting
	§ 502	Compliance Determination and Test Methods

Rule 335		Architectural Coatings (9/25/13 revision)
	§ 301	Prohibition – Bituminous Pavement Sealers
	§ 302	Interim Limits Non-Flat Architectural Coatings
	§ 303	Final Limits – Non-Flat Architectural Coatings
	§ 304	Limits – Flat Architectural Coatings

Rule 335		Architectural Coatings (9/25/13 revision)
	§ 305	Limits – Specialty Coating
	§ 306	Exemptions – Specific Use Coatings
	§ 307	Exemption – Small Containers
	§ 401	Labeling
	§ 402	Manufacture Date
	§ 500	Monitoring and Records

Rule 336		Surface Coating Operations (9/25/13 revision)
	§ 301	Surface Coatings
	§ 302	Application Methods for Surface Coatings
	§ 303	Cleanup of Application Equipment
	§ 304	Handling and Disposal of VOC
	§ 305	Exemptions
	§ 500	Monitoring and Records
	§ 501	Recordkeeping and Reporting

Rule 340		Cutback and Emulsified Asphalt (9/25/13 revision)
	§ 301	Limitations
	§ 302.1	Exemptions
	§ 302.3	Exemptions
	§ 303	Labeling
	§ 500	Monitoring and Records
	§ 501	Recordkeeping and Reporting
	§ 502	Compliance Determination and Test Methods

Rule 353		Gasoline in Stationary Dispensing Tanks (9/25/13 revision)
	§ 301	Basic Tank Integrity
	§ 302	Fill Pipe Requirements
	§ 303	Vapor Recovery System
	§ 304	Equipment Maintenance and Use Required
	§ 305	Exemptions
	§ 500	Monitoring and Records
	§ 502	Recordkeeping
	§ 503	Compliance Determination
	§ 504	Test Methods

Rule 360		New Source Performance Standards (11/18/15 revision)
	§ 301	Adopted Federal Standards
	§ 301	Subpart A – General Provisions
	§ 301	Subpart Db – Standards of Performance for Electric Utility Steam Generating Units for Which Construction Commenced After September 18, 1978
	§ 301	Subpart Db – Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units
	§ 301	Subpart Dc - Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units
	§ 301	Subpart GG – Standard of Performance for Stationary Gas Turbines

Rule 370		Federal Hazardous Air Pollutant Program (11/18/15 revision)
	§301.8	Asbestos NESHAP

Rule 371	Acid Rain (11/18/15 revision)
§ 301	Incorporated Subparts of the Federal Acid Rain Regulations

Rule 500	Attainment Area Classification (2/3/16 revision)
§ 300	Standards

Rule 510	Air Quality Standards (2/3/16 revision)
§ 300	Standards

Regulation VI Emergency Episodes

Rule 600	Emergency Episodes (2/3/16 revision)
§ 302	Control Actions

Appendices

Appendix C	Fugitive Dust Test Methods (3/26/08 revision)
Section 2	Test Methods for Stabilization
Section 3	Visual Determination of Opacity of Emissions from Dust-Generating Operations

State Requirements Arizona Administrative Code

R18-2-703.C.1 (R9-3-503.C.1) (Steam Generating Units over 73 MW)	For steam generating units having a heat input rate of 4200 million BTU per hour or less, the maximum allowable particulate emissions rate in pounds-mass per hour $E = 1.02Q^{0.769}$ where: Q = heat input in million BTU per hour.
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R18-2-719.C.1 (R9-3-519.C.1) (Rotating Machinery)	For stationary rotating machinery having a heat input rate of 4200 million BTU per hour or less, the maximum allowable particulate emissions rate in pounds-mass per hour $E = 1.02Q^{0.769}$ where: Q = heat input in million BTU per hour.
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R18-2-724.C.1 (R9-3-524.C.1) (Steam Generating Units less than 73 MW)	For steam generating units having a heat input rate of 4200 million BTU per hour or less, the maximum allowable particulate emissions rate in pounds-mass per hour $E = 1.02Q^{0.769}$ where: Q = heat input in million BTU per hour.
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Federal Requirements

New Source Performance Standards General Provisions

(40 CFR Part 60 Subpart A)

§ 60.4(a), (b)(D)	Address
§ 60.7(a), (b), (c), (d), (f)	Notification and Recordkeeping
§ 60.8	Performance Tests
§ 60.12	Circumvention
§ 60.13	Monitoring
§ 60.19	General Notification and Reporting Requirements

New Source Performance Standards – Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units (40 CFR Part 60 Subpart Db)

§ 60.44b(a), 60.44b(l)(1)	Standard for Nitrogen Oxides
§ 60.45b(a), 60.45b(k)	Compliance and Performance Test Methods and Procedures for Sulfur Dioxide
§ 60.46b(c), (f)	Compliance and Performance Test Methods and Procedures for Particulate Matter and Nitrogen Oxides
§ 60.47(a), 60.47b(g)	Emission Monitoring
§ 60.48b, (b), (c), (d), (e), (f), (g)	Emission Monitoring for Particulate Matter and Nitrogen Oxides
§ 60.49b(a), (b), (d), (g), (h)(2), (i)	Reporting and Recordkeeping Requirements

New Source Performance Standards – Standards of Performance for Stationary Gas Turbines (40 CFR Part 60 Subpart GG)

§ 60.332(a) and (b)	Standard for Nitrogen Oxides
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§ 60.333	Standard for Sulfur Dioxide
§ 60.334(b)	Monitoring of Operations
§ 60.335	Test Methods and Procedures

NESHAP Program (40 CFR Part 61)

Subpart M	National Emission Standard for Asbestos
§ 61.145(a)(2)	Standard for demolition and renovation
§ 61.145(b)(1), (2), (3)(i) and (3)(iv), (4)(i) through (vii) and (4)(ix) and (4)(xvi)	Notification requirements when demolishment involves less than 80 linear meters on pipes and less than 15 square meters on other services and less than one cubic meter off facility components of regulated asbestos containing material (RACM) where the length or area could not be measured previously or there is no asbestos.
§ 63.4(b)	Circumvention

Accidental Release Program (40 CFR Part 68)

§ 112(r)(1)	General duty to identify, prevent and minimize the consequences of accidental releases of listed and other extremely hazardous substances.
40 CFR Part 68	Chemical Accident Prevention Provisions

Permits Regulation (40 CFR Part 72)

Subpart A provisions	Acid Rain Program General Provisions
72.9(a), (b), (c), (d), (f), (g)4	Standard Requirements
Subpart B	Designated Representative
72.20	Authorizations and Responsibilities of the Designated Representative
72.21	Submissions
72.22	Alternate Designated Representative
72.23	Changing the Designated Representative
72.24	Certificate of Representation

Subpart C	Acid Rain Permit Applications
72.30(a), (b)(2)(ii), (d)	Requirements to Apply
Subpart D	Acid Rain Compliance Plan and Compliance Options
72.40(a)(1)	General, Compliance Plan with sulfur dioxide emissions
Subpart I	Compliance Certification
72.90	Annual Compliance Certification Report
72.95	Allowance Deduction Formula
Appendix A	Methodology for Annualization of Emissions Limits
Appendix B	Methodology for Conversion of Emissions Limits
Appendix D	Calculation of Potential Electric Output Capacity

Sulfur Dioxide Allowance System (40 CFR Part 73)

Subpart B	Allowance Allocations
73.33(a), (c)	Authorized Account Representative
Subpart D	Allowance Transfer
73.50(b)	Scope and Submission of Transfers

Continuous Emission Monitoring (40 CFR Part 75)

Subpart A	General
75.4(b)(2),(c)(2),(i)(2)	Compliance Dates
Subpart B	Monitoring Provisions
75.10	General Operating Requirements
75.11(d)(2)	Specific Provisions for Monitoring SO ₂ Emissions
75.12(a),(b),(c)	Specific Provisions for Monitoring NO _x Emissions
75.13(b)	Specific Provisions for Monitoring CO ₂ Emissions

75.16(b),(e)	Special Provisions for Monitoring Emissions from Common, Bypass, and Multiple Stacks for SO ₂ Emissions and Heat Input Determinations
Subpart C	Operation and Maintenance Requirements
75.20	Initial Certification and Recertification Procedures
75.21	Quality Assurance and Quality Control Requirements
75.22	Reference Test Methods
75.24	Out-of-Control Periods and Adjustments for System Bias
Subpart D	Missing Data Substitution Procedures
75.30	General Provisions
75.31	Initial Missing Data Procedures
75.32	Determination of Monitor Data Availability for Standard Missing Data Procedures
75.33	Standard Missing Data Procedures for SO ₂ , NO _x , and Flow Rate
75.34	Units with Add-on Emission Controls
75.35	Missing Data Procedures for CO ₂ Data
75.36	Missing Data Procedures for Heat Input Determinations
Subpart E	Alternative Monitoring Systems
75.40	General Demonstration Requirements
75.41	Precision Criteria
75.42	Reliability Criteria
75.43	Accessibility Criteria
75.44	Timeliness Criteria
75.45	Daily Quality Assurance Criteria
75.46	Missing Data Substitution Criteria
75.47	Criteria for a Class of Affected Units
75.48	Petition for an Alternate Monitoring System

Subpart F	Recordkeeping Requirements
75.53(a), (b), (f)(1), (f)(4), (f)(6)	Monitoring Plan
75.57	General Recordkeeping Provisions
75.58(b), (c)	General Recordkeeping Provisions for Specific Situations
75.59	Certification, Quality Assurance, and Quality Control Record Provisions
Subpart G	Reporting Requirements
75.60	General Provisions
75.61	Notifications
75.62	Monitoring Plan Submittals
75.63	Initial Certification or Recertification Application Submittals
75.64	Quarterly Reports
Subpart H	NO_x Mass Emissions Provisions
Appendix A	Specifications and Test Procedures
Appendix B	Quality Assurance and Quality Control Procedures
Appendix F	Conversion Procedures
Appendix D	Optional SO₂ Emissions Data Protocol for Gas-Fired and Oil-Fired Units
Appendix G	Determination of CO₂ Procedures

Protection of Stratospheric Ozone (40 CFR Part 82)

Subpart F	Recycling and Emissions Reduction
§ 82.106 - 82.124	Labeling Requirements
§ 82.156	Required Practices
§ 82.158	Standards for Recycling and Recovery Equipment
§ 82.161	Technician Certification
§ 82.166	Reporting and Recordkeeping Requirements

Subpart G Significant New Alternatives Policy Program	
§ 82.174(b)	Prohibition against use of substitute
§ 82.174(c)	Prohibition against use of substitute without adhering to use restrictions
§ 82.174(d)	Prohibition against use of substitute after added to list of unacceptable substitutes

Federal Requirements

Maricopa County State Implementation Plan (as of 3/1/2007)

Regulation I General Provisions

Rule 3 - Air Pollution Prohibited

Regulation II Permits

Rule 27 - Performance Tests

Regulation III Control of Air Contaminants

Rule 30 - Visible Emissions
Rule 31 - Emissions of Particulate Matter
§§ A.1,2,3,4,6,7, - Non-Point Sources of Particulate Matter.
§ H.1.a - Fuel Burning
Rule 32 - Odors and Gaseous Emissions
§§ A, C, D, E, F
Rule 33 – Storage and Handling of Petroleum Products
§ 33.3 Loading Into Stationary Storage Containers

Rule 34 – Organic Solvents – Volatile Organic Compounds
§ C.1 – Metal cleaning operations
§ C.2(a) – Cold Organic Solvent Cleaning
§ E.1 & E.2 – Spray Paint and Other Surface Coating Operations
§ G – Limits on VOC Discharge from Individual Equipment
§ K – Limits on Photochemically Reactive Solvent
§ L – Cutback Asphalt
Rule 34 – Organic Solvents – Volatile Organic Compounds
§ C.1 – Metal cleaning operations
§ K – Limits on Photochemically Reactive Solvent
Rule 310 – Fugitive Dust Sources
Rule 312 – Abrasive Blasting
Rule 314 – Open Outdoor Fires
Rule 353 – Gasoline in Stationary Dispensing Tanks

Regulation IV Production of Records: Monitoring, Testing and Sampling Facilities

Rule 40 Recordkeeping and Reporting
Rule 41 § A Monitoring
Rule 42 Testing and Sampling
Rule 43 Right of Inspection

SECTION 10. VOLUNTARY AND PROPOSED EXEMPTIONS

No exemptions from applicable requirements are proposed.

SECTION 11. PROCESS INFORMATION

11.1. Maximum Hourly Process Rate

Unit	Hourly Maximum Process Rate	
	mmBtu	mw*
CC1	1049	85 (peak 97)
CC2	1049	85 (peak 97)
CC3	1049	85 (peak 97)
CC4	944	118
CC5	4400	542
CC5 Duct Burner	480	---
CT1	825	55 (peak 67)
CT2	825	55 (peak 67)
Clayton Boiler	96	---

11.2. Description of Fuel Use

The West Phoenix Power Plant is only permitted to burn natural gas. The natural gas utilized at the facility contains 20.0 grains or less of total sulfur per 100 standard cubic feet (scf) and has a heating value that can vary between 950 to 1050 Btu/scf. Natural gas consumption at the facility is driven by market demand for electricity.

11.3. Description of Raw Materials

Natural gas is the primary raw material utilized at the West Phoenix Power Plant. Water is the only other significant raw material that is utilized at the facility. Raw water is treated for use in the STs and for evaporative cooling of the inlet air to the CTs.

11.4. Anticipated Operating Schedules

The operating schedule at the facility is a function of market demand and potentially could operate the equipment at any time during the day or year. However, the market has historical trends in which typically demand is highest during the summer months of June, July, and August. During these months, demand is highest in the late afternoon of the hottest days.

11.5. Work Practice Standards

Work practice standards that affect air emissions could include scheduled outages for maintenance reasons. Many of the maintenance procedures are requirements of the manufactures of the combustion turbine engines. Typically estimated outages for maintenance are outlined below.

Combined Cycle Units	Outage	Frequency
1) Combustor basket and blade inspection	2-3 days	Annual
2) Combustor inspection	4-6 weeks	Annual
3) Hot gas path inspection	8 weeks	3 years
4) Major overhaul	16 weeks	6 years
Combustion Turbines		
1) Combustor basket and blade inspection	2-3 days	Annual
2) Combustor inspection	4-6 weeks	5 years
3) Hot gas path inspection	8 weeks	10 years
4) Major Overhaul	16 weeks	20 years

SECTION 12. PROCESS EQUIPMENT

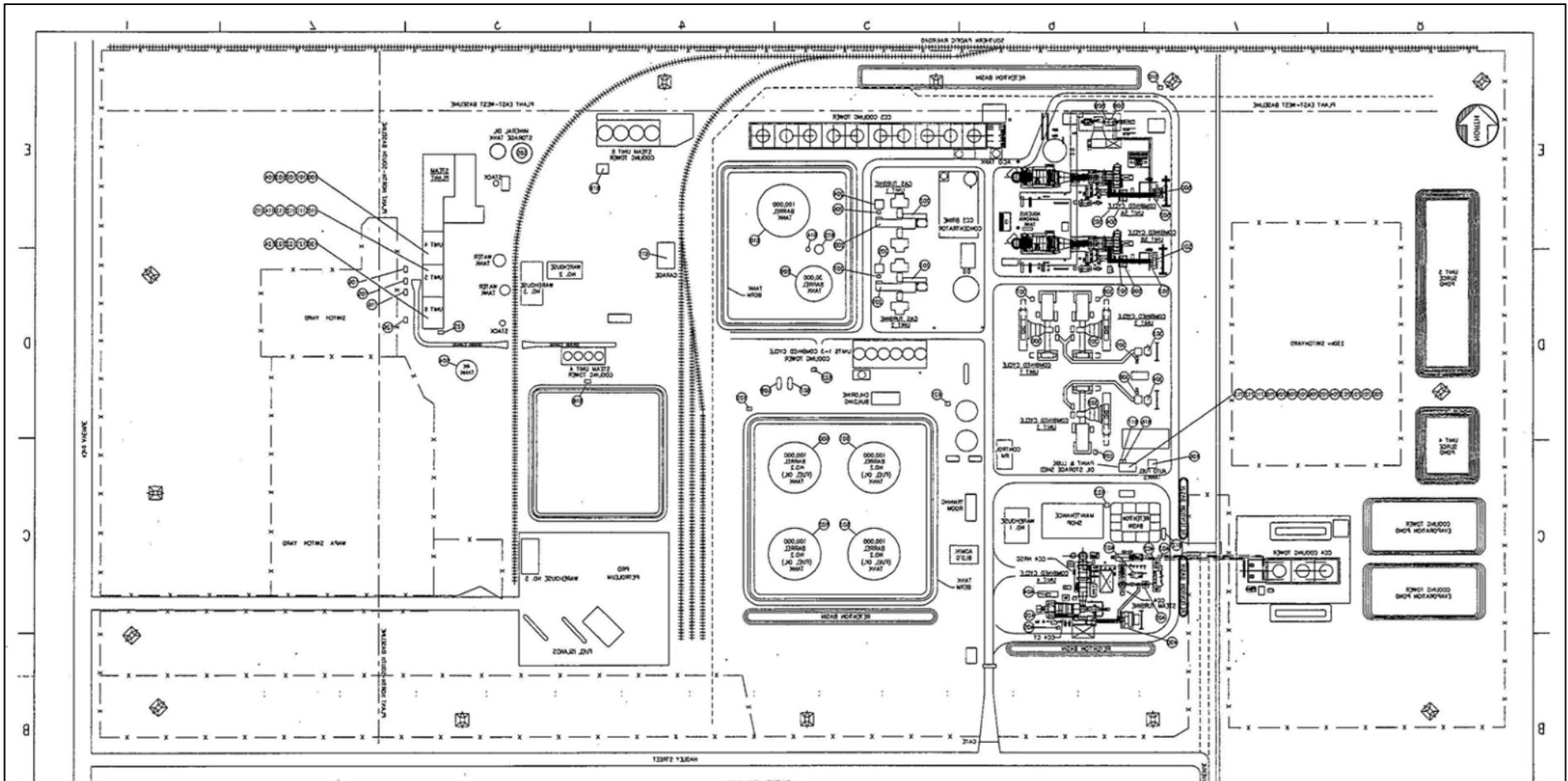
Unit	Manufacture	Serial Number	Model
CC1 – CT	General Electric	237989	7001C
CC1 – ST	General Electric	197660	
CC2 – CT	General Electric	237988	7001C
CC2 – ST	General Electric	197659	
CC3 – CT	General Electric	237987	7001C
CC3 – ST	General Electric	197658	
CC4 – CT	General Electric	237987	7EA
CC4 – ST	Dresser Rand	197658	
CC5 (A&B) – CT	Siemens	37A8408/37A8409	501F
CC5 – ST	Siemens	T10356	
CC5 (A&B) – DB	Copes		
CT1	Westinghouse	17A5038	501-AA
CT2	Westinghouse	17A5058	501-AA
Aux Boiler	Clayton	25126	SEG304-1-FMB
Cooling Tower 1,2,3	Marley	653-12-167-74	653-4-06
Cooling Tower 4	Marley	164804-664-4-3-00	664-4-03
Cooling Tower 5	GEA	50-ECT001	484834-10I-32-WCS

SECTION 13. STACK INFORMATION

Description	Building Dimensions (Ft)	Exit Gas Temperature (F°)	Exit Gas Flow Rate (lb/hr)	Exit Gas Velocity (ft/sec)	Height (Ft)	Inside Dimension (Ft)
CC1	40 wide 150 long 24 high	350	1918000	70.4	54	11 x 17
CC2	40 wide 150 long 24 high	350	1918000	70.4	54	11 x 17
CC3	40 wide 150 long 24 high	350	1918000	70.4	85	11 x 17
CT1	12 wide 84 long 12 high	850	3648046	108.4	32	11 x 17
CT2	12 wide 84 long 12 high	850	3648046	108.4	32	10.5 x 22
Clayton Boiler	22 wide 38 long 20 high	380	12055	22	16	10.5 x 22
Cooling Tower 1,2,3	71 wide 169 long 41 high	---	---	---	59	2.3
CC4	Ground Level	170	2265000	66	120	24

Cooling Tower CC4	52 wide 97 long 36 high	115	3177350	45.3	52	14
CC5A	Ground Level	170	3706676	65	175	18 diameter
CC5B	Ground Level	170	3706676	65	175	18
Cooling Tower CC5	54 wide 486 long 34 high	115	---	---	52	18

SECTION 14. SITE DIAGRAM



SECTION 15. AIR POLLUTION CONTROL EQUIPMENT

West Phoenix emission units incorporate the use of both combustion and post combustion controls to reduce and limit the amount of pollutants emitted. Combustion controls include the use of pipeline quality natural gas and pollution control equipment such as dry low-NO_x (DLN) burners to limit production of nitrogen oxides. Post combustion controls include the use of selective catalytic reduction (SCR) systems to control NO_x emissions and oxidation reduction catalyst to reduce carbon monoxide emissions.

14.1. Identification, Description, and Location of Control Equipment

West Phoenix combined cycles CC4 and CC5 are equipped with DLN burners which fine tunes the ratio of air to fuel in the combustor through various stages of combustion as the load increases. The intent is to limit the fuel/air ratio to a fuel lean environment which decreases the flame temperature to limit thermal NOx production.

CC3 and CC5 are equipped with an SCR to reduce post combustion NOx emissions. Each SCR system consists of a catalyst and an ammonia injection system. The catalyst are located in the HRSGs, in the area where the temperature is in the ideal range for the catalyst-assisted reaction during normal operation.

CC4 and CC5 are also equipped with oxidation catalyst to reduce CO emissions. CO can be formed during any incomplete combustion of the fuel. The oxidation catalyst, along with excess air, converts the CO into carbon dioxide thereby reducing the CO emission.

SECTION 16. SUPPLEMENTARY EQUIPMENT INFORMATION

This permit renewal application is not seeking to add or modify any existing equipment and therefore this section is not applicable.

SECTION 17. COMPLIANCE

<u>PERMIT TERMS & CONDITIONS</u>		Methods Used for Compliance	<u>COMPLIANCE STATUS</u>	Deviations
Permit Condition - Post Revision	Specific Conditions			
Section 1.a.i	Allowable Emissions for Facility: Particulate matter limits	Compliance determined by calculations.	Continuous	No

PERMIT TERMS & CONDITIONS		Methods Used for Compliance	COMPLIANCE STATUS	Deviations
Section 1.a.ii	Annual Emission Limits for CC3, CC4, CC5, the Cooling Towers for CC4 and CC5, and the Clayton Boiler	Standard operating procedures; compliance reviews.	Continuous	No
Section 1.a.iii	Short-Term Emission Limits for CC3, CC4 and CC5	Standard operating procedures; compliance reviews.	Intermittent	Yes ¹
Section 1.b	LAER and BACT Emission Limits for CC4 and CC5	Standard operating procedures; compliance reviews; recordkeeping.	Continuous	No
Section 1.c	Emission Limits for Clayton Boiler	Standard operating procedures; compliance reviews; recordkeeping.	Continuous	No
Section 1.d	Short-Term Emission Limits Normal Operation for CT1, CT2, CC1 and CC2	Standard operating procedures; compliance reviews; recordkeeping.	Continuous	No

PERMIT TERMS & CONDITIONS		Methods Used for Compliance	COMPLIANCE STATUS	Deviations
Section 1.e	Allowable Emissions: Offsite sulfur oxides limits	Standard operating procedures. Compliance demonstrated by ambient air quality modeling (Feb 98) and permitted operating scenarios.	Continuous	No
Section 1.f	Allowable Emissions: Opacity limits	RM 9 observations; standard operating procedures; compliance reviews; recordkeeping.	Continuous	No
Section 2.a	Facility-Wide Requirements: Fuel requirements	Standard operating procedures; compliance reviews; recordkeeping.	Continuous	No
Section 2.b	Facility-Wide Requirements: Air contaminants	Standard operating procedures; compliance reviews; recordkeeping.	Continuous	No

¹One short term emission limit deviation of NOx occurred on CC4. Notifications submitted.

Section 2.c	Facility-Wide Requirements: Materials such as solvents, VOCs, paints, acids, alkalies, pesticides, fertilizer and manure	Standard operating procedures; compliance reviews; recordkeeping.	Continuous	No
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PERMIT TERMS & CONDITIONS		Methods Used for Compliance	COMPLIANCE STATUS	Deviations
Section 2.d	Facility-Wide Requirements: Air pollution control	Standard operating procedures; compliance reviews; recordkeeping.	Continuous	No
Section 2.e	Facility-Wide Requirements: Odors	Standard operating procedures; compliance reviews; recordkeeping.	Continuous	No
Section 3.a.i	Operational Requirements for Combustion Turbines	Standard operating procedures; compliance reviews; recordkeeping.	Continuous	No
Section 3.a.ii	Operational Requirements for CC5 Auxiliary Boiler (Clayton)	Standard operating procedures; compliance reviews; recordkeeping.	Continuous	No
Section 3.b.i	Monitoring and Recordkeeping: Combustion Turbines & Auxiliary Boiler	Standard operating procedures; compliance reviews; recordkeeping.	Continuous	No
Section 3.b.ii	Monitoring and Recordkeeping: Combustion monitors	Standard operating procedures; compliance reviews; recordkeeping.	Continuous	No
Section 3.b.iii	Monitoring and Recordkeeping: Auxiliary boiler	Standard operating procedures; compliance reviews; recordkeeping.	Continuous	No
Section 3.c	Performance Testing Requirements	Standard operating procedures; compliance reviews; recordkeeping.	Continuous	No

PERMIT TERMS & CONDITIONS		Methods Used for Compliance	COMPLIANCE STATUS	Deviations
Section 4.a.i	Operational Requirements: Selective Catalytic Reduction (SCR) System on CC3 and CC5	Standard operating procedures; compliance reviews; recordkeeping.	Continuous	No
Section 4.a.ii	Operational Requirements: Oxidation Catalyst Emission System on CC4 and CC5	Standard operating procedures; compliance reviews; recordkeeping.	Continuous	No
Section 4.b	Recordkeeping Requirements for Emission Control Equipment	Standard operating procedures; compliance reviews; recordkeeping.	Continuous	No
Section 5.a	Continuous Emissions Monitoring System (CEMS): Operational Requirements	Standard operating procedures; compliance reviews; recordkeeping.	Continuous	No
Section 5.b	Continuous Emissions Monitoring System (CEMS): Data acquisition system (DAS)	Standard operating procedures; compliance reviews; recordkeeping.	Continuous	No

PERMIT TERMS & CONDITIONS		Methods Used for Compliance	COMPLIANCE STATUS	Deviations
Section 5.c	Continuous Emissions Monitoring System (CEMS): NO _x emissions	Standard operating procedures; compliance reviews; recordkeeping.	Continuous	No
Section 5.d	Continuous Emissions Monitoring System (CEMS): CO emissions	Standard operating procedures; compliance reviews; recordkeeping.	Continuous	No
Section 5.e	Continuous Emissions Monitoring System (CEMS): VOC emissions	Standard operating procedures; compliance reviews; recordkeeping.	Continuous	No
Section 5.f	Continuous Emissions Monitoring System (CEMS): PM ₁₀ emissions	Standard operating procedures; compliance reviews; recordkeeping.	Continuous	No
Section 5.g	Continuous Emissions Monitoring System (CEMS): SO ₂ emissions	Standard operating procedures; compliance reviews; recordkeeping.	Continuous	No

PERMIT TERMS & CONDITIONS		Methods Used for Compliance	COMPLIANCE STATUS	Deviations
Section 5.h	Continuous Emissions Monitoring System (CEMS): Recordkeeping	Standard operating procedures; compliance reviews; recordkeeping.	Continuous	No
Section 5.i	Continuous Emissions Monitoring System (CEMS): Operation and maintenance (O&M) plans	Standard operating procedures; compliance reviews; recordkeeping.	Continuous	No
Section 6.a	Cooling Towers: Drift eliminators TDS < 12,000; <.001% Drift; Monthly Inspection	Standard operating procedures; compliance reviews; recordkeeping.	Continuous	No
Section 6.b	Cooling Towers: Water conductivity	Standard operating procedures; compliance reviews; recordkeeping.	Continuous	No
Section 6.c	Cooling Towers: PM ₁₀ emission calculations	Standard operating procedures; compliance reviews; recordkeeping.	Continuous	No
Section 7	Semiannual Monitoring Report and Compliance Certification	Standard operating procedures; compliance reviews; recordkeeping.	Continuous	No

PERMIT TERMS & CONDITIONS		Methods Used for Compliance	COMPLIANCE STATUS	Deviations
Section 8.a	PM10 Offset Requirement: Road integrity responsibilities	Standard operating procedures; compliance reviews; recordkeeping.	Continuous	No
Section 8.b	PM10 Offset Requirement: Offset integrity responsibilities	Standard operating procedures; compliance reviews; recordkeeping.	Continuous	No
Section 8.c	Monitoring and Recordkeeping	Standard operating procedures; compliance reviews; recordkeeping.	Continuous	No
Section 9.a	Acid Rain - Permit Shield	NA Explanatory statement of law and therefore not amendable to compliance certification.	NA	N/A
Section 9.b	Acid Rain Permit	Standard operating procedures; compliance reviews; recordkeeping.	Continuous	No
Section 10	Non-Resale Gasoline Tank: Allowable throughput	Standard operating procedures; compliance reviews; recordkeeping.	Continuous	No
Section 11	Non-Resale Gasoline – Operational Limitation	Standard operating procedures.	Continuous	No

PERMIT TERMS & CONDITIONS		Methods Used for Compliance	COMPLIANCE STATUS	Deviations
Section 12	Non-Resale Gasoline – General Duties to Minimize Emissions	Standard operating procedures; compliance reviews; recordkeeping.	Continuous	No
Section 13	Non-Resale Gasoline – Emission Limitations and Management Practices	Standard operating procedures; compliance reviews; recordkeeping.	Continuous	No
Section 14.a	Non-Resale Gasoline Tank: Basic Tank Integrity	Standard operating procedures; compliance reviews; recordkeeping.	Continuous	No
Section 14.b	<u>Non-Resale Gasoline Tank: Fill pipe</u>	Standard operating procedures; compliance reviews; recordkeeping.	Continuous	No
Section 15	<u>Non-Resale Gasoline Tank: Inspection Requirement</u>	Standard operating procedures; compliance reviews; recordkeeping.	Continuous	No
Section 16	<u>Non-Resale Gasoline Tank: Recordkeeping</u>	Standard operating procedures; compliance reviews; recordkeeping.	Continuous	No
Section 17	Surface Coating	Standard operating procedures; compliance reviews; recordkeeping.	Continuous	No

PERMIT TERMS & CONDITIONS		Methods Used for Compliance	COMPLIANCE STATUS	Deviations
Section 18	Abrasive Blasting without Baghouse	Standard operating procedures; compliance reviews; recordkeeping.	Continuous	No
Section 19	<u>ARCHITECTURAL COATINGS</u>	Standard operating procedures; compliance reviews; recordkeeping.	Continuous	No
Section 20	Volatile Organic Compounds	Standard operating procedures; compliance reviews; recordkeeping.	Continuous	No
Section 21	Solvent Cleaning (Note: solvent cleaning machine is no longer in use at the facility)	Standard operating procedures; compliance reviews; recordkeeping.	Continuous	No
Section 22	Wipe Cleaning	Standard operating procedures; compliance reviews; recordkeeping.	Continuous	No
Section 23	Spray Coating	Standard operating procedures; compliance reviews; recordkeeping.	Continuous	No

PERMIT TERMS & CONDITIONS		Methods Used for Compliance	COMPLIANCE STATUS	Deviations
Section 24	Cutback and Emulsified Asphalt	Standard operating procedures; compliance reviews; recordkeeping.	Continuous	No
Section 25	Air Pollution Prohibited	Standard operating procedures; compliance reviews.	Continuous	No
Section 26	Circumvention	Standard operating procedures; compliance reviews.	Continuous	No
Section 27	Certification of Truth, Accuracy and Completeness	Standard operating procedures; compliance reviews.	Continuous	No
Section 28.a.i	Compliance with all Conditions of the Permit, Statutes, and Rules	NA Explanatory statement of law and therefore not amendable to compliance certification.	NA	NA
Section 28.a.ii	Need to Halt or Reduce Activities to Maintain Compliance with Applicable Requirements.	NA Explanatory statement of law and therefore not amendable to compliance certification.	NA	NA

PERMIT TERMS & CONDITIONS		Methods Used for Compliance	COMPLIANCE STATUS	Deviations
Section 28.a.iii	Compliance: RACT	NA Explanatory statement of law and therefore not amendable to compliance certification.	NA	NA
Section 28.a.iv	Compliance: BACT	NA Explanatory statement of law and therefore not amendable to compliance certification.	NA	NA
Section 28.b	Compliance Certification Requirements	Standard operating procedures; compliance reviews.	Continuous	No
Section 28.c	Compliance Plan	NA Explanatory statement of law and therefore not amendable to compliance certification.	NA	NA
Section 29	Confidentiality Claims	NA Explanatory statement of law and therefore not amendable to compliance certification.	NA	NA
Section 30.a	Contingent Requirements: Acid rain	NA Explanatory statement of law and therefore not amendable to compliance certification.	NA	NA

PERMIT TERMS & CONDITIONS		Methods Used for Compliance	COMPLIANCE STATUS	Deviations
Section 30.b	Contingent Requirements: Asbestos	Standard operating procedures; compliance reviews; recordkeeping.	Continuous	No
Section 30.c	Contingent Requirements: Risk management plan (RMP)	Standard operating procedures; compliance reviews.	Continuous	No
Section 30.d	Contingent Requirements: Stratospheric ozone protection	Standard operating procedures; compliance reviews; recordkeeping.	Continuous	No
Section 31	Duty to Supplement or Correct Application	Standard operating procedures; compliance reviews; recordkeeping.	Continuous	No
Section 32	Emergency Episodes	Standard operating procedures; compliance reviews; recordkeeping.	Continuous Term NA during this period.	No
Section 33	Emergency Provisions	NA Explanatory statement of law and therefore not amendable to compliance certification.	NA	NA

PERMIT TERMS & CONDITIONS		Methods Used for Compliance	COMPLIANCE STATUS	Deviations
Section 34	Excess Emissions	NA Explanatory statement of law and therefore not amendable to compliance certification.	NA	NA
Section 35	Fees	Standard operating procedures; compliance reviews.	Continuous	No
Section 36	Modeling	Standard operating procedures; compliance reviews.	Continuous	No
Section 37	Monitoring and Testing	Standard operating procedures; compliance reviews; recordkeeping.	Continuous	No
Section 38.a	Permits: Basic	NA Explanatory statement of law and therefore not amendable to compliance certification.	NA	NA
Section 38.b	Permits and Permit Changes, Amendments and Revisions	NA Explanatory statement of law and therefore not amendable to compliance certification.	NA	NA

PERMIT TERMS & CONDITIONS		Methods Used for Compliance	COMPLIANCE STATUS	Deviations
Section 38.c	Permits: Posting	Standard operating procedures; compliance reviews.	Continuous	No
Section 38.d	<u>Permits: Prohibition on permit modification</u>	NA Explanatory statement of law and therefore not amendable to compliance certification.	NA	NA
Section 38.e	Permit Renewal	Standard operating procedures; compliance reviews.	Continuous	No
Section 38.f	Permit Revision/Reopening/Revocation	NA Explanatory statement of law and therefore not amendable to compliance certification.	NA	NA
Section 38.g.i	Requirements for a Permit: Permit application	Standard operating procedures; compliance reviews.	Continuous	No
Section 38.g.ii	Requirements for a Permit: Dust control permit	Standard operating procedures; compliance reviews.	Continuous	No

PERMIT TERMS & CONDITIONS		Methods Used for Compliance	COMPLIANCE STATUS	Deviations
Section 38.g.iii	Requirements for a Permit: Burn permit	Standard operating procedures; compliance reviews; recordkeeping.	Continuous Term NA during this period.	No
Section 38.h	Permits: Rights and privileges	NA Explanatory statement of law and therefore not amendable to compliance certification.	NA	NA
Section 38.i	Permits: Severability	NA Explanatory statement of law and therefore not amendable to compliance certification.	NA	NA
Section 38.j	Permits: Scope	NA Explanatory statement of law and therefore not amendable to compliance certification.	NA	NA
Section 38.k	Permits: Term of permit	NA Explanatory statement of law and therefore not amendable to compliance certification.	NA	NA

PERMIT TERMS & CONDITIONS		Methods Used for Compliance	COMPLIANCE STATUS	Deviations
Section 38.l	Permits: Transfer	NA Explanatory statement of law and therefore not amendable to compliance certification.	NA	NA
Section 39.a	Recordkeeping: Records required	Standard operating procedures; compliance reviews; recordkeeping.	Continuous	No
Section 39.b	Recordkeeping: Retention of records	Standard operating procedures; compliance reviews; recordkeeping.	Continuous	No
Section 39.c	Recordkeeping: Monitoring records	Standard operating procedures; compliance reviews; recordkeeping.	Continuous	No
Section 39.d	Recordkeeping: Right of inspection of records	NA Explanatory statement of law and therefore not amendable to compliance certification.	NA	NA
Section 40.a	Reporting: Annual emissions inventory report	Standard operating procedures; compliance reviews.	Continuous	No

PERMIT TERMS & CONDITIONS		Methods Used for Compliance	COMPLIANCE STATUS	Deviations
Section 40.b	Reporting: Data reporting	Standard operating procedures; compliance reviews; recordkeeping.	Continuous Term NA during this period	No
Section 40.c	Reporting: Deviation reporting	Standard operating procedures; compliance reviews; recordkeeping.	Continuous	No
Section 40.d	Reporting: Emergency reporting	Standard operating procedures; compliance reviews; recordkeeping.	Continuous Term NA during this period	No
Section 40.e	Reporting: Emission statements required as stated in the ACT	Standard operating procedures; compliance reviews; recordkeeping.	Continuous Term NA during this period	No
Section 40.f	Reporting: Excess emissions reporting	Standard operating procedures; compliance reviews; recordkeeping.	Continuous	No
Section 40.g	Reporting: Other reporting	Standard operating procedures; compliance reviews; recordkeeping.	Continuous	No

PERMIT TERMS & CONDITIONS		Methods Used for Compliance	COMPLIANCE STATUS	Deviations
Section 41	Right to Entry and Inspection of Premises	Standard operating procedures.	Continuous	No

SECTION 18. COMPLIANCE CERTIFICATION

I, Andre Bodrog, as Responsible Official, Plant Manager for the APS West Phoenix Power Plant, hereby certify that:

1. The applicable requirements for the West Phoenix Power Plant that are the basis of this certification are set forth in the West Phoenix Title V Permit.
2. The West Phoenix Power Plant is in compliance with the applicable requirements listed in the West Phoenix Title V Permit, and will comply with any additional requirements, if any, become applicable during the permit term.
3. The methods used to determine compliance with the listed applicable requirements are set forth in Sections 8 of this permit application and in the West Phoenix Title V Permit.
4. Arizona Public Service Company will submit required semi-annual compliance certifications no later than April 30, for operations between October 1 and March 31, and the second report will be submitted no later than October 31, for operations between April 1 and September 30.
5. Based on information and belief formed after reasonable inquiry, the statement and information in the permit application are true, accurate and complete.

Date: _____

Andre Bodrog

West Phoenix Plant Manager

SECTION 19. NEW OR MODIFIED SOURCES WITHIN THE NON-ATTAINMENT AREA

The West Phoenix Power Plant is an existing major source as defined in Maricopa County Air Pollution Control Regulations, Regulation I, Rule 100, Section 245, and Regulation II, Rule 240, Section 210. The facility has not undergone, nor has any plans to undergo, any major modification or changes in the methods of operation. For these reasons, Rule 240 is not applicable regarding the renewal of this permit for the West Phoenix Power Plant.

SECTION 20. CALCULATIONS

Combined Cycle Number 1 Natural Gas

Emission Point 1

Potential hours of operation = 8760 hours
 Max Heat Input = 1049 MMBtu

Pollutant	Emission Factor (lb/MMBtu)	Emission Factor Source	Emissions (lbs/hr)	Emissions (tons/year)
CO	8.2E-02	AP-42	86.0	376.8
NO _x	3.2E-01	AP-42	335.7	1470.3
SO ₂	4.7E-04	AP-42	0.5	2.2
PM ₁₀	6.6E-03	AP-42	6.9	30.3
VOC	2.1E-03	AP-42	2.2	9.6
Lead	Not Detected	AP-42	0.0	0.0
Acetaldehyde	4.0E-05	AP-42	0.0	0.2
Acrolein	6.4E-06	AP-42	0.0	0.0
Benzene	1.2E-05	AP-42	0.0	0.1
Butadiene (1,3)	4.3E-07	AP-42	0.0	0.0
Ethylbenzene	3.2E-05	AP-42	0.0	0.1
Formaldehyde	6.5E-05	Performance Testing	0.1	0.3
Naphthalene	1.3E-06	AP-42	0.0	0.0
PAH	2.2E-06	AP-42	0.0	0.0
Propylene Oxide	2.9E-05	AP-42	0.0	0.1
Toluene	1.3E-04	AP-42	0.1	0.6
Xylenes	6.4E-05	AP-42	0.1	0.3

Combined Cycle Number 2 Natural Gas

Emission Point 2

Potential hours of operation = 8760 hours

Max Heat Input = 1049 MMBtu

Pollutant	Emission Factor (lb/MMBtu)	Emission Factor Source	Emissions (lbs/hr)	Emissions (tons/year)
CO	8.2E-02	AP-42	86.0	376.8
NO _x	3.2E-01	AP-42	335.7	1470.3
SO ₂	4.7E-04	AP-42	0.5	2.2
PM ₁₀	6.6E-03	AP-42	6.9	30.3
VOC	2.1E-03	AP-42	2.2	9.6
Lead	Non Detect	AP-42	0.0	0.0
Acetaldehyde	4.0E-05	AP-42	0.0	0.2
Acrolein	6.4E-06	AP-42	0.0	0.0
Benzene	1.2E-05	AP-42	0.0	0.1
Butadiene (1,3)	4.3E-07	AP-42	0.0	0.0
Ethylbenzene	3.2E-05	AP-42	0.0	0.1
Formaldehyde	6.5E-05	Performance Testing	0.1	0.3
Naphthalene	1.3E-06	AP-42	0.0	0.0
PAH	2.2E-06	AP-42	0.0	0.0
Propylene Oxide	2.9E-05	AP-42	0.0	0.1
Toluene	1.3E-04	AP-42	0.1	0.6
Xylenes	6.4E-05	AP-42	0.1	0.3

Combined Cycle Number 3 Natural Gas

Emission Point 3

Potential hours of operation = 8760 hours

Max Heat Input = 1049 MMBtu

Pollutant	Emission Factor	Emission Factor Source	Emissions (lbs/hr)	Emissions (tons/year)
lb/hr				
CO	2.5E+01	Permit Limits	25.1	
NO _x	3.4E+01	Permit Limits	34.3	
SO ₂	6.3E-01	Permit Limits	0.6	
PM ₁₀	6.9E+00	Permit Limits	6.9	
VOC	5.6E+00	Permit Limits	5.6	
MMBt/hr				
SO ₂	6.3E-01	Permit Limits	0.6	
Lead	Non Detect	AP-42	0.0	0.0
Acetaldehyde	4.0E-05	AP-42	0.0	0.2
Acrolein	6.4E-06	AP-42	0.0	0.0
Benzene	1.2E-05	AP-42	0.0	0.1
Butadiene (1,3)	4.3E-07	AP-42	0.0	0.0
Ethylbenzene	3.2E-05	AP-42	0.0	0.1
Formaldehyde	6.5E-05	Performance Testing	0.1	0.3
Naphthalene	1.3E-06	AP-42	0.0	0.0
PAH	2.2E-06	AP-42	0.0	0.0
Propylene Oxide	2.9E-05	AP-42	0.0	0.1
Toluene	1.3E-04	AP-42	0.1	0.6
Xylenes	6.4E-05	AP-42	0.1	0.3

Combined Cycle Number 4 Natural Gas

Emission Point 4

Potential hours of operation = 8760 hours

Max Heat Input = 944 MMBtu

Pollutant	Emission Factor	Emission Factor Source	Emissions (lbs/hr)	Emissions (tons/year)
lb/hr				
CO	12.5	Permit Limit	12.5	Combined Permit Limit for CC3, CC4, and CC5
NO _x	34.2	Permit Limit	34.2	
PM ₁₀	5.4	Permit Limit	5.4	
VOC	1.5	Permit Limit	1.5	
lb/MMBtu				
SO ₂	4.7E-04	AP-42	0.4	
Lead	Non Detect	AP-42	0.0	0.0
Acetaldehyde	4.0E-05	AP-42	0.0	0.2
Acrolein	6.4E-06	AP-42	0.0	0.0
Benzene	1.2E-05	AP-42	0.0	0.0
Butadiene (1,3)	4.3E-07	AP-42	0.0	0.0
Ethylbenzene	3.2E-05	AP-42	0.0	0.1
Formaldehyde	6.5E-05	Performance Testing	0.1	0.3
Naphthalene	1.3E-06	AP-42	0.0	0.0
PAH	2.2E-06	AP-42	0.0	0.0
Propylene Oxide	2.9E-05	AP-42	0.0	0.1
Toluene	1.3E-04	AP-42	0.1	0.5
Xylenes	6.4E-05	AP-42	0.1	0.3

Combined Cycle Number 5 Natural Gas

Emission Point 5

Potential hours of operation = 8760 hours
 Max Heat Input = 4400 MMBtu

Pollutant	Emission Factor	Emission Factor Source	Emissions (lbs/hr)	Emissions (tons/year)
	lb/hr			
CO	52.8	Permit Limit	52.8	Combined Permit Limit for CC3, CC4, and CC5
NO _x	48.6	Permit Limit	48.6	
PM ₁₀	10.3	Permit Limit	10.3	
VOC	5.4	Permit Limit	5.4	
	lb/MMBtu			
SO ₂	4.7E-04	AP-42	2.1	
Lead	Non Detect	AP-42	0.0	0.0
Acetaldehyde	4.0E-05	AP-42	0.2	0.8
Acrolein	6.4E-06	AP-42	0.0	0.1
Benzene	1.2E-05	AP-42	0.1	0.2
Butadiene (1,3)	4.3E-07	AP-42	0.0	0.0
Ethylbenzene	3.2E-05	AP-42	0.1	0.6
Formaldehyde	6.5E-05	Performance Testing	0.3	1.2
Naphthalene	1.3E-06	AP-42	0.0	0.0
PAH	2.2E-06	AP-42	0.0	0.0
Propylene Oxide	2.9E-05	AP-42	0.1	0.6
Toluene	1.3E-04	AP-42	0.6	2.5
Xylenes	6.4E-05	AP-42	0.3	1.2
			1.7	7.4

Combustion Turbine Number

1 Natural Gas

Emission Point 6

Potential hours of operation = 8760 hours
 Max Heat Input = 825 MMBtu

Pollutant	Emission Factor	Emission Factor	Emissions	Emissions
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	(lb/MMBtu)	Source	(lbs/hr)	(tons/year)
CO	8.2E-02	AP-42	67.7	296.3
NO _x	3.2E-01	AP-42	264.0	1156.3
SO ₂	4.7E-04	AP-42	0.4	1.7
PM ₁₀	6.6E-03	AP-42	5.4	23.8
VOC	2.1E-03	AP-42	1.7	7.6
Lead	Non Detect	AP-42	0.0	0.0
Acetaldehyde	4.0E-05	AP-42	0.0	0.1
Acrolein	6.4E-06	AP-42	0.0	0.0
Benzene	1.2E-05	AP-42	0.0	0.0
Butadiene (1,3)	4.3E-07	AP-42	0.0	0.0
Ethylbenzene	3.2E-05	AP-42	0.0	0.1
Formaldehyde	6.5E-05	Performance Testing	0.1	0.2
Naphthalene	1.3E-06	AP-42	0.0	0.0
PAH	2.2E-06	AP-42	0.0	0.0
Propylene Oxide	2.9E-05	AP-42	0.0	0.1
Toluene	1.3E-04	AP-42	0.1	0.5
Xylenes	6.4E-05	AP-42	0.1	0.2

Combustion Turbine Number

2 Natural Gas

Emission Point 7

Potential hours of operation = 8760 hours
 Max Heat Input = 825 MMBtu

Pollutant	Emission Factor (lb/MMBtu)	Emission Factor Source	Emissions (lbs/hr)	Emissions (tons/year)
CO	8.2E-02	AP-42	67.7	296.3
NO _x	3.2E-01	AP-42	264.0	1156.3
SO ₂	4.7E-04	AP-42	0.4	1.7

PM ₁₀	6.6E-03	AP-42	5.4	23.8
VOC	2.1E-03	AP-42	1.7	7.6
Lead	Non Detect	AP-42	0.0	0.0
Acetaldehyde	4.0E-05	AP-42	0.0	0.1
Acrolein	6.4E-06	AP-42	0.0	0.0
Benzene	1.2E-05	AP-42	0.0	0.0
Butadiene (1,3)	4.3E-07	AP-42	0.0	0.0
Ethylbenzene	3.2E-05	AP-42	0.0	0.1
Formaldehyde	6.5E-05	Performance Testing	0.1	0.2
Naphthalene	1.3E-06	AP-42	0.0	0.0
PAH	2.2E-06	AP-42	0.0	0.0
Propylene Oxide	2.9E-05	AP-42	0.0	0.1
Toluene	1.3E-04	AP-42	0.1	0.5
Xylenes	6.4E-05	AP-42	0.1	0.2

Clayton Boiler

Natural Gas

Emission Point 7

Potential hours of operation	=	8760	hours
Max Heat Input	=	96	MMBtu

Pollutant	Emission Factor (lb/10 ⁶ scf)	Emission Factor Source	Emissions (lbs/hr)	Emissions (tons/year)
CO	8.4E+01	AP-42	7.9	34.6
NO _x	1.0E+02	AP-42	9.4	41.2
SO ₂	7.1E-02	AP-42	0.0	0.0
PM ₁₀	7.6E+00	AP-42	0.7	3.1
VOC	5.5E+00	AP-42	0.5	2.3
Lead	5.0E-04	AP-42	0.0	0.0
2-Methylnaphthalene	2.4E-05	AP-42	0.0	0.0

3-Methylcholanthrene	1.8E-06	AP-42	0.0	0.0
7,12-Dimethylbenz(a)anthracene	1.6E-05	AP-42	0.0	0.0
Acenaphthene	1.8E-06	AP-42	0.0	0.0
Acenaphthylene	1.8E-06	AP-42	0.0	0.0
Anthracene	2.4E-06	AP-42	0.0	0.0
Benz(a)anthracene	1.8E-06	AP-42	0.0	0.0
Benzene	2.1E-03	AP-42	0.0	0.0
Benzo(a)pyrene	1.2E-06	AP-42	0.0	0.0
Benzo(b)fluoranthene	1.8E-06	AP-42	0.0	0.0
Benzo(g,h,i)perylene	1.2E-06	AP-42	0.0	0.0
Benzo(k)fluoranthene	1.8E-06	AP-42	0.0	0.0
Butane	2.1E+00	AP-42	0.2	0.9
Chrysene	1.8E-06	AP-42	0.0	0.0
Dibenzo(a,h)anthracene	1.2E-06	AP-42	0.0	0.0
Dichlorobenzene	1.2E-03	AP-42	0.0	0.0
Ethane	3.1E+00	AP-42	0.3	1.3
Fluoranthene	3.0E-05	AP-42	0.0	0.0
Fluorene	2.8E-05	AP-42	0.0	0.0
Formaldehyde	7.5E-02	AP-42	0.0	0.0
Hexane	1.8E+00	AP-42	0.2	0.7
Indeno(1,2,3-cd)pyrene	1.8E-05	AP-42	0.0	0.0
Naphthalene	6.1E-04	AP-42	0.0	0.0
Pentane	2.6E+00	AP-42	0.2	1.1
Phenanathrene	1.7E-05	AP-42	0.0	0.0
Propane	1.6E+00	AP-42	0.2	0.7
Pyrene	5.0E-06	AP-42	0.0	0.0
Toluene	3.4E-03	AP-42	0.0	0.0

Facility (Source) Name: West Phoenix Power Plant

Permit Requirements

STEP 3

Read the standard requirements.

- (1) The designated representative of each affected source and each affected unit at the source shall:
 - (i) Submit a complete Acid Rain permit application (including a compliance plan) under 40 CFR part 72 in accordance with the deadlines specified in 40 CFR 72.30; and
 - (ii) Submit in a timely manner any supplemental information that the permitting authority determines is necessary in order to review an Acid Rain permit application and issue or deny an Acid Rain permit;
- (2) The owners and operators of each affected source and each affected unit at the source shall:
 - (i) Operate the unit in compliance with a complete Acid Rain permit application or a superseding Acid Rain permit issued by the permitting authority; and
 - (ii) Have an Acid Rain Permit.

Monitoring Requirements

- (1) The owners and operators and, to the extent applicable, designated representative of each affected source and each affected unit at the source shall comply with the monitoring requirements as provided in 40 CFR part 75.
- (2) The emissions measurements recorded and reported in accordance with 40 CFR part 75 shall be used to determine compliance by the source or unit, as appropriate, with the Acid Rain emissions limitations and emissions reduction requirements for sulfur dioxide and nitrogen oxides under the Acid Rain Program.
- (3) The requirements of 40 CFR part 75 shall not affect the responsibility of the owners and operators to monitor emissions of other pollutants or other emissions characteristics at the unit under other applicable requirements of the Act and other provisions of the operating permit for the source.

Sulfur Dioxide Requirements

- (1) The owners and operators of each source and each affected unit at the source shall:
 - (i) Hold allowances, as of the allowance transfer deadline, in the source's compliance account (after deductions under 40 CFR 73.34(c)), not less than the total annual emissions of sulfur dioxide for the previous calendar year from the affected units at the source; and
 - (ii) Comply with the applicable Acid Rain emissions limitations for sulfur dioxide.
- (2) Each ton of sulfur dioxide emitted in excess of the Acid Rain emissions limitations for sulfur dioxide shall constitute a separate violation of the Act.
- (3) An affected unit shall be subject to the requirements under paragraph (1) of the sulfur dioxide requirements as follows:
 - (i) Starting January 1, 2000, an affected unit under 40 CFR 72.6(a)(2); or
 - (ii) Starting on the later of January 1, 2000 or the deadline for monitor certification under 40 CFR part 75, an affected unit under 40 CFR 72.6(a)(3).

Facility (Source) Name: West Phoenix Power Plant

Sulfur Dioxide Requirements, Cont'd.

STEP 3, Cont'd.

(4) Allowances shall be held in, deducted from, or transferred among Allowance Tracking System accounts in accordance with the Acid Rain Program.

(5) An allowance shall not be deducted in order to comply with the requirements under paragraph (1) of the sulfur dioxide requirements prior to the calendar year for which the allowance was allocated.

(6) An allowance allocated by the Administrator under the Acid Rain Program is a limited authorization to emit sulfur dioxide in accordance with the Acid Rain Program. No provision of the Acid Rain Program, the Acid Rain permit application, the Acid Rain permit, or an exemption under 40 CFR 72.7 or 72.8 and no provision of law shall be construed to limit the authority of the United States to terminate or limit such authorization.

(7) An allowance allocated by the Administrator under the Acid Rain Program does not constitute a property right.

Nitrogen Oxides Requirements

The owners and operators of the source and each affected unit at the source shall comply with the applicable Acid Rain emissions limitation for nitrogen oxides.

Excess Emissions Requirements

(1) The designated representative of an affected source that has excess emissions in any calendar year shall submit a proposed offset plan, as required under 40 CFR part 77.

(2) The owners and operators of an affected source that has excess emissions in any calendar year shall:

(i) Pay without demand the penalty required, and pay upon demand the interest on that penalty, as required by 40 CFR part 77; and

(ii) Comply with the terms of an approved offset plan, as required by 40 CFR part 77.

Recordkeeping and Reporting Requirements

(1) Unless otherwise provided, the owners and operators of the source and each affected unit at the source shall keep on site at the source each of the following documents for a period of 5 years from the date the document is created. This period may be extended for cause, at any time prior to the end of 5 years, in writing by the Administrator or permitting authority:

(i) The certificate of representation for the designated representative for the source and each affected unit at the source and all documents that demonstrate the truth of the statements in the certificate of representation, in accordance with 40 CFR 72.24; provided that the certificate and documents shall be retained on site at the source beyond such 5-year period until such documents are superseded because of the

Facility (Source) Name: West Phoenix Power Plant

submission of a new certificate of representation changing the designated representative;

STEP 3, Cont'd. Recordkeeping and Reporting Requirements, Cont'd.

(ii) All emissions monitoring information, in accordance with 40 CFR part 75, provided that to the extent that 40 CFR part 75 provides for a 3-year period for recordkeeping, the 3-year period shall apply.

(iii) Copies of all reports, compliance certifications, and other submissions and all records made or required under the Acid Rain Program; and,

(iv) Copies of all documents used to complete an Acid Rain permit application and any other submission under the Acid Rain Program or to demonstrate compliance with the requirements of the Acid Rain Program.

(2) The designated representative of an affected source and each affected unit at the source shall submit the reports and compliance certifications required under the Acid Rain Program, including those under 40 CFR part 72 subpart I and 40 CFR part 75.

Liability

(1) Any person who knowingly violates any requirement or prohibition of the Acid Rain Program, a complete Acid Rain permit application, an Acid Rain permit, or an exemption under 40 CFR 72.7 or 72.8, including any requirement for the payment of any penalty owed to the United States, shall be subject to enforcement pursuant to section 113(c) of the Act.

(2) Any person who knowingly makes a false, material statement in any record, submission, or report under the Acid Rain Program shall be subject to criminal enforcement pursuant to section 113(c) of the Act and 18 U.S.C. 1001.

(3) No permit revision shall excuse any violation of the requirements of the Acid Rain Program that occurs prior to the date that the revision takes effect.

(4) Each affected source and each affected unit shall meet the requirements of the Acid Rain Program.

(5) Any provision of the Acid Rain Program that applies to an affected source (including a provision applicable to the designated representative of an affected source) shall also apply to the owners and operators of such source and of the affected units at the source.

(6) Any provision of the Acid Rain Program that applies to an affected unit (including a provision applicable to the designated representative of an affected unit) shall also apply to the owners and operators of such unit.

(7) Each violation of a provision of 40 CFR parts 72, 73, 74, 75, 76, 77, and 78 by an affected source or affected unit, or by an owner or operator or designated representative of such source or unit, shall be a separate violation of the Act.

Effect on Other Authorities

No provision of the Acid Rain Program, an Acid Rain permit application, an Acid Rain permit, or an exemption under 40 CFR 72.7 or 72.8 shall be construed as:

Facility (Source) Name: West Phoenix Power Plant

STEP 3, Cont'd.

(1) Except as expressly provided in title IV of the Act, exempting or excluding the owners and operators and, to the extent applicable, the designated representative of an affected source or affected unit from compliance with any other provision of the Act, including the provisions of title I of the Act relating

Effect on Other Authorities, Cont'd.

to applicable National Ambient Air Quality Standards or State Implementation Plans;

(2) Limiting the number of allowances a source can hold; *provided*, that the number of allowances held by the source shall not affect the source's obligation to comply with any other provisions of the Act;

(3) Requiring a change of any kind in any State law regulating electric utility rates and charges, affecting any State law regarding such State regulation, or limiting such State regulation, including any prudence review requirements under such State law;

(4) Modifying the Federal Power Act or affecting the authority of the Federal Energy Regulatory Commission under the Federal Power Act; or,

(5) Interfering with or impairing any program for competitive bidding for power supply in a State in which such program is established.

STEP 4

Read the certification statement, sign, and date.

Certification

I am authorized to make this submission on behalf of the owners and operators of the affected source or affected units for which the submission is made. I certify under penalty of law that I have personally examined, and am familiar with, the statements and information submitted in this document and all its attachments. Based on my inquiry of those individuals with primary responsibility for obtaining the information, I certify that the statements and information are to the best of my knowledge and belief true, accurate, and complete. I am aware that there are significant penalties for submitting false statements and information or omitting required statements and information, including the possibility of fine or imprisonment.

Name: Andre Bodrog	
Signature	Date:

APPENDIX B: REQUESTED CHANGES

Permit Condition 1.a.iii.4)

The maximum short-term NO_x emissions from the duct burners on ~~CC4 and~~ CC5 shall be limited to 0.20 lb/MMBtu at all times.

Comment: CC4 is no longer equipped with duct burner.

Table 3. BACT/LAER Allowable Emissions

APS is requesting that the last row of the table be removed since CC4 is no longer equipped with duct burners.

Permit Condition 1.d.i

The maximum short-term NO_x emissions from CC1 and CC2 during periods of normal operation shall not exceed 155 ppmv~~dc~~ calculated as nitrogen dioxide when burning gaseous fossil fuel.

Comment: Add 'dc' to ensure it is understood that measurement is in parts per million by volume, corrected to 15% oxygen.

Permit Condition 2.a.i.2)

If at any time a fuel sulfur analysis indicates noncompliance with the fuel sulfur limit of Pipeline Natural Gas, the Permittee shall notify the Administrator and Control Officer ~~of such excess emissions~~ within one week of the analysis and shall follow the procedures in 40 CFR Part 75, Appendix D. Section 2.3.1.4 for additional monitoring.

Comment: This would not be considered an excess emission. The plant would simply have to use calculated emission factor instead of the default .0006 lb SO₂/mmBtu.

Permit Condition 3.a.i

Combustion Turbine: The Permittee shall use operational practices for combustion turbines that ensure good combustion control. For purposes of this condition, "Good combustion control for combustion turbines shall mean that the temperature spread across the combustion burners ~~during steady state operations~~ is no greater than 100 °F." If a valid temperature spread of greater than 100 °F is observed across the burners, corrective action shall be taken within three hours to either (1) reduce the output of the units until the spread is less than 100 °F or (2) shutdown the unit until the problem causing the temperature imbalance is corrected. ~~The temperature spread across the combustion burners during startup and shut down conditions shall not be subject to the maximum 100°F condition.~~

Comments: Temperature spread across burners is inconsistent when the unit is not operating during steady state because of inconsistent cooling. Language was added to clarify that condition does not apply during startup or shutdown.

Permit Condition 3.a.ii

CC5 Auxiliary Boiler (Clayton): The Permittee shall have established initial optimal baseline concentrations for NO_x and CO utilizing the initial design burner specifications or manufacturer's recommendations to ensure good combustion practices. Tune the unit in accordance with good combustion practices or a manufacturer's

procedure, if applicable, and as required by Rule 323. Tuning the unit may include the following but only as required by County Rule 323:

- 1) ~~Inspect the burner system and~~ Clean and replace any components of the burner as necessary to minimize emission of NOX and CO.
- 2) ~~Inspect the burner chamber for areas of impingement and remove if necessary.~~
- 3) ~~Inspect flame pattern and make adjustments as necessary to optimize the flame pattern.~~
- 3) Due to the design of the boiler and the ultra low emissions burner system, combustion chamber inspection, burner inspection, and inspection of flame pattern cannot be completed as per County Rule 323 and do not apply.
- 4) Inspect the system controlling the air-to-fuel ratio and ensure that it is correctly calibrated and functioning properly.
- 5) Measure the NO_x and the CO concentration of the effluent stream after each adjustment was made with a handheld portable monitor to ensure optimal baseline concentrations are maintained.

Comment: Due to the design of the boiler and the ultra low emission burner system, combustion chamber inspection, burner inspection, and inspection of the flame pattern cannot be complete. Documentation from Clayton has been provided to the agency during compliance inspection.

Permit Condition 3.b.ii

Combustion Monitors: To monitor for good combustion the Permittee shall install and maintain combustion monitors on Combustion Turbines. The Permittee shall **daily** record temperature spread across the combustion burners for each Combustion Turbine except CC3, CC4, and CC5 **during steady state operations**. The Permittee shall keep record of any corrective actions taken in a case the temperature spread was greater than 100 °F **during steady state operations**. **The temperature spread across the combustion burners during startup and shut down conditions shall not be subject to the maximum 100°F condition.**

Comment: Language updated to clarify when recordkeeping of temperature spread is required.

Table 5a. Stack Performance Test Requirements for the Combined Cycle Units 3, 4, and 5

Add EPA Method 320 to test Method column for Ammonia.

Comment: This condition has been approved at Redhawk Generating Station and improves consistency between plant requirements.

Permit Condition 4.a.ii.3)

The maximum temperature of the oxidation catalyst shall not exceed 1000 °F as measured at the catalytic oxidizer inlet or the maximum temperature in the currently approved version of the O&M plan. The approved oxidation catalyst temperature range is ~~600~~ 350 - 1000 °F during normal operations.

Comment: Updated to reflect value from the approved Operations and Maintenance Plan.

Permit Condition 5.a.i.1)

Daily zero and span calibration drifts according to 40 CFR 60.13(d). Note that daily zero, span and Quality Assurance activities are not required on any calendar day in which no fuel is combusted in the unit for which the CEMS is monitoring **or if a malfunction of the CEMS occurs preventing the calibration to be performed in which case a daily calibration is required to be conducted as soon as the CEMS has been repaired and placed back in service.**

Comment: A malfunction of the CEMS prevented the daily calibration to occur. When this was reviewed by the agency, it was determined that it was not a violation of the permit or standard. APS is requesting that language is added to the permit to clarify what is required if a malfunction of the CEMS occurs. This language is from the recently approved Redhawk Power Plant Title V Permit that was negotiated with MCAQD earlier this year.

Permit Condition 5.a.v.

The Permittee shall ensure that all calibration gases (including zero gases) are certified and current at all times. **The certification of zero air gases is unlimited and there is no expiration date for their certification.**

Comment: This language helps to clarify that the certification of zero gas does not expire. Documentation related to this has been submitted to the agency during compliance inspections.

Permit Condition 5.a.vi.

The Permittee shall re-calibrate any CEMS after any maintenance activity that could affect the system calibration and shall re-certify, **for the NO_x and O₂ or CO₂ diluent CEMS**, as required by and within the time periods required by 40 CFR 75.20(b) whenever the Permittee makes a replacement, modification, or change that may significantly affect the ability of the system to accurately measure or record emissions.

Comment: Language added to clarify requirement.

Permit Condition 7.d

d. In addition to the information provided in the Compliance Certification, the Permittee shall submit the following information at a minimum in the Monitoring Report.

- i. ~~Hours of the operation and amount of fuel burned each hour for each combustion turbine, duct burner, and auxiliary boiler.~~ A summary of the hours of operation for each combustion turbine, duct burner and auxiliary boiler.
- ii. ~~Electrical energy output of each Combustion Turbine for each hour of operation.~~
- iii. Dates on which visible emissions observations were taken, the test method used, and the results of the observations;
- iv. Fuel supplier certification or other documentation as detailed in Permit Condition 2.a.ix. regarding sulfur content for all fuel combusted;
- v. ~~Continuous Emissions Monitoring data related to the emission limits contained in this permit, calibrations, quality assurance, performance demonstrations, and certifications for the reporting period.~~
- vi. ~~Stack emissions test results related to emission limits and/or operational requirements in this Permit.~~

vii. ~~Cooling tower inspection log and results of conductivity and TDS monitoring.~~

viii. ~~Odor log.~~

ix. ~~Good combustion monitoring records for Combustion Turbines including the records required by County Rule 322 §501.6.~~

x. Any other records and reports required by any Permit Condition contained in this Permit.

Comment: The items listed above are reviewed during the annual Title V inspection and do not need to be submitted in their entirety. This requirement language has been changed to match the requirements agreed upon in the recently approved Redhawk Title V permit. This will reduce extensive paperwork submittal and man hours on these semi-annual reports. The most current submittal of the compliance certification and monitoring plan for West Phoenix Power Plant was 888 pages in length.

Table 6. Calculated Startup/Shutdown Emissions

Change lb/hr rate for CC3 to 440.

Comment: Correction made to reflect value found in Table 2a.

Equipment List Updates

1. Manufacture of Simple Cycle 1 and 2 were manufactured by Westinghouse
2. CC3 SCR was replaced and is manufactured by Ceram
3. CC5 oxidation catalyst is manufactured by Johnson Matthey
4. Cooling Tower 1,2, and 3 is manufactured by PVC Cellular
5. Cooling Tower 5 is manufactured by Marley and is model TU12C
6. Self contained abrasive blasting cabinet has exhaust
7. Bioventing systems no longer at facility
8. Facility no longer has a solvent cleaning station