ADEQ
OPERATING
AIR PERMIT

Pursuant to the Regulations of the Arkansas Operating Air Permit Program, Regulation #26:

Permit #: 449-AOP-R3

Renewal #1

IS ISSUED TO: Entergy Arkansas, Inc. - Independence

555 Point Ferry Road

Newark, AR 72562

Independence County

AFIN: 32-00042

THIS PERMIT AUTHORIZES THE ABOVE REFERENCED PERMITTEE TO INSTALL, OPERATE, AND MAINTAIN THE EQUIPMENT AND EMISSION UNITS DESCRIBED IN THE PERMIT APPLICATION AND ON THE FOLLOWING PAGES. THIS PERMIT IS VALID BETWEEN:

June 3, 2005 AND June 2, 2010

THE PERMITTEE IS SUBJECT TO ALL LIMITS AND CONDITIONS CONTAINED HEREIN.

Signed:

Michael Bonds
Chief, Air Division

Date Amended

Facility: Entergy Arkansas, Inc. - Independence
Permit No.: 449-AOP-R3
AFIN: 32-00042

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Table 1 - List of Acronyms

A.C.A.	Arkansas Code Annotated
CFR	Code of Federal Regulations
CO	Carbon Monoxide
CSN	County Serial Number
HAP	Hazardous Air Pollutant
lb/hr	Pound per hour
MVAC	Motor Vehicle Air Conditioner
No.	Number
NO_x	Nitrogen Oxide
PM	Particulate matter
PM_{10}	Particulate matter smaller than ten microns
QIP	Quality Improvement Plan
SNAP	Significant New Alternatives Program (SNAP)
SO_2	Sulfur dioxide
SSM	Startup, Shutdown, and Malfunction Plan
Tpy	Ton per year
UTM	Universal Transverse Mercator
VOC	Volatile Organic Compound

Section I: FACILITY INFORMATION

PERMITTEE:	Entergy Arkansas, Inc. - Independence
AFIN:	32-00042
PERMIT NUMBER:	449-AOP-R3
FACILITY ADDRESS:	555 Point Ferry Road Newark, AR 72562
MAILING ADDRESS:	555 Point Ferry Road Newark, AR 72562
COUNTY:	Independence
CONTACT POSITION:	Tracy Johnson
TELEPHONE NUMBER:	(501) 377-4033
REVIEWING ENGINEER:	Ann Sudmeyer
UTM North - South (Y):	Zone 15 3949.3
UTM East - West (X):	Zone 15 644.10

Section II: INTRODUCTION

Summary of Permit Activity

Entergy-Arkansas, Inc. operates the Independence Steam Electric Station located in Newark, Arkansas. In addition to renewing the facility's Title V air permit, this permitting action is necessary to:

1. Permit emissions of hazardous air pollutants (HAPs);
2. Recalculate the permitted coal handling emission rates (SN-06);
3. Increase the diesel throughput of SN-12;
4. Move SN-14 to the insignificant activities list;
5. Increase the cooling tower circulating water flow rate (SN-16 and SN-17);
6. Increase the cooling tower total dissolved solids content (SN-16 and SN-17);
7. Permit the degreasers (SN-18) and grit blaster (SN-19) which were previously submitted as insignificant;
8. Correct the emission rate limits of SN-05 to reflect No. 2 fuel oil firing;
9. Correct the fly ash silos (SN-04) PM emission rates;
10. Specify the CO PSD limit and compliance demonstration (SN-01 and SN-02);
11. Correct the permitted annual CO emission rate (SN-01 and SN-02) to correspond with the PSD limit of 100 ppm (24-hr average);
12. Update the PM_{10} emission rates (SN-01, SN-02, and SN-05) to include condensable particulate matter; and
13. Correct the permitted PM emission rates (SN-01 and SN-02) to correspond with the PSD limit of 0.04 lb/MMBtu.

Process Description

The Independence Plant is a two-unit electric generating station which generates electric energy for sale. Electricity is produced by using sub-bituminous coal as the primary fuel and No. 2 fuel oil as the start-up fuel in both boilers (SN-01 and SN-02) to produce steam, which is used to drive turbines which turn the electric generators.

Independence Steam Electric Station operates currently as a base-load facility. The facility has two identical coal-fired units (Units 1 and 2) with a total capacity of approximately 1780 megawatts (MW) Gross. Low sulfur sub-bituminous coal is delivered by rail. Each rail car is equipped with rotary couplings which enable the rotary car dumper to grasp one car at a time and empty it without removing the car from the train. The rotary car dumper (SN-03) is capable of emptying approximately 30 cars per hour. Transfer conveyors move the coal to a transfer tower. From here the coal can be conveyed to three different areas including the plant to be pulverized and burned, the stacker/reclaimer, or the storage area. The stacker/reclaimer has the capability of either stacking coal out or reclaiming the coal from the storage area. The storage area is used for

long term storage of coal and is also managed by the use of heavy vehicles including front end loaders and bull dozers.

Coal is burned in the steam generators which feed turbine generators to produce electricity. Exhaust gases from both units are expelled through two 1000 foot stacks within a common outer chimney shell. Waste heat dissipation is through two hyperbolic natural draft cooling towers (SN-16 and SN-17) which obtain makeup water from the White River and from the capture of site drainage. Other major plant components include facilities for storage and handling of coal and disposal of ash; a switch-yard; electrostatic precipitators; water treatment: surge and other ponds; and intake and discharge structures.

Regulations

Emissions from the plant include sulfur dioxide, nitrogen oxides, particulates, and carbon monoxide. The emission levels for each of these are governed by Federal and State emission and ambient air regulations. In-stack monitoring is designed to meet the requirements of Acid Rain (40 CFR 75) and New Source Performance Standards. Oxides of nitrogen are subject to NSPS and Acid Rain requirements; particulates are subject to NSPS and PSD requirements; sulfur dioxide emissions are subject to PSD, NSPS, and Acid Rain requirements; and carbon monoxide emissions are subject to PSD requirements. Entergy elected to comply with a 0.45 lb/MMBtu annual average for NO_X emissions under the Acid Rain provisions of 40 CFR Part 76. Compliance began in the year 1997 and is determined by the average emission rate at the end of each calendar year.

The following table contains the regulations applicable to this permit.

Table 2 - Regulations

Source No.	Regulation Citations
Plantwide	Arkansas Air Pollution Control Code (Regulation 18)
Plantwide	Regulations of the Arkansas Plan of Implementation for Air Pollution Control (Regulation 19)
Plantwide	Regulations of the Arkansas Operating Air Permit Program (Regulation 26)
SN-01 and SN-02	40 CFR Part 60, Subpart D – *Standards of Performance for Fossil-Fuel-Fired Steam Generators for Which Construction is Commenced After August 17, 1971*
Plantwide	40 CFR Part 61, Subpart M – *National Emissions Standard for Asbestos*
Plantwide	40 CFR Part 72, Subpart A-D – Permits Regulation (Acid Rain)
Plantwide	40 CFR Part 73, Subpart B – Sulfur Dioxide Allowance System

Source No.	Regulation Citations
SN-01 and SN-02	40 CFR Part 75 – Continuous Emission Monitoring
Plantwide	40 CFR Part 76 – Acid Rain Nitrogen Oxide Emission Reduction Program
Plantwide	40 CFR Part 77 – Excess Emissions
Plantwide	40 CFR 52.21 – *Prevention of Significant Deterioration of Air Quality* (PSD)
SN-01, SN-02, and SN-04	40 CFR Part 64 – Compliance Assurance Monitoring
Plantwide	40 CFR Part 82 – Protection of Stratospheric Ozone

The following table is a summary of emissions from the facility. The following table contains cross-references to the pages containing specific conditions and emissions for each source. This table, in itself, is not an enforceable condition of the permit.

Table 3 – Emission Summary

Emission Summary					
			Emission Rates		
Source No.	**Description**	**Pollutant**	**lb/hr**	**tpy**	**Cross Reference Page**
Total Allowable Emissions		PM	1,076.3	4,385.6	N/A
		PM_{10}	326.9	1,353.2	
		SO_2	16,287.2	71,338.0	
		VOC	80.8	322.6	
		CO	6,470.7	9,467.0	
		NO_x	12,212.2	53,489.3	
		Lead*	0.7	2.1	
HAPs		Acenaphthene*	0.02	0.02	N/A
		Acenaphthylene*	0.02	0.02	
		Acetaldehyde*	0.60	2.64	
		Acrolein*	0.32	1.34	
		Anthracene*	0.02	0.02	
		Arsenic*	0.45	1.91	
		Benzene*	1.38	5.98	
		Benzyl chloride*	0.74	3.22	
		Beryllium*	0.061	0.243	
		Cadmium*	0.061	0.243	
		Carbon Disulfide*	0.14	0.60	

Emission Summary					
			Emission Rates		
Source No.	**Description**	**Pollutant**	**lb/hr**	**tpy**	**Cross Reference Page**
		2-Chloroacetophenone*	0.02	0.04	
		Chloroform*	0.08	0.28	
		Chromium*	0.29	1.21	
		Chromium VI*	0.10	0.38	
		Cobalt*	0.12	0.46	
		Cyanide*	2.64	11.50	
		Dimethyl sulfate*	0.06	0.24	
		Ethylene Dichloride*	0.06	0.20	
		Fluoranthene*	0.02	0.02	
		Fluorene*	0.02	0.02	
		Formaldehyde*	0.79	3.37	
		Hydrogen Chloride	1260.00	5518.80	
		Hydrogen Fluoride	157.50	689.86	
		Isophorone*	0.62	2.68	
		Manganese*	0.53	2.27	
		Mercury*	0.11	0.41	
		Methyl Chloride*	0.56	2.44	
		Methyl Ethyl Ketone*	0.42	1.80	
		Methyl Hydrazine*	0.18	0.80	
		Methylene Chloride*	0.32	1.34	
		Nickel*	0.31	1.31	
		Phenanthrene*	0.02	0.02	
		Phenol*	0.02	0.08	
		POM*	0.07	0.24	
		Propionaldehyde*	0.40	1.76	
		Pyrene*	0.02	0.02	
		Selenium*	1.39	6.00	
		Styrene*	0.04	0.12	
		Toluene*	0.26	1.12	
		2,3,7,8-TCDD*	0.02	0.02	
Air Contaminants		N_2O**	84.15	368.57	N/A
SN-01 (C1)	Unit 1 Boiler – Coal Fired	PM	453.0	1,984.2	19
		PM_{10}	137.0	600.1	
		SO_2	8,091.0	35,438.6	
		VOC	35.0	153.3	

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Emission Summary					
			Emission Rates		
Source No.	**Description**	**Pollutant**	**lb/hr**	**tpy**	**Cross Reference Page**
		CO	3,232.0	4,718.8	
		NO_X	6,090.0	26,674.2	
		Lead	0.3	1.0	
		Acenaphthene	0.01	0.01	
		Acenaphthylene	0.01	0.01	
		Acetaldehyde	0.30	1.32	
		Acrolein	0.16	0.67	
		Anthracene	0.01	0.01	
		Arsenic	0.22	0.95	
		Benzene	0.69	2.99	
		Benzyl chloride	0.37	1.61	
		Beryllium	0.02	0.05	
		Cadmium	0.03	0.12	
		Carbon Disulfide	0.07	0.30	
		2-Chloroacetophenone	0.01	0.02	
		Chloroform	0.04	0.14	
		Chromium	0.14	0.60	
		Chromium (VI)	0.05	0.19	
		Cobalt	0.06	0.23	
		Cyanide	1.32	5.75	
		Dimethyl sulfate	0.03	0.12	
		Ethylene Dichloride	0.03	0.10	
		Fluoranthene	0.01	0.01	
		Fluorene	0.01	0.01	
		Formaldehyde	0.13	0.56	
		Hydrogen Chloride*	630.00	2759.40	
		Hydrogen Fluoride*	78.75	344.93	
		Isophorone	0.31	1.34	
		Manganese	0.26	1.13	
		Mercury	0.05	0.20	
		Methyl Chloride	0.28	1.22	
		Methyl Ethyl Ketone	0.21	0.90	
		Methyl Hydrazine	0.09	0.40	
		Methylene Chloride	0.16	0.67	
		Nickel	0.15	0.65	

Emission Summary					
			Emission Rates		
Source No.	**Description**	**Pollutant**	**lb/hr**	**tpy**	**Cross Reference Page**
		Phenanthrene	0.01	0.01	
		Phenol	0.01	0.04	
		POM	0.03	0.10	
		Propionaldehyde	0.20	0.88	
		Pyrene	0.01	0.01	
		Selenium	0.69	2.99	
		Styrene	0.02	0.06	
		Toluene	0.13	0.56	
		2,3,7,8-TCDD	0.01	0.01	
		N_2O	42.00	183.96	
SN-02 (C2)	Unit 2 Boiler – Coal Fired	PM	453.0	1,984.2	19
		PM_{10}	137.0	600.1	
		SO_2	8,091.0	35,438.6	
		VOC	35.0	153.3	
		CO	3,232.0	4,718.8	
		NO_X	6,090.0	26,674.2	
		Lead	0.3	1.0	
		Acenaphthene	0.01	0.01	
		Acenaphthylene	0.01	0.01	
		Acetaldehyde	0.30	1.32	
		Acrolein	0.16	0.67	
		Anthracene	0.01	0.01	
		Arsenic	0.22	0.95	
		Benzene	0.69	2.99	
		Benzyl chloride	0.37	1.61	
		Beryllium	0.02	0.05	
		Cadmium	0.03	0.12	
		Carbon Disulfide	0.07	0.30	
		2-Chloroacetophenone	0.01	0.02	
		Chloroform	0.04	0.14	
		Chromium	0.14	0.60	
		Chromium (VI)	0.05	0.19	
		Cobalt	0.06	0.23	
		Cyanide	1.32	5.75	
		Dimethyl sulfate	0.03	0.12	

Emission Summary					
			Emission Rates		
Source No.	**Description**	**Pollutant**	**lb/hr**	**tpy**	**Cross Reference Page**
		Ethylene Dichloride	0.03	0.10	
		Fluoranthene	0.01	0.01	
		Fluorene	0.01	0.01	
		Formaldehyde	0.13	0.56	
		Hydrogen Chloride*	630.00	2759.40	
		Hydrogen Fluoride*	78.75	344.93	
		Isophorone	0.31	1.34	
		Manganese	0.26	1.13	
		Mercury	0.05	0.20	
		Methyl Chloride	0.28	1.22	
		Methyl Ethyl Ketone	0.21	0.90	
		Methyl Hydrazine	0.09	0.40	
		Methylene Chloride	0.16	0.67	
		Nickel	0.15	0.65	
		Phenanthrene	0.01	0.01	
		Phenol	0.01	0.04	
		POM	0.03	0.10	
		Propionaldehyde	0.20	0.88	
		Pyrene	0.01	0.01	
		Selenium	0.69	2.99	
		Styrene	0.02	0.06	
		Toluene	0.13	0.56	
		2,3,7,8-TCDD	0.01	0.01	
		N_2O	42.00	183.96	
SN-01 (C1)	Unit 1 Boiler – No. 2 Fuel Oil Fired	PM	9.6	41.9	19
		PM_{10}	9.6	41.9	
		SO_2	573.0	2,509.8	
		VOC	1.9	8.1	
		CO	3,232.0	4,718.8	
		NO_X	175.2	767.4	
		Lead	0.1	0.4	
		Arsenic	0.04	0.16	
		Beryllium	0.03	0.12	
		Cadmium	0.03	0.12	
		Chromium	0.03	0.12	

Emission Summary					
			Emission Rates		
Source No.	**Description**	**Pollutant**	**lb/hr**	**tpy**	**Cross Reference Page**
		Formaldehyde	0.36	1.54	
		Manganese	0.06	0.23	
		Mercury	0.03	0.12	
		Nickel	0.03	0.12	
		POM	0.03	0.11	
		Selenium	0.14	0.58	
		N_2O	0.81	3.52	
SN-02 (C2)	Unit 2 Boiler – No. 2 Fuel Oil Fired	PM	9.6	41.9	19
		PM_{10}	9.6	41.9	
		SO_2	573.0	2,509.8	
		VOC	1.9	8.1	
		CO	3,232.0	4,718.8	
		NO_X	175.2	767.4	
		Lead	0.1	0.4	
		Arsenic	0.04	0.16	
		Beryllium	0.03	0.12	
		Cadmium	0.03	0.12	
		Chromium	0.03	0.12	
		Formaldehyde	0.36	1.54	
		Manganese	0.06	0.23	
		Mercury	0.03	0.12	
		Nickel	0.03	0.12	
		POM	0.03	0.11	
		Selenium	0.14	0.58	
		N_2O	0.81	3.52	
SN-03 (M1)	Rail Car Rotary Dumper	PM	16.0	70.1	35
		PM_{10}	0.1	0.1	
SN-03 (M1) and SN-06	Rail Car Rotary Dumper and Handling/ Conveying Emissions	VOC	1.3	2.2	40
SN-04 (M30-31)	Fly Ash Silos(2) with Fabric Filters	PM	4.0	17.6	39
		PM_{10}	0.1	0.1	

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			Emission Rates		
Source No.	**Description**	**Pollutant**	**lb/hr**	**tpy**	**Cross Reference Page**
SN-05 (C3)	Auxiliary Boiler	PM PM_{10} SO_2 VOC CO NO_X Lead Arsenic Beryllium Cadmium Chromium Formaldehyde Manganese Mercury Nickel POM Selenium N_2O	4.5 4.5 105.2 0.4 6.7 32.2 0.1 0.01 0.001 0.001 0.01 0.07 0.01 0.01 0.01 0.01 0.01 0.15	19.4 19.4 460.8 1.5 29.4 140.9 0.1 0.01 0.003 0.003 0.01 0.29 0.01 0.01 0.01 0.02 0.02 0.65	19
SN-06A	Handling/ Conveying Emissions	PM PM_{10}	0.6 0.3	2.6 1.3	35
SN-06B	Stacker/Reclaimer Emissions	PM PM_{10}	0.6 0.3	2.3 1.1	35
SN-06C	Storage Pile and Haul Road Emissions	PM PM_{10}	131.4 35.5	247.8 78.5	35
SN-07 (T1)	Fuel Oil Storage Tank	VOC	0.4	1.7	42
SN-12 (T27)	UST Diesel Tank	VOC	0.1	0.1	43
SN-13 (T29)	UST Automotive Unleaded Gasoline Tank	VOC	0.1	0.1	43
SN-14 (T30)	Unleaded Gasoline	Insignificant Activity			

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Emission Summary					
			Emission Rates		
Source No.	**Description**	**Pollutant**	**lb/hr**	**tpy**	**Cross Reference Page**
	Tank				
SN-16 (X35)	Cooling Tower #1	PM PM_{10}	5.7 5.7	24.9 24.9	45
SN-17 (X36)	Cooling Tower #2	PM PM_{10}	5.7 5.7	24.9 24.9	45
SN-18	Degreasing Operations	VOC	8.5	10.4	47
SN-19 (X23)	Grit Blaster	PM PM_{10}	1.8 0.7	7.6 2.7	49

* HAPs included in the PM or VOC totals.
**Air Contaminants such as ammonia, acetone, and certain halogenated solvents are not VOCs or HAPs.

Section III: PERMIT HISTORY

449-A was issued to Arkansas Power & Light Company on November 1, 1977. 449-A permitted the installation of the coal-fired steam electric station near Newark on the White River. The permit established the limit of the SO_2 emission rate at 0.93 lbs/MMBtu heat input. The maximum emission rate for TSP was limited to 611 lb/hr based on the use of coal with a heat content of 8700 Btu/lb and a maximum sulfur and ash content of 0.45 percent and 8 percent, respectively on an as received basis.

PSD-AR-48 was issued by the Environmental Protection Agency (EPA) to Arkansas Power and Light Company to construct the Independence Steam Electric Station on March 30, 1978. This PSD permit limited the emission rates from the common stack of the two 800 MW coal-fired units (Units 1 and 2) to 15,510 lb/hr SO_2 and 611 lb/hr TSP based on the use of coal with a heat content of 8,700 Btu/lb and a maximum sulfur of 0.45% and a maximum ash content of 8%. Limits of 0.04 lb/10^6 Btu TSP and 0.93 lb/10^6 Btu SO_2 were also included. The EPA determined that the facility met the Best Available Control Technology (BACT) requirements for SO_2 and TSP. (The actual technology requirements were not specified in the permit.) This source was also subject to the requirements of 40 CFR 60, Subpart D-*Standards of Performance for Fossil-Fuel-Fired Steam Generators for Which Construction is Commenced After August 17, 1971,* except that the maximum allowed emissions for TSP and SO_2 were 0.04 and 0.93 lb/10^6 Btu and 40 CFR 60, Subpart Y-*Standards of Performance for Coal Preparation Plants*.

449-AR-1 was issued to Arkansas Power & Light Company- Independence Steam Electric Station on April 9, 1991. In June, 1990, AP&L announced its intent to sell a percentage of power from Unit 2 to Entergy Power Incorporated (EPI). EPI is a subsidiary of Entergy Corporation. It was determined that a revised permit for the Independence facility was needed. The revised permit incorporated existing lb/10^6 Btu limits for particulate matter, and sulfur dioxide. The lb/hr limit for SO_2 was increased from 15,510 lb/hr to 16,182 lb/hr (8,091 lb/hr for each unit.) The lb/hr limit for TSP was increased from 611 lb/hr to 696 lb/hr (348 lb/hr for each unit.) The limits from 40 CFR 60, Subpart D-*Standards of Performance for Fossil-Fuel-Fired Steam Generators for Which Construction is Commenced After August 17, 1971,* were incorporated for oxides of nitrogen and opacity. It also identified emission sources that were not addressed in the original permit application (i.e. rotary car dumper, fly ash silos) and estimated pollutant emissions from fuel oil storage facilities and air toxic emissions. The restrictions of 40 CFR 60, Subpart Y-*Standards of Performance for Coal Preparation Plants* were removed from the permit because the facility commenced construction before the applicable date.

0449-AOP-R0 was the first operating air permit issued to Entergy-Arkansas, Inc.-Independence Steam Electric Station under Regulation 26 (Title V). There were no physical changes in the method of operation at the facility.

Entergy-Arkansas, Inc. increased the CO limit for the Independence facility from 300 lb/hr (50 ppm) to 3232 lb/hr or 300 ppm hourly (100 ppm 24-hour average) to reflect the optimum range

for unit operating efficiency. Modeling analysis at a 500 ppm emission rate was conducted and showed no significant impact to the *NAAQS*. In addition, a Best Achievable Control Technology review was conducted since the facility is currently subject to PSD.

Entergy-Arkansas, Inc. elected to permit a new NO_X emission limit of 0.45 lb/MMBtu annual average at Independence Units 1 and 2. This early election is allowed under 40 CFR 76 of the Acid Rain Regulations. This limit was applicable beginning calendar year 1997. However, Entergy-Arkansas, Inc. shall not submit an application for an alternative emissions limitation demonstration period until the earlier of January 1, 2008, or early election is terminated pursuant to 40 CFR 76.8. The NSPS limit of 0.7 lb/MMBtu and the state-imposed lb/hr limit will still apply to these units.

*See BACT Analysis for Permit #449-AOP-R0.

Permit #449-AOP-R1 was issued July 12, 2000. In this minor modification, storage tanks SN-10 and SN-11, and the Emergency Diesel Generator (SN-08), and the Fire Pump Emergency Diesel Generator (SN-09) were moved to the insignificant activities list. Storage tank SN-15 was removed from the permit because it was no longer in existence. The fuel throughput for storage tanks SN's 12, 13, and 14 was increased. The true vapor pressure for SN-13 and SN-14 was also increased.

Permit #449-AOP-R2 was issued November 8, 2001. In this minor modification, the facility replaced the control equipment associated with the rail car rotary dumper (SN-03) and the coal emission points (SN-06) with chemical foam spray. Emissions from the use of the chemical foam spray were permitted at 2.2 tpy VOC.

Section IV: SPECIFIC CONDITIONS

SN-01, SN-02, and SN-05

Boilers

Source Descriptions

SN-01 and SN-02 are 8700 million Btu per hour coal fired boilers. Both boilers were installed in 1974. Unit 1 (SN-01) was placed into operation in 1983 and Unit 2 (SN-02) was placed into operation in 1985. The boilers use sub-bituminous coal as their primary fuel and No. 2 fuel oil as the start-up fuel. The boilers are permitted to operate under alternating scenarios. Scenario I represents combustion from coal and Scenario II represents No. 2 fuel oil combustion. The boilers supply steam which feed turbine generators to produce electricity. Both units are subject to NSPS Subpart D, which regulates emissions of particulate matter, sulfur dioxide, and nitrogen oxides from fossil-fuel-fired steam generators.

A PSD permit was issued by the EPA in 1978 for the Independence facility. The facility underwent PSD review for SO_2 and TSP. The limits of 0.04 lb/10^6 Btu TSP and 0.93 lb/10^6 Btu SO_2 are still in effect. A PSD permit for CO was issued by the Department in 1998. These limits are specified in the Specific Conditions section for these sources.

Particulate emissions from SN-01 and SN-02 are controlled with electrostatic precipitators. NSPS emissions standards for particulate matter are 0.1 lb/MMBtu and a maximum opacity of 20 percent. However, the more stringent PSD emission limitation of 0.04 lb/MMBtu is in effect for this facility. A continuous opacity monitor records opacity emissions.

Sulfur dioxide emissions from SN-01 and SN-02 are limited by the use of low-sulfur coal. The NSPS emission standard for sulfur dioxide is 1.2 lb/MMBtu. However, the more stringent PSD emission limitation of 0.93 lb/MMBtu is in effect for this facility. A continuous emissions monitoring system measures sulfur dioxide emissions. Continuous emissions monitoring systems also measure CO_2 emissions and NO_X emissions under Acid Rain requirements (40 CFR 75).

SN-05 is a 183 million Btu per hour boiler. It was installed in 1974. This auxiliary boiler combusts No. 2 fuel in order to provide steam for unit start-up and shut-down activities. There are no control devices associated with this source. Emissions from this boiler are regulated under the State Implementation Plan (SIP), Regulation 19.

Specific Conditions

1. The permittee shall not exceed the emission rates set forth in the following table, when operating under Scenario I: Coal Firing. [Regulation No. 19 §19.501 *et seq.* effective February 15, 1999 and 40 CFR Part 52, Subpart E]

Table 4 – Maximum Criteria Pollutant Emission Rates for Scenario I: Coal Firing

Source No.	Pollutant	lb/hr	tpy
SN-01	PM_{10}	137.0	600.1
	SO_2	8,091.0	35,438.6
	VOC	35.0	153.3
	CO	3,232.0	4,718.8*
	NO_X	6,090.0	26,674.2
	Lead	0.3	1.0
SN-02	PM_{10}	137.0	600.1
	SO_2	8,091.0	35,438.6
	VOC	35.0	153.3
	CO	3,232.0	4,718.8*
	NO_X	6,090.0	26,674.2
	Lead	0.3	1.0

*Note: The CO tpy limit is based on the PSD limit of 100 ppm (24 hour average).

2. The permittee shall not exceed the emission rates set forth in the following table, when operating under Scenario I: Coal Firing. [§19.901 of Regulation 19 et seq, and 40 CFR Part 52, Subpart E]

Table 5 – Maximum PSD Emission Rates for Scenario I: Coal Firing

Source No.	Pollutant	lb/hr	tpy
SN-01	PM	348.0	1,524.3
	SO_2	8,091.0	35,438.6
	CO	3,232.0	4,718.8*

Source No.	Pollutant	lb/hr	tpy
SN-02	PM	348.0	1,524.3
	SO_2	8,091.0	35,438.6
	CO	3,232.0	4,718.8*

*Note: The CO tpy limit is based on the PSD limit of 100 ppm (24 hour average).

3. The permittee shall not exceed the emission rates set forth in the following table, when operating under Scenario I: Coal Firing. [Regulation No. 18 §18.801 effective February 15, 1999, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

Table 6 – Maximum Non-Criteria Pollutant Emission Rates for Scenario I: Coal Firing

Source No.	Pollutant	lb/hr	tpy
SN-01	PM	453.0	1,984.2
	Acenaphthene	0.01	0.01
	Acenaphthylene	0.01	0.01
	Acetaldehyde	0.30	1.32
	Acrolein	0.16	0.67
	Anthracene	0.01	0.01
	Arsenic	0.22	0.95
	Benzene	0.69	2.99
	Benzyl chloride	0.37	1.61
	Beryllium	0.02	0.05
	Cadmium	0.03	0.12
	Carbon Disulfide	0.07	0.30
	2-Chloroacetophenone	0.01	0.02
	Chloroform	0.04	0.14
	Chromium	0.14	0.60
	Chromium (VI)	0.05	0.19
	Cobalt	0.06	0.23
	Cyanide	1.32	5.75
	Dimethyl sulfate	0.03	0.12
	Ethylene Dichloride	0.03	0.10
	Fluoranthene	0.01	0.01
	Fluorene	0.01	0.01
	Formaldehyde	0.13	0.56
	Hydrogen Chloride	630.00	2759.40
	Hydrogen Fluoride	78.75	344.93
	Isophorone	0.31	1.34
	Manganese	0.26	1.13
	Mercury	0.05	0.20
	Methyl Chloride	0.28	1.22

Source No.	Pollutant	lb/hr	tpy
	Methyl Ethyl Ketone	0.21	0.90
	Methyl Hydrazine	0.09	0.40
	Methylene Chloride	0.16	0.67
	Nickel	0.15	0.65
	Phenanthrene	0.01	0.01
	Phenol	0.01	0.04
	POM	0.03	0.10
	Propionaldehyde	0.20	0.88
	Pyrene	0.01	0.01
	Selenium	0.69	2.99
	Styrene	0.02	0.06
	Toluene	0.13	0.56
	2,3,7,8-TCDD	0.01	0.01
	N_2O	42.00	183.96
SN-02	PM	453.0	1,984.2
	Acenaphthene	0.01	0.01
	Acenaphthylene	0.01	0.01
	Acetaldehyde	0.30	1.32
	Anthracene	0.01	0.01
	Acrolein	0.16	0.67
	Arsenic	0.22	0.95
	Benzene	0.69	2.99
	Benzyl chloride	0.37	1.61
	Beryllium	0.02	0.05
	Cadmium	0.03	0.12
	Carbon Disulfide	0.07	0.30
	2-Chloroacetophenone	0.01	0.02
	Chloroform	0.04	0.14
	Chromium	0.14	0.60
	Chromium (VI)	0.05	0.19
	Cobalt	0.06	0.23
	Cyanide	1.32	5.75
	Dimethyl sulfate	0.03	0.12
	Ethylene Dichloride	0.03	0.10
	Fluoranthene	0.01	0.01
	Fluorene	0.01	0.01
	Formaldehyde	0.13	0.56
	Hydrogen Chloride	630.00	2759.40
	Hydrogen Fluoride	78.75	344.93
	Isophorone	0.31	1.34
	Manganese	0.26	1.13
	Mercury	0.05	0.20

Source No.	Pollutant	lb/hr	tpy
	Methyl Chloride	0.28	1.22
	Methyl Ethyl Ketone	0.21	0.90
	Methyl Hydrazine	0.09	0.40
	Methylene Chloride	0.16	0.67
	Nickel	0.15	0.65
	Phenanthrene	0.01	0.01
	Phenol	0.01	0.04
	POM	0.03	0.10
	Propionaldehyde	0.20	0.88
	Pyrene	0.01	0.01
	Selenium	0.69	2.99
	Styrene	0.02	0.06
	Toluene	0.13	0.56
	2,3,7,8-TCDD	0.01	0.01
	N_2O	42.00	183.96

4. SN-01 and SN-02 are subject to 40 CFR Part 60, Subpart D, Standards of Performance for fossil fuel-fired steam generators due to a heat input capacity of greater than 250 MMBtu/hr. A copy of Subpart D is provided in Appendix A. [§19.304 of Regulation 19, and 40 CFR Part 60] Applicable provisions of Subpart D, include, but are not limited to:

   a. PM emissions shall not exceed 0.1 lb/MMBtu.* [40 CFR 60.42(a)(1)]
   b. Opacity shall not exceed 20 percent except for one six-minute period per hour of not more than 27 percent opacity and except as provided by 40 CFR 60.8 and 60.11. [40 CFR 60.42(a)(2)]
   c. SO_2 emissions shall not exceed 1.2 lb/MMBtu.** [40 CFR 60.43(a)(2)]
   d. NO_X emissions shall not exceed 0.7 lb/MMBtu. [40 CFR 60.44(a)(3)]
   e. The permittee shall install, calibrate, and maintain Continuous Emissions Monitoring Systems (CEMS) for NO_X, SO_2, CO_2, and opacity. [40 CFR 60.45(a)]
   f. Excess emission and monitoring system performance reports shall be submitted to the ADEQ for every calendar quarter. Quarterly reports shall be postmarked by the 30th day following the end of the calendar quarter. Excess emissions are defined in 60.45(g)(1), (2), and (3). [40 CFR 60.45(g)]
   g. Excess opacity emissions are defined as any six-minute period during which the average opacity emissions exceed 20%, except for one 6-minute average per hour of up to 27% opacity. [40 CFR 60.45(g)(1)]
   h. Excess SO_2 emissions are defined as any 3-hour period during which the average emissions (arithmetic average of three contiguous one-hour periods) of SO_2 as measured by a CEMS exceed the applicable standard under §60.43. [40 CFR 60.45(g)(2)]
   i. Excess NO_X emissions are defined as any 3-hour period during which the average emissions (arithmetic average of three contiguous one-hour periods) of NO_X as

measured by a CEMS exceed the applicable standard under §60.44. [40 CFR 60.45(g)(3)]

Note these units are also subject to PSD Restrictions.

*A more stringent PSD limit of 0.04 lb/MMBtu is in effect for these units. (See Specific Condition #5)

**A more stringent PSD limit of 0.93 lb/MMBtu is in effect for these units. (See Specific Condition #5)

5. The emissions from SN-01 and SN-02 shall not exceed the PSD emission limits in the following table when burning coal or No. 2 fuel oil. [§19.901 of Regulation 19 et seq, and 40 CFR Part 52, Subpart E]

Table 7 – Maximum PSD Emission Limits

Source No.	Pollutant	lb/MMBtu
SN-01	PM	0.04
	SO_2	0.93
SN-02	PM	0.04
	SO_2	0.93

6. Carbon monoxide (CO) emissions shall not exceed the PSD limit of 100 ppm (24-hour average) per unit from SN-01 and SN-02 when burning coal or No. 2 fuel oil. [§19.901 of Regulation 19 et seq, and 40 CFR Part 52, Subpart E]

7. The permittee shall test SN-01 and SN-02 for CO while operating under Scenario I: Coal Firing. This testing shall be conducted within 180 days of permit issuance and every five years thereafter. These tests shall be performed using EPA Reference Method 10, and shall be conducted in accordance with Plantwide Condition #3. This testing shall be conducted while operating at 90% or greater capacity and consist of three, one hour test periods averaged to demonstrate compliance with Specific Condition #6. [§19.702 of Regulation 19 and 40 CFR Part 52, Subpart E]

8. The permittee shall maintain records which demonstrate compliance with the SO_2 emission limits set in Specific Conditions #1, #4, and #5. These records may be used by the Department for enforcement purposes. For Specific Condition #1, compliance shall be determined as the arithmetic average of three contiguous one-hour periods of SO_2 emissions as measured by the CEMS and converted to pounds per hour per 40 CFR Part 75. For Specific Conditions #4 and #5, compliance shall be determined as the arithmetic average of three contiguous one-hour periods of SO_2 as measured by a CEMS and converted to pounds per MMBtu per 40 CFR Part 60. These records shall be kept on site and shall be provided to Department personnel upon request. Records shall be submitted in accordance with General Provisions #7 and #8. [§19.705 of Regulation 19, and 40 CFR Part 52, Subpart E]

9. The permittee shall maintain records which demonstrate compliance with the NO_X emission limits set in Specific Conditions #1 and #4. These records may be used by the Department for enforcement purposes. For Specific Condition #1, compliance shall be determined as the arithmetic average of three contiguous one-hour periods of NO_X emissions as measured by the CEMS and converted to pounds per hour per 40 CFR Part 75. For Specific Condition #4, compliance shall be determined as the arithmetic average of three contiguous one-hour periods of NO_X as measured by a CEMS and converted to pounds per MMBtu per 40 CFR Part 60. These records shall be kept on site and shall be provided to Department personnel upon request. Records shall be submitted in accordance with General Provisions #7 and #8. [§19.705 of Regulation 19, and 40 CFR Part 52, Subpart E]

10. The permittee shall not cause to be discharged to the atmosphere from the boilers any emissions which exhibit an opacity greater than 20 percent when firing coal or No. 2 fuel oil. The opacity shall not exceed 20 percent (6-minute average), except for one 6-minute period per hour not to exceed 27 percent. Opacity exceedances shall be reported in accordance with Specific Condition #11. [§19.503 of Regulation 19, and 40 CFR Part 52, Subpart E and 40 CFR 60.42(a)(2)]

11. The permittee shall install, calibrate, maintain, and operate a continuous emission monitoring system (CEMS) for measuring opacity of emissions and all SO_2, NO_X and CO_2 emissions discharged to the atmosphere from SN-01 and SN-02 and record the output of the system. This CEMS shall comply with the Air Division's "Continuous Emission Monitoring System Conditions". A copy is provided in Appendix B. The permittee shall report all excess emissions as defined by 40 CFR 60.45(g)(1), (2), and (3) and in accordance with 40 CFR 60.7(c).

    Except for opacity, the permittee must report all excess emissions including those excess emissions caused by startups, shutdowns, and malfunctions. For opacity, all exceedances must be reported in the quarterly reports including those attributable to startup, shutdown, and malfunction. Only those opacity exceedances that are not attributable to startup, shutdown, and malfunction will be used for calculating the percentage of compliance with the NSPS opacity limit. Opacity exceedances would not be reported under §19.601 of Regulation 19 for startup, shutdown, and malfunction.

    The number of startup and shutdown occurrences that occur at this facility have historically ranged from 12 to 24 per year. In general, startup begins when the ID and FD fans are started with the intent to fire the unit. Normally, startup ends when the unit achieves stable operation and the following operating parameters are met: (1) the electrostatic precipitator is placed in service, and (2) startup oil is no longer necessary to support combustion. Duct sweeps are usually considered a part of the startup operation. For these units, shutdown normally begins when the unit load or output is reduced with the intent of removing the unit from service, or when the unit trips as the result of a sudden or unforeseen failure or

malfunction. Shutdown ends when the unit is no longer combusting fuel and fan operation is no longer required. [§19.703 of Regulation 19; §19.901 of Regulation 19 et seq; 40 CFR Part 52, Subpart E; A.C.A. §8- 4-203 as referenced by §8-4-304 and §8-4-311; and 40 CFR 60, Subpart D]

12. The permittee shall submit quarterly excess emissions and monitoring systems performance reports to the Department. The reports shall include the magnitude of excess emissions, date and time of commencement and completion of each period of excess emissions, process operating time during reporting period, date and time of each period during which the CEMS are inoperative, identification of each period of excess emissions that occurs during startup, shutdown, and malfunctions of the units, nature and cause of any malfunction (if known), and the corrective action or preventative measure adopted. Reports shall be sent to the following address [§19.304 of Regulation 19, and 40 CFR 60, §60.7]:

    Arkansas Department of Environmental Quality
    Air Division
    ATTN: Compliance Inspector Supervisor
    Post Office Box 8913
    Little Rock, AR 72219

13. The permittee shall ensure that all continuous emission and opacity monitoring systems are in operation and monitoring all unit emissions or opacity at all times that the affected unit combusts any fuel, except during periods of calibration, quality assurance, preventative maintenance or repair. [§19.304 of Regulation 19, and 40 CFR 75, §75.10]

14. The permittee shall not exceed the emission rates, when operating under Scenario II: No. 2 Fuel Oil Firing, set forth in the following table. [§19.501 of Regulation 19 et seq, and 40 CFR Part 52, Subpart E]

Table 8 – Maximum Criteria Pollutant Emission Rates for Scenario II: No. 2 Fuel Oil Firing

Source No.	Pollutant	lb/hr	tpy
SN-01	PM_{10}	9.6	41.9
	SO_2	573.0	2,509.8
	VOC	1.9	8.1
	CO	3,232.0	4,718.8
	NO_X	175.2	767.4
	Lead	0.1	0.4
SN-02	PM_{10}	9.6	41.9
	SO_2	573.0	2,509.8
	VOC	1.9	8.1
	CO	3,232.0	4,718.8
	NO_X	175.2	767.4
	Lead	0.1	0.4

15. The permittee shall not exceed the emission rates, when operating under Scenario II: No. 2 Fuel Oil Firing, set forth in the following table. [§18.801 of Regulation 18, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

Table 9 – Maximum Non-Criteria Pollutant Emission Rates for Scenario II: No. 2 Fuel Oil Firing

Source No.	Pollutant	lb/hr	tpy
SN-01	PM	9.6	41.9
	Arsenic	0.04	0.16
	Beryllium	0.03	0.12
	Cadmium	0.03	0.12
	Chromium	0.03	0.12
	Formaldehyde	0.36	1.54
	Manganese	0.06	0.23
	Mercury	0.03	0.12
	Nickel	0.03	0.12
	POM	0.03	0.11
	Selenium	0.14	0.58
	N_2O	0.81	3.52
SN-02	PM	9.6	41.9
	Arsenic	0.04	0.16

Source No.	Pollutant	lb/hr	tpy
	Beryllium	0.03	0.12
	Cadmium	0.03	0.12
	Chromium	0.03	0.12
	Formaldehyde	0.36	1.54
	Manganese	0.06	0.23
	Mercury	0.03	0.12
	Nickel	0.03	0.12
	POM	0.03	0.11
	Selenium	0.14	0.58
	N_2O	0.81	3.52

16. The permittee shall maintain records which demonstrate compliance with the SO_2 emission limits set in Specific Conditions #14 and #5 and may be used by the Department for enforcement purposes. For Specific Condition #14, compliance shall be determined as the arithmetic average of three contiguous one-hour periods of SO_2 emissions as measured by the CEMS and converted to pounds per hour per 40 CFR Part 75. For Specific Condition #5, compliance shall be determined as the arithmetic average of three contiguous one-hour periods of SO_2 as measured by a CEMS and converted to pounds per MMBtu. These records shall be kept on site and shall be provided to Department personnel upon request. Records shall be submitted in accordance with General Provisions #7 and #8. [§19.705 of Regulation 19, and 40 CFR Part 52, Subpart E]

17. The permittee shall maintain records which demonstrate compliance with the NO_X emission limits set in Specific Condition #14 and may be used by the Department for enforcement purposes. For Specific Condition #14, compliance shall be determined as the arithmetic average of three contiguous one-hour periods of NO_X emissions as measured by the CEMS and converted to pounds per hour per 40 CFR Part 75. These records shall be kept on site and shall be provided to Department personnel upon request. Records shall be submitted in accordance with General Provisions #7 and #8. [§19.705 of Regulation 19, and 40 CFR Part 52, Subpart E]

18. The permittee may burn No. 2 Fuel Oil during startup, shutdown, and malfunction. For all other No. 2 Fuel Oil burning activities, the permittee shall submit a request to EPA for a determination regarding the applicability of NSPS Subpart D limits and testing requirements during the coal and fuel oil and fuel oil only firing scenarios. Within 30 days of permit issuance, this request shall be submitted to EPA and a copy shall be submitted to the Department. The permittee may burn No. 2 Fuel Oil until a determination is made by EPA. [A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

19. The permittee shall, contemporaneously with making a change from one operating scenario to another, record in a log at the permitted facility a record of the scenario under which the

facility or source is operating. [40 CFR 70.6(a)(9)(i), §26.7 of Regulation #26, and in accordance with General Provision #17]

20. The permittee shall not exceed the rates in the following table during any consecutive twelve month period from SN-01 and SN-02 when firing coal or No. 2 fuel oil. [§19.501 of Regulation 19 et seq, and 40 CFR Part 52, Subpart E]

Table 10 – Maximum Combined SO_2 Emission Rate for SN-01 and SN-02

Source No.	Pollutant	tpy
SN-01 and SN-02	SO_2	70,877.2

21. The permittee shall maintain monthly records which demonstrate compliance with the limit set in Specific Condition #20. These records may be used by the Department for enforcement purposes. These records shall be updated no later than the last day of the month following the month which the records represent. The records shall be kept on site, and shall be provided to Department personnel upon request. A twelve month rolling total and each individual month's data shall be submitted in accordance with General Provision #7. [§19.705 of Regulation 19, and 40 CFR Part 52, Subpart E]

22. The permittee shall not exceed the rates in the following table during any consecutive twelve month period from SN-01 and SN-02 when firing coal or No. 2 fuel oil. [§19.501 of Regulation 19 et seq, and 40 CFR Part 52, Subpart E]

Table 11 – Maximum Combined NO_X Emission Rate for SN-01 and SN-02

Source No.	Pollutant	tpy
SN-01 and SN-02	NO_X	53,348.4

23. The permittee shall maintain monthly records which demonstrate compliance with the limit set in Specific Condition #22. These records may be used by the Department for enforcement purposes. These records shall be updated no later than the last day of the month following the month which the records represent. The records shall be kept on site, and shall be provided to Department personnel upon request. A twelve month rolling total and each individual month's data shall be submitted in accordance with General Provision #7. [§19.705 of Regulation 19, and 40 CFR Part 52, Subpart E]

24. SN-01 and SN-02 are subject to and shall comply with all applicable provisions of the Acid Rain Program. [§19.304 of Regulation 19, and 40 CFR Parts 72, 73, 75, 76, and 77]

25. The permittee shall submit the required electronic data reports (EDRs) to EPA Headquarters. [§19.304 of Regulation 19, and 40 CFR Part 75]

26. Relative Accuracy tests will be performed in accordance with 40 CFR, Part 75. This relative accuracy test will meet the requirements under 40 CFR, Part 60, Subpart D. [§19.304 of Regulation 19, and 40 CFR 75]

27. The permittee shall determine and record the heat input to each affected unit (SN-01 and SN-02) for every hour or part of an hour any fuel is combusted following the procedures in Appendix F of 40 CFR Part 75. [§19.304 of Regulation 19, and 40 CFR Part 75.10(c)]

28. The permittee shall test SN-01 and SN-02 for PM and PM_{10} while operating under Scenario I: Coal Firing and while operating at 90% or greater capacity. Emission results shall be extrapolated to correlate with 100% of the permitted capacity to determine compliance. The PM test shall be performed using EPA Reference Methods 5 and 202. The PM_{10} test shall be performed using EPA Reference Methods 201A and 202. These tests shall be conducted in accordance with Plantwide Condition #3.

    This testing shall be conducted within 180 days of permit issuance and every five years thereafter and when the plant's annual average sulfur content or annual average ash content changes such that:

    For PM

$$\left[\left((\text{New Sulfur \%} - \text{Tested Sulfur \%}) \times 1050\right) + \left((\text{New Ash \%} - \text{Tested Ash \%}) \times 42\right)\right] > \left[\left(\text{Permitted PM limit, lb/hr}\right) - \left(\text{Tested PM rate, lb/hr}\right)\right]$$

    or

    For PM_{10}

$$\left[\left((\text{New Sulfur \%} - \text{Tested Sulfur \%}) \times 1050\right) + \left((\text{New Ash \%} - \text{Tested Ash \%}) \times 28.35\right)\right] > \left[\left(\text{Permitted } PM_{10} \text{ limit, lb/hr}\right) - \left(\text{Tested } PM_{10} \text{ rate, lb/hr}\right)\right]$$

    These calculations shall be performed once per calendar year using the plant's annual average coal analysis data from the preceding year for the "New Sulfur" and "New Ash" variables and the data from the latest PM and PM_{10} test for the "Tested Sulfur" and "Tested Ash" variables. The calculations shall be completed prior to the end of the first quarter. Any required re-testing due to sulfur content or ash content changes shall be conducted within 180 days of detecting the change. Documentation of the coal analyses and each source's calculated results from the above two equations shall be maintained onsite. [§19.702 of Regulation 19 and 40 CFR Part 52, Subpart E]

29. The permittee shall monitor the opacity of SN-01 and SN-02 using a continuous opacity monitoring system. The permittee shall initiate corrective action when the measured opacity is greater than 20% for a one-hour average, and shall report any excursions where the opacity is 20% or greater on a three-hour average. Corrective action shall include ESP inspection, returning tripped ESP sections to service, ash removal system evaluation, and load reduction, if necessary. During startup when the ESP is offline, the corrective actions referenced above will not be required but startup shall be minimized. The permittee shall maintain records of the measured opacity and any corrective actions taken. A monitoring

report shall be submitted to the Department in accordance with General Provision #7 and shall include the following per 40 CFR §64.9(a)(2):

a. The information required under 40 CFR §70.6(a)(3)(iii);

b. Summary information on the number, duration and cause (including unknown cause, if applicable) of excursions or exceedances, as applicable, and the corrective actions taken;

c. Summary information on the number, duration and cause (including unknown cause, if applicable) for monitor downtime incidents (other than downtime associated with zero and span or other daily calibration checks, if applicable); and

d. A description of the actions taken to implement a QIP, if required, during the reporting period as specified in §64.8. Upon completion of a QIP, the owner or operator shall include in the next summary report documentation that the implementation of the plan has been completed and reduced the likelihood of similar levels of excursions or exceedances occurring. A QIP shall be required if the excess emissions for opacity, as reported on the Quarterly Excess Emissions Report, exceeds 5% of the unit operating time.

All opacity exceedances must be reported in the quarterly reports including those attributable to startup, shutdown, and malfunction. Opacity exceedances would not be reported under §19.601 of Regulation 19 for startup, shutdown, and malfunction. In accordance with §64.7(d)(2), a determination may be made by the Department regarding whether the permittee has used acceptable procedures in response to an excursion or an exceedance. [§19.304 of Regulation 19, and 40 CFR Part 64]

30. The opacity for SN-01 and SN-02 shall not exceed 20% opacity except that emissions greater than 20% opacity but not exceeding 60% opacity will be allowed for not more than six (6) minutes in the aggregate in any consecutive 60-minute period, provided such emissions will not be permitted more than three (3) times during any 24-hour period. However, the opacity limits imposed by this condition will be held in abeyance provided that opacity does not exceed 20% except that emissions greater than 20% opacity but not exceeding 27% opacity will be allowed for not more than one 6-minute period per hour, provided such emissions will not be permitted more than ten (10) times per day. Violations of this condition may be allowed as a direct result of unavoidable upset conditions in the nature of the process, or unavoidable and unforeseeable breakdown of any air pollution control equipment or related operating equipment, or as a direct result of shutdown or start-up of the operating unit, provided the following requirements are met:

a. Such occurrence, in the case of unavoidable upset in or breakdown of equipment, shall have been reported to the Department by means of a notification delivered

by phone, fax, or email by the end of the next business day after the discovery of the occurrence.

b. The facility shall submit to the Department, at its request, a full report of such occurrence, including a statement of all known causes and of the scheduling and nature of the actions to be taken to minimize or eliminate future occurrences, including, but not limited to, action to reduce the frequency of occurrence of such conditions, to minimize the amount by which said limits are exceeded, and to reduce the length of time for which said limits are exceeded.

c. In the case of shutdown for necessary scheduled maintenance, the intent to shutdown shall be reported to the Department at least twenty-four (24) hours prior to the shutdown; provided, however, that the exception provided by this condition shall only apply in those cases where maximum reasonable effort has been made to accomplish such maintenance during periods of non operation of any related source operation or where it would be unreasonable or impossible to shut down the source operation during the maintenance period. Any information which is considered a trade secret under 8-4-308 shall be submitted with an affidavit containing the information of Regulation 18.1402(B).

d. Demonstrates to the satisfaction of the Department that the emissions resulted from:

1. equipment malfunction or upset and are not the result of negligence or improper maintenance;

2. physical constraints on the ability of a source to comply with the emission standard, limitation or rate during startup or shutdown;

And that all reasonable measures have been taken to immediately minimize or eliminate the excess emissions. Opacity exceedances shall be reported in accordance with Specific Condition #11. [§18.102(C), §18.501, and §18.1101 of Regulation 18 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

31. The permittee shall sample and analyze each shipment of fuel oil to determine the sulfur content. The sulfur content shall not exceed 0.5 weight percent. Fuel oil sampling and analysis may be performed by the owner or operator of an affected unit, an outside laboratory, or a fuel supplier, provided that sampling is performed according to ASTM D4057. Each shipment shall be defined as a 5,000 or 10,000 barrel lot delivered to a pipeline and pumped to a loading rack. *(Note: Vendor testing would satisfy this requirement as long as the sampling is performed according to ASTM D4057 and the facility is able to meet the requirements of Specific Condition #32.)* [§19.703 of Regulation 19, 40 CFR Part 52, Subpart E, and A.C.A. §8- 4-203 as referenced by §8-4-304 and §8-4-311]

32. The permittee shall maintain records of fuel oil sampling. These records shall be kept on site and made available to Department personnel upon request. These records may be used by the Department for enforcement purposes. [§19.705 of Regulation 19, and 40 CFR Part 52, Subpart E]

33. No. 2 fuel oil is the only fuel permitted for use in the Auxiliary boiler, SN-05. [§19.705 of Regulation 19, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6]

34. The permittee shall not exceed the emission rates set forth in the following table when burning No. 2 fuel oil in the Auxiliary boiler, SN-05. [§19.501 of Regulation 19 et seq, and 40 CFR Part 52, Subpart E]

Table 12 – Maximum Criteria Pollutant Emission Rates for SN-05

Source No.	Pollutant	lb/hr	tpy
SN-05	PM_{10}	4.5	19.4
	SO_2	105.2	460.8
	VOC	0.4	1.5
	CO	6.7	29.4
	NO_X	32.2	140.9
	Lead	0.1	0.1

35. The permittee shall not exceed the emission rates set forth in the following table when burning No. 2 fuel oil in the Auxiliary boiler, SN-05. [§18.801 of Regulation 18, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

Table 13 – Maximum Non-Criteria Pollutant Emission Rates for SN-05

Source No.	Pollutant	lb/hr	tpy
SN-05	PM	4.5	19.4
	Arsenic	0.01	0.01
	Beryllium	0.001	0.003
	Cadmium	0.001	0.003
	Chromium	0.01	0.01
	Formaldehyde	0.07	0.29
	Manganese	0.01	0.01
	Mercury	0.01	0.01
	Nickel	0.01	0.01
	POM	0.01	0.02
	Selenium	0.01	0.02
	N_2O	0.15	0.65

36. The opacity shall not exceed 20% from SN-05 as measured by EPA Reference Method 9. [§19.503 of Regulation 19 and 40 CFR Part 52, Subpart E]

37. Weekly observations of the opacity from SN-05 shall be conducted by personnel familiar with the permittee's visible emissions, when it operates more than one continuous hour. The permittee shall keep records of these observations. The permittee shall maintain personnel trained in (but not necessarily certified in) EPA Reference Method 9. If visible emissions are detected, then the permittee shall conduct a 6-minute opacity reading in accordance with EPA Reference Method 9. Records of the opacity observations shall be updated weekly, maintained on site, and made available to Department personnel upon request. [§19.705 of Regulation 19 and 40 CFR Part 52, Subpart E]

38. The permittee shall maintain records of when SN-05 is operated. These records shall be maintained on site, and made available to Department personnel upon request. [§19.705 of Regulation 19 and 40 CFR Part 52, Subpart E]

SN-03, SN-06A, SN-06B, and SN-06C

Rail Car Rotary Dumper and Handling/Conveying Emissions

Source Descriptions

SN-03 The coal for the Independence Steam Electric Station is received by rail. Each rail car is equipped with rotary couplings which enable the rail car rotary dumper to grasp one car at a time and empty it without removing the car from the train. The rail car rotary dumper, SN-03, is capable of emptying approximately 30 cars per hour. The rotoclone and water sprays previously used to control emissions from this process were replaced by chemical foam spray in 2001. Emissions from the rail car rotary dumper are regulated under the State Implementation Plan (SIP), Regulation 19.

SN-06 Minor emission sources at the facility include coal handling/conveying operations (not subject to NSPS Subpart Y). Dust emissions from the coal handling operations (SN-06) were previously controlled with AMERCLONES, rotoclones and wet sprays. Beginning in 2001, dust emissions are now controlled with water and a chemical foam spray. SN-06 is separated into three sources: SN-06A, SN-06B, and SN-06C. SN-06A, Handling and Conveying Emissions, includes emission points M2, M3, M5, M6, M7, M8, M9, M12, M13, M14, M15, M16, M24, M25, M26, M27, M28, M32, and M33. SN-06B, Stacker/Reclaimer Emissions, includes emission points M17, M18, M20, M21, M22, and M23. SN-06C, Storage Piles and Haul Road Emissions, includes emission points M11 and M34. Emissions are regulated under the State Implementation Plan (SIP), Regulation 19.

Specific Conditions

39. The permittee shall not exceed the emission rates set forth in the following table. [§19.501 et seq of the Regulations of the Arkansas Plan of Implementation for Air Pollution Control (Regulation #19) effective February 15, 1999 and 40 CFR Part 52, Subpart E]

Table 14 – Maximum Criteria Pollutant Emission Rates for SN-03 and SN-06

Source No.	Pollutant	lb/hr	tpy
SN-03 and SN-06	VOC	1.3	2.2
SN-03	PM_{10}	0.1	0.1
SN-06A	PM_{10}	0.3	1.3
SN-06B	PM_{10}	0.3	1.1
SN-06C	PM_{10}	35.5	78.5

40. The permittee shall not exceed the emission rates set forth in the following table. [§18.801 of the Arkansas Air Pollution Control Code (Regulation #18) effective February 15, 1999, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

Table 15 – Maximum Non-Criteria Pollutant Emission Rates for SN-03 and SN-06

Source No.	Pollutant	lb/hr	tpy
SN-03	PM	16.0	70.1
SN-06A	PM	0.6	2.6
SN-06B	PM	0.6	2.3
SN-06C	PM	131.4	247.8

41. The permittee shall not use any chemical foam spray at SN-03 and SN-06 which contains HAPs. [§18.1004 of Regulation 18, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

42. Records shall be maintained to demonstrate compliance with Condition #41. These records shall be updated no later than the last day of the month following the month which the records represent. Such records shall be submitted to the Department in accordance with General Provision #7. [§18.1004 of Regulation 18, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

43. The VOC content of the chemical foam spray used at SN-03 and SN-06 shall not exceed 1.42% by weight. [§19.705 of Regulation 19, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR Part 70.6]

44. Records shall be maintained to demonstrate compliance with Specific Condition #43. These records shall be updated no later than the last day of the month following the month which the records represent. Such records shall be submitted to the Department in accordance with General Provision #7. [§19.705 of Regulation 19, and 40 CFR Part 52, Subpart E]

45. Usage of the chemical foam spray at SN-03 and SN-06 shall not exceed 300,000 pounds in any consecutive twelve month period. [§19.705 of Regulation 19, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR Part 70.6]

46. The permittee shall maintain monthly records to demonstrate compliance with Specific Condition #45. These records shall be updated no later than the last day of the month following the month which the records represent. The records shall be kept on site, and shall be provided to Department personnel upon request. A twelve month rolling total and each individual month's data shall be submitted in accordance with General Provision #7. [§19.705 of Regulation 19, and 40 CFR Part 52, Subpart E]

47. The permittee shall not cause to be discharged into the atmosphere any emissions which exhibit an opacity greater than 20% from the sources at SN-03. The opacity shall be

measured in accordance with EPA Reference Method 9. [§19.503 of Regulation 19, and 40 CFR Part 52, Subpart E]

48. Weekly observations of the opacity from source SN-06A shall be conducted by personnel familiar with the permittee's visible emissions. The permittee shall maintain personnel trained in (but not necessarily certified in) EPA Reference Method 9. If visible emissions from any of the towers, enclosed conveyors, or silos are detected, the permittee shall take action to identify the cause of the visible emissions, implement corrective action, and document if visible emissions were present following the corrective action. If visible emissions are still present following the corrective action, the permittee shall document that visible emissions do not appear to be in excess of 20% opacity and shall document that visible emissions did not cause a nuisance off-site. The permittee shall maintain records which contain the following items in order to demonstrate compliance with this condition. These records shall be updated weekly, kept on site, and made available to Department personnel upon request.

    a. The date and time of the observation.

    b. If visible emissions were detected.

    c. If visible emissions were detected, the cause of the visible emissions, the corrective action taken, and if the visible emissions were present following the corrective action.

    d. If visible emissions were present following the corrective action, document that the visible emissions do not appear to be in excess of 20% opacity and document that the visible emissions do not cause a nuisance off-site.

    e. The name of the person conducting the opacity observations.

49. The permittee shall conduct weekly observations of the opacity for source SN-06B. Weekly observations from source SN-06B shall be conducted by personnel familiar with the permittee's visible emissions. The permittee shall maintain personnel trained in (but not necessarily certified in) EPA Reference Method 9. If visible emissions from stackout, reclaiming, or any of the belts or transfer points are detected, the permittee shall take action to identify the cause of the visible emissions, implement corrective action, and document if visible emissions were present following the corrective action. If visible emissions are still present following the corrective action, the permittee shall document that visible emissions do not cause a nuisance beyond the property boundary. Under normal conditions, off-site opacity less than or equal to 5% shall not be considered a nuisance. The permittee shall maintain records which contain the following items in order to demonstrate compliance with this condition. These records shall be updated weekly, kept on site, and made available to Department personnel upon request.

    a. The date and time of the observation.

b. If visible emissions were detected.

c. If visible emissions were detected, the cause of the visible emissions, the corrective action taken, and if the visible emissions were present after the corrective action was taken.

d. If visible emissions were present following the corrective action, document that the visible emissions do not cause a nuisance beyond the property boundary.

e. The name of the person conducting the opacity observations.

50. The permittee shall not operate in a manner such that fugitive emissions from the storage piles, pile operations (such as operation of mobile equipment upon the storage pile), and haul road (SN-06C) would cause a nuisance off-site. Under normal conditions, off-site opacity less than or equal to 5% shall not be considered a nuisance. The permittee shall use water sprays or other techniques as necessary to control fugitive emissions.

51. The permittee shall use the foam sprays while the dumper (SN-03) is in operation and at all times when the Transfer Points (SN-06) including Bins, Silos, etc., that are equipped with the foam spray controls are in use except when the ambient temperature is below 40 degrees F or while it is raining. [§19.303 of Regulation 19 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

52. The permittee shall comply with the maintenance plan submitted to the Department for the rotary car dumper, SN-03 (See Appendix C). The requirements include but are not limited to the following:

a. inspect spray nozzles for pluggage,
b. check air pressure and flow,
c. check water pressure and water/dust foam flow, and
d. check for adequate dust foam chemical additive.

The permittee may use equivalent or alternative plans for this source without undergoing a modification to this permit if the new maintenance plans have been reviewed and approved by the Department. The permittee is required to submit any new maintenance plan for this source to the Department and may not implement the maintenance plan until the facility receives approval from the Department. The permittee must submit the proposed maintenance plan(s) with a cover letter explaining any changes to the following address.

Arkansas Department of Environmental Quality
Air Division
ATTN: Compliance Inspector Supervisor
Post Office Box 8913
Little Rock, AR 72219

[§19.304 of Regulation 19, and 40 CFR 70.6]

53. The fly ash trucks hauling ash for disposal in the on-site landfill shall not exceed 19,440 vehicle miles traveled per consecutive twelve (12) month period on paved roads and 9,720 vehicle miles traveled per consecutive twelve (12) month period on unpaved roads. [§19.705 of Regulation 19, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR Part 70.6]

54. The permittee shall maintain monthly records to demonstrate compliance with Specific Condition #53. Compliance shall be demonstrated by recording the tons of fly ash disposed of in the on-site landfill and calculating the mileage based on the following calculations:

$$\text{Monthly Total Paved Miles Traveled} = \left(\frac{\text{Monthly tons disposed}}{\text{26 tons per round trip}} \right) \times \left(\text{"Miles Paved" per round trip} \right)$$

$$\text{Monthly Total Unpaved Miles Traveled} = \left(\frac{\text{Monthly tons disposed}}{\text{26 tons per round trip}} \right) \times \left(\text{"Miles Unpaved" per round trip} \right)$$

The round trip mileage to the on-site landfill will be checked annually to determine the number of miles on paved and unpaved road. This check will be completed prior to the end of the first quarter of the year. The results will be recorded and used in the calculation for the remainder of the year unless an additional check is performed. The total miles traveled records shall be updated no later than the last day of the month following the month which the records represent. The records shall be kept on site, and shall be provided to Department personnel upon request. A twelve month rolling total and each individual month's data shall be submitted in accordance with General Provision #7. [§19.705 of Regulation 19, and 40 CFR Part 52, Subpart E]

55. The permittee shall not operate the three Coal Yard Dozers more than a combined 9,000 hours per consecutive twelve (12) month period, and the water wagon shall not exceed 3,000 hours of operation per consecutive twelve (12) month period. Hours of operation do not include time spent idling while stationary. [§19.705 of Regulation 19, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR Part 70.6]

56. The permittee shall maintain monthly records to demonstrate compliance with Specific Condition #55. These records shall be updated no later than the last day of the month following the month which the records represent. The records shall be kept on site, and shall be provided to Department personnel upon request. A twelve month rolling total and each individual month's data shall be submitted in accordance with General Provision #7. [§19.705 of Regulation 19, and 40 CFR Part 52, Subpart E]

SN-04

Fly Ash Silos with Fabric Filters

Source Description

The Independence Plant is equipped with two (2) fly ash silos. Particulate emissions from the silos are controlled by fabric filters (SN-04) with control efficiency of 99.9% for PM and 99.8% for PM_{10}. Emissions are regulated under the State Implementation Plan, (SIP), Regulation 19.

Specific Conditions

57. The permittee shall not exceed the emission rates at SN-04 specified in the following table. [§19.501 of Regulation 19 et seq, and 40 CFR Part 52, Subpart E]

Table 16 – Maximum Criteria Pollutant Emission Rates for SN-04

Source No.	Pollutant	lb/hr	tpy
SN-04	PM_{10}	0.1	0.1

58. The permittee shall not exceed the emission rates at SN-04 specified in the following table. [§18.801 of Regulation 18, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

Table 17 – Maximum Non-Criteria Pollutant Emission Rates for SN-04

Source No.	Pollutant	lb/hr	tpy
SN-04	PM	4.0	17.6

59. The permittee shall not cause to be emitted from this source any emission which exhibit an opacity greater than 20 percent. The opacity shall be measured in accordance with EPA Reference Method 9. [§19.503 of Regulation 19, and 40 CFR Part 52, Subpart E]

60. Plant personnel will perform a daily visual check, during daylight hours, to ensure the baghouse is functioning properly. Observations of the opacity from source SN-04 shall be conducted by personnel familiar with the permittee's visible emissions. These observations of opacity shall be conducted weekly and whenever visible emissions are detected during the daily visual checks. The permittee shall maintain personnel trained in (but not necessarily certified in) EPA Reference Method 9. If visible emissions are detected, the permittee shall identify the cause of the visible emissions and implement corrective action. The permittee shall maintain records which contain the following items in order to demonstrate compliance with this condition. These records shall be updated daily, kept on site, and made available to Department personnel upon request. The records shall be submitted to the Department in accordance with General Provision #7. [§19.705 of Regulation 19; 40 CFR Part 52, Subpart E; and 40 CFR Part 64]

a. The date and time of the opacity observation and/or visual check.

b. If any visible emissions were detected.

c. If any visible emissions were detected, the permittee shall document the opacity, the cause of the visible emissions, the corrective action taken, any necessary repairs, and if any visible emissions were detected following the repairs.

d. The name of the person conducting the opacity observation and/or visual check.

61. The permittee shall comply with the maintenance plan submitted to the Department for the fly ash silos (See Appendix C). Requirements include but are not limited to the following:

a. Check air leaks on pulsation system;
b. Check air operated valves;
c. Check piping and supports;
d. Check air cylinders;
e. Check baghouse doors and seals;
f. Check bags;
g. Check diffuser blower bearings for heat and vibration;
h. Check blower case for excessive heat buildup;
i. Check inlet filter and change as needed.

The permittee may use equivalent or alternative maintenance plans for this source without undergoing a modification to this permit. [§19.303 of Regulation 19, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

62. The permittee shall conduct semi-annual maintenance inspections on the baghouses at SN-04. These inspections shall include checking all of the requirements listed in Specific Condition #61. The permittee shall maintain a record of these inspections. This record shall be kept on site and made available to Department personnel upon request. [§19.705 of Regulation 19; 40 CFR Part 52, Subpart E; and 40 CFR Part 64]

SN-07

Fuel Oil Storage Tank

Source Description

No. 2 Fuel Oil is stored in a storage tank on site. The tank has a capacity of 3,360,000 gallons or 80,000 barrels. The tank is cylindrical with a fixed roof. Emissions from the storage tank are 1.7 tons/year of volatile organic compounds (VOCs). Emissions are regulated under the State Implementation Plan (SIP), Regulation 19.

Specific Conditions

63. The permittee shall not exceed the emission rates at SN-07 as specified in the following table. [§19.501 of Regulation 19 et seq, and 40 CFR Part 52, Subpart E]

Table 18 – Maximum Criteria Pollutant Emission Rates for SN-07

Source No.	Pollutant	lb/hr	tpy
SN-07	VOC	0.4	1.7

64. The permittee shall not exceed the annual throughput limit of 112,000,000 gallons of No. 2 fuel oil at SN-07 during any consecutive twelve month period. [§19.705 of Regulation 19, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6]

65. The permittee shall maintain records which demonstrate compliance with the limit set forth in Specific Condition #64 . These records may be used by the Department for enforcement purposes. These records shall be updated no later than the last day of the month following the month which the records represent. The twelve month rolling total and each individual month's data shall be kept on site, provided to Department personnel upon request, and submitted in accordance with General Provision #7. [§19.705 of Regulation 19, and 40 CFR Part 52, Subpart E]

SN-12 and SN-13

Miscellaneous Storage Tanks

Source Description

SN-12 (T27) is a 15,000 gallon tank used to store diesel.

SN-13 (T29) is a 2,500 gallon tank used to store gasoline.

Emissions from the tanks are volatile organic compounds (VOCs) which are regulated under the State Implementation Plan (SIP), Regulation 19.

Specific Conditions

66. The permittee shall not exceed the emission rates specified in the following table. [§19.501 of Regulation 19 et seq, and 40 CFR Part 52, Subpart E]

Table 19 – Maximum Criteria Pollutant Emission Rates for SN-12 and SN-13

Source No.	Pollutant	lb/hr	tpy
SN-12 (T27)	VOC	0.1	0.1
SN-13 (T29)	VOC	0.1	0.1

67. The permittee shall store only diesel in storage tank SN-12. Supporting documentation shall be maintained on site to demonstrate compliance with this specific condition. [§19.705 of Regulation 19, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6]

68. The permittee shall store only gasoline in storage tank SN-13. Supporting documentation shall be maintained on site to demonstrate compliance with this specific condition. [§19.705 of Regulation 19, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6]

69. The permittee shall not exceed an annual throughput limit of 200,000 gallons of diesel at SN-12 during any consecutive twelve month period. [§19.705 of Regulation 19, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6]

70. The permittee shall not exceed an annual throughput of 15,600 gallons of gasoline at SN-13 during any consecutive twelve month period. [§19.705 of Regulation 19, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6]

71. The permittee shall maintain records which demonstrate compliance with the limits set in Specific Conditions #69 and #70. These records may be used by the Department for

enforcement purposes. These records shall be updated no later than the last day of the month following the month which the records represent. The twelve month rolling total and each individual month's data shall be kept on site, provided to Department personnel upon request, and submitted in accordance with General Provision #7. [§19.705 of Regulation 19, and 40 CFR Part 52, Subpart E]

SN-16 and SN-17

Cooling Towers

Source Description

The Independence Steam Electric Station operates two (2) cooling towers for waste heat dissipation. The cooling towers obtain makeup water from the White River and from the capture of site drainage. Emissions from the towers are particulate matter which are regulated under the State Implementation Plan, (SIP), Regulation 19.

Specific Conditions

72. The permittee shall not exceed the emission rates specified in the following table. [§19.501 of Regulation 19 et seq, and 40 CFR Part 52, Subpart E]

Table 20 – Maximum Criteria Pollutant Emission Rates for SN-16 and SN-17

Source No.	Pollutant	lb/hr	tpy
SN-16 (X35)	PM_{10}	5.7	24.9
SN-17 (X36)	PM_{10}	5.7	24.9

73. The permittee shall not exceed the emission rates specified in the following table. [§18.801 of Regulation 18, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

Table 21 – Maximum Non-Criteria Pollutant Emission Rates for SN-16 and SN-17

Source No.	Pollutant	lb/hr	tpy
SN-16 (X35)	PM	5.7	24.9
SN-17 (X36)	PM	5.7	24.9

74. The permittee shall not cause to be discharged to the atmosphere from this source any cooling tower drift emissions which exhibit an opacity greater than 5 percent. The opacity shall be measured in accordance with EPA Reference Method 9. [§18.501 of Regulation 18, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

75. The permittee shall operate the cooling towers within the design specifications listed in Appendix C. Compliance with the design specifications may demonstrate compliance with the limit specified in Specific Condition #74. [A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

76. The total dissolved solids content shall not exceed 3,600 parts per million. [§19.705 of Regulation 19, A.C.A. §8- 4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6]

77. The permittee shall monitor the total dissolved solids weekly when the unit is operating to demonstrate compliance with Specific Condition #76. The permittee shall maintain records that demonstrate compliance with this specific condition. These records shall be updated weekly, kept on site, and made available to Department personnel upon request. [§19.705 of Regulation 19, and 40 CFR Part 52, Subpart E]

78. The circulating water flow for SN-16 and SN-17 shall not exceed 21,600 kgal/hr per Tower. [§19.705 of Regulation 19, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6]

79. The permittee shall test the circulating water flow annually to demonstrate compliance with this Specific Condition #78. The permittee shall maintain records that demonstrate compliance with this specific condition. These records shall be updated annually, kept on site, and made available to Department personnel upon request. [§19.705 of Regulation 19, and 40 CFR Part 52, Subpart E]

SN-18

Degreasing Operations

Source Description

This source consists of eight (8) degreasers with a total capacity of 546 gallons. Two (2) of the degreasers are used during outage periods only. One of the degreasers, the turbine oil filter degreaser (16 gallon capacity), uses a different solvent than the other 7 degreasers.

Specific Conditions

80. The permittee shall not exceed the emission rates specified in the following table. [§19.501 of Regulation 19 et seq, and 40 CFR Part 52, Subpart E].

Table 22 – Maximum Criteria Pollutant Emission Rates for SN-18

Source No.	Pollutant	lb/hr	tpy
SN-18	VOC	8.5	10.4

81. The VOC content of the solvent used at the turbine oil filter degreaser shall not exceed 7.59 pounds of VOC per gallon of solvent. Material Safety Data Sheets shall be maintained on site to demonstrate compliance with this specific condition. [§19.705 of Regulation 19, A.C.A. §8- 4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6]

82. The VOC content of the solvent used at all degreasers other than the turbine oil filter degreaser shall not exceed 6.8 pounds of VOC per gallon of solvent. Material Safety Data Sheets shall be maintained on site to demonstrate compliance with this specific condition. [§19.705 of Regulation 19, A.C.A. §8- 4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6]

83. The throughput of the turbine oil filter degreaser shall not exceed 32 gallons of solvent per consecutive twelve-month period. [§19.705 of Regulation 19, A.C.A. §8- 4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6]

84. The throughput of all degreasers excluding the turbine oil filter degreaser shall not exceed 3,000 gallons of solvent per consecutive twelve-month period. [§19.705 of Regulation 19, A.C.A. §8- 4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6]

85. Monthly records shall be maintained to demonstrate compliance with Specific Conditions #83 and #84. These records shall be updated no later than the last day of the month following the month which the records represent. A twelve month rolling total and each individual month's data shall be maintained on site, made available to Department personnel

upon request, and submitted in accordance with General Provision #7. [§19.705 of Regulation 19, and 40 CFR Part 52, Subpart E]

SN-19

Grit Blaster

Source Description

This source consists of a grit blaster used for small parts cleaning. The maximum hourly abrasive usage rate is 550 lb/hr. The emissions are controlled with a baghouse.

Specific Conditions

86. The permittee shall not exceed the emission rates specified in the following table. [§19.501 of Regulation 19 et seq, and 40 CFR Part 52, Subpart E].

Table 23 – Maximum Criteria Pollutant Emission Rates for SN-19

Source No.	Pollutant	lb/hr	tpy
SN-19 (X23)	PM_{10}	0.7	2.7

87. The permittee shall not exceed the emission rates specified in the following table. [§18.801 of Regulation 18, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

Table 24 – Maximum Non-Criteria Pollutant Emission Rates for SN-19

Source No.	Pollutant	lb/hr	tpy
SN-19 (X23)	PM	1.8	7.6

88. The permittee shall not cause to be emitted from this source any emission which exhibit an opacity greater than 5 percent. The opacity shall be measured in accordance with EPA Reference Method 9. [§18.501 of Regulation 18, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

89. The permittee shall operate the baghouse according to the manufacturer's specifications. Compliance with this specific condition may demonstrate compliance with Specific Condition #88. [§19.303 of Regulation 19 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

Section V: COMPLIANCE PLAN AND SCHEDULE

Entergy Arkansas, Inc. – Independence will continue to operate in compliance with those identified regulatory provisions. The facility will examine and analyze future regulations that may apply and determine their applicability with any necessary action taken on a timely basis.

Section VI: PLANT WIDE CONDITIONS

1. The permittee will notify the Director in writing within thirty (30) days after commencing construction, completing construction, first placing the equipment and/or facility in operation, and reaching the equipment and/or facility target production rate. [Regulation No. 19 §19.704, 40 CFR Part 52, Subpart E, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

2. If the permittee fails to start construction within eighteen months or suspends construction for eighteen months or more, the Director may cancel all or part of this permit. [Regulation No. 19 §19.410(B) and 40 CFR Part 52, Subpart E]

3. The permittee must test any equipment scheduled for testing, unless stated in the Specific Conditions of this permit or by any federally regulated requirements, within the following time frames: (1) New Equipment or newly modified equipment within sixty (60) days of achieving the maximum production rate, but no later than 180 days after initial start-up of the permitted source or (2) operating equipment according to the time frames set forth by the Department or within 180 days of permit issuance if no date is specified. The permittee must notify the Department of the scheduled date of compliance testing at least fifteen (15) days in advance of such test. The permittee will submit the compliance test results to the Department within thirty (30) days after completing the testing. [Regulation 19 §19.702 and/or Regulation 18 §18.1002 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

4. The permittee must provide: [Regulation No. 19 §19.702 and/or Regulation No. 18 §18.1002 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

    a. Sampling ports adequate for applicable test methods
    b. Safe sampling platforms
    c. Safe access to sampling platforms
    d. Utilities for sampling and testing equipment.

5. The permittee must operate the equipment, control apparatus and emission monitoring equipment within the design limitations. The permittee will maintain the equipment in good condition at all times. [Regulation No. 19 §19.303 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

6. This permit subsumes and incorporates all previously issued air permits for this facility. [Regulation No. 26 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

Acid Rain (Title IV)

7. The Director prohibits the permittee to cause any emissions exceeding any allowances the source lawfully holds under Title IV of the Act or the regulations promulgated under the Act. No permit revision is required for increases in emissions allowed by allowances

acquired pursuant to the acid rain program, if such increases do not require a permit revision under any other applicable requirement. This permit establishes no limit on the number of allowances held by the permittee. However, the source may not use allowances as a defense for noncompliance with any other applicable requirement of this permit or the Act. The permittee will account for any such allowance according to the procedures established in regulations promulgated under Title IV of the Act. [Regulation No. 26 §26.701 of and 40 CFR 70.6(a)(4)]

Title VI Provisions

8. The permittee must comply with the standards for labeling of products using ozone-depleting substances. [40 CFR Part 82, Subpart E]

    a. All containers containing a class I or class II substance stored or transported, all products containing a class I substance, and all products directly manufactured with a class I substance must bear the required warning statement if it is being introduced to interstate commerce pursuant to §82.106.

    b. The placement of the required warning statement must comply with the requirements pursuant to §82.108.

    c. The form of the label bearing the required warning must comply with the requirements pursuant to §82.110.

    d. No person may modify, remove, or interfere with the required warning statement except as described in §82.112.

9. The permittee must comply with the standards for recycling and emissions reduction, except as provided for MVACs in Subpart B. [40 CFR Part 82, Subpart F]

    a. Persons opening appliances for maintenance, service, repair, or disposal must comply with the required practices pursuant to §82.156.

    b. Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to §82.158.

    c. Persons performing maintenance, service repair, or disposal of appliances must be certified by an approved technician certification program pursuant to §82.161.

    d. Persons disposing of small appliances, MVACs, and MVAC-like appliances must comply with record keeping requirements pursuant to §82.166. (“MVAC-like appliance” as defined at §82.152.)

e. Persons owning commercial or industrial process refrigeration equipment must comply with leak repair requirements pursuant to §82.156.

f. Owners/operators of appliances normally containing 50 or more pounds of refrigerant must keep records of refrigerant purchased and added to such appliances pursuant to §82.166.

10. If the permittee manufactures, transforms, destroys, imports, or exports a class I or class II substance, the permittee is subject to all requirements as specified in 40 CFR Part 82, Subpart A, Production and Consumption Controls.

11. If the permittee performs a service on motor (fleet) vehicles when this service involves ozone-depleting substance refrigerant (or regulated substitute substance) in the motor vehicle air conditioner (MVAC), the permittee is subject to all the applicable requirements as specified in 40 CFR part 82, Subpart B, Servicing of Motor Vehicle Air Conditioners.

The term "motor vehicle" as used in Subpart B does not include a vehicle in which final assembly of the vehicle has not been completed. The term "MVAC" as used in Subpart B does not include the air-tight sealed refrigeration system used as refrigerated cargo, or the system used on passenger buses using HCFC-22 refrigerant.

12. The permittee can switch from any ozone-depleting substance to any alternative listed in the Significant New Alternatives Program (SNAP) promulgated pursuant to 40 CFR Part 82, Subpart G, "Significant New Alternatives Policy Program".

Permit Shield

13. Compliance with the conditions of this permit shall be deemed compliance with all applicable requirements, as of the date of permit issuance, included in and specifically identified in Table 25 – Applicable Regulations of this condition. The permit specifically identifies the following as applicable requirements based upon the information submitted by the permittee in an application dated November 27, 2002.

Table 25 – Applicable Regulations

Regulation	Description	Basis
Regulations of the Arkansas Operating Air Permit Program	Regulation 26 Section 3	Facility is defined as a major source.
State Implementation Plan, Prevention of Significant Deterioration Supplement	Regulation 19 §19.9	Facility is currently a major stationary source for the purpose of applicability.

Regulation	Description	Basis
New Source Performance Standards for Fossil-Fuel-Fired Steam Generators after August 17, 1978	40 CFR 60 Subpart D	Fossil-fuel fired steam generating units have heat input rate greater than 250 MMBtu/hr.
National Emission Standards for Hazardous Air Pollutants	40 CFR 61 Subpart M	Facility meets requirements for asbestos.
Acid Rain Permit Regulations	40 CFR 72 Subpart A-D	Units meet the definition of an affected source.
SO_2 Allowance Allocations	40 CFR 73 Subpart B	Facility is on list of Phase II Allowance Allocations.
Continuous Emission Monitoring	40 CFR 75 Subpart A-D, F, and G	Facility is subject to Acid Rain Requirements for the purpose of applicability.
NO_X Emission Reduction Program	40 CFR 76	Facility is subject to Acid Rain Requirements for the purpose of applicability.
Excess Emissions	40 CFR 77	Facility is subject to Acid Rain Requirements for the purpose of applicability.
Prevention of Significant Deterioration of Air Quality (PSD)	40 CFR 52.21	Facility is subject to PSD requirements.
Compliance Assurance Monitoring (CAM)	40 CFR 64	Facility is subject to CAM requirements.
Protection of Stratospheric Ozone	40 CFR 82	Facility is subject to these requirements.

The permit specifically identifies the following as inapplicable based upon information submitted by the permittee in an application dated November 27, 2002.

Table 26 – Inapplicable Regulations

Source No.	Regulation	Description
Not Applicable		

14. The annual throughput of coal at the facility shall not exceed 9.2 million tons of coal per any consecutive twelve month period. [§19.705 of Regulation 19, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6]

15. The permittee shall maintain records which demonstrate compliance with the limit set in Plantwide Condition #14. These records shall be updated on a monthly basis, shall be

kept on site, shall be provided to Department personnel upon request, and shall be submitted in accordance with General Provision #7. [§19.705 of Regulation 19, and 40 CFR Part 52, Subpart E]

16. The permittee shall submit a compliance certification with state-only enforceable terms and conditions contained in the permit, including emission limitations, standards, or work practices. This compliance certification shall be submitted annually to the Department. All compliance certifications required by this permit shall include the following:

    a. The identification of each term or condition of the permit that is the basis of the certification;
    b. The compliance status;
    c. Whether compliance was continuous or intermittent;
    d. The method(s) used for determining the compliance status of the source, currently and over the reporting period established by the monitoring requirements of this permit; and
    e. Such other facts as the Department may require elsewhere in this permit.

    This compliance certification may be in the same format as, and may be included with, the annual compliance certification required by General Provision 21. [§18.1004 of the Arkansas Air Pollution Control Code (Regulation 18)]

Section VII: INSIGNIFICANT ACTIVITIES

The following sources are insignificant activities. Any activity that has a state or federal applicable requirement is a significant activity even if this activity meets the criteria of §304 of Regulation 26 or listed in the table below. Insignificant activity determinations rely upon the information submitted by the permittee in an application dated November 27, 2002 and correspondence dated May 30, 2003.

Table 27 - Insignificant Activities

Description	Category
Microwave Tower Propane Generator (C6), Kerosene Fired Space Heaters #1-#4 (C7-C10)	A-1
Storage tanks less than 250 gallons storing organic liquids having a true vapor pressure less than or equal to 3.5 psia, provided that the aggregate pollutant specific emissions from all such liquid storage tanks listed as insignificant do not exceed 5 tpy of any combination of HAPs and 10 tpy of any other pollutant. (T52, T63-T65)	A-2
Storage tanks less than 10,000 gallons storing organic liquids having a true vapor pressure less than or equal to 0.5 psia, provided that the aggregate pollutant specific emissions from all such liquid storage tanks listed as insignificant do not exceed 5 tpy of any combination of HAPs and 10 tpy of any other pollutant. (T3-T12, T14-T26, T28, T32-T33, T47-T48)	A-3
Caustic storage tank containing no VOCs. (T36B, T36C, T37)	A-4
Emissions from laboratory equipment/vents (V38 and V39)	A-5

Description	Category
Emergency use generators, boilers, or other fuel burning equipment that is of equal or smaller capacity than the primary operating unit, cannot be used in conjunction with the primary operating unit, and does not emit or have the potential to emit regulated air pollutants in excess of the primary operating unit and not operated more than 90 days a year. (C4, C5)	A-12
Other activities for which the facility demonstrates that no enforceable permit conditions are necessary to insure compliance with any applicable law or regulation provided that the emissions are less than 5 tpy of any pollutant regulated under this regulation or less than 1 tpy of a single HAP or 2.5 tpy of any combination of HAPs. Unit 1 Turbine Lube Oil Storage Tank (T2), Unit 2 Lube Oil Storage Tank (T13), Unleaded Gasoline Storage Tank - 500 gal (T30), Oil/Water Separator (W5-W7), Oil/Waste Basin (W8), Turbine Area Sump (W9), Fuel Dispensing Stations (X1-X8), Welding Area (X10-X15), Transformers (X24-X28), Switchyard Oil Circuit Breaker (X29), Unit 1 and Unit 2 Battery Room (X30-X31), Common Battery Room (X32), Metalizer (X34), Aerosol Lubricant Fugitives (X57), Aerosol Degreaser Fugitives (X58), and Insecticide Fugitives (X59)	A-13
AC Chiller – Pressure Tanks (X38-X45 and X53-X56)	Pressure Tanks No Emissions

Pursuant to §26.304 of Regulation 26, the Department determined the emission units, operations, or activities contained in Regulation 19, Appendix A, Group B, to be insignificant activities. Activities included in this list are allowable under this permit and need not be specifically identified.

Section VIII: GENERAL PROVISIONS

1. Any terms or conditions included in this permit which specify and reference Arkansas Pollution Control & Ecology Commission Regulation 18 or the Arkansas Water and Air Pollution Control Act (A.C.A. §8-4-101 *et seq*.) as the sole origin of and authority for the terms or conditions are not required under the Clean Air Act or any of its applicable requirements, and are not federally enforceable under the Clean Air Act. Arkansas Pollution Control & Ecology Commission Regulation 18 was adopted pursuant to the Arkansas Water and Air Pollution Control Act (A.C.A. §8-4-101 *et seq*.). Any terms or conditions included in this permit which specify and reference Arkansas Pollution Control & Ecology Commission Regulation 18 or the Arkansas Water and Air Pollution Control Act (A.C.A. §8-4-101 *et seq*.) as the origin of and authority for the terms or conditions are enforceable under this Arkansas statute.[Pursuant to 40 CFR 70.6(b)(2)]

2. This permit shall be valid for a period of five (5) years beginning on the date this permit becomes effective and ending five (5) years later. [40 CFR 70.6(a)(2) and §26.701(B) of the Regulations of the Arkansas Operating Air Permit Program (Regulation 26), effective August 10, 2000]

3. The permittee must submit a complete application for permit renewal at least six (6) months before permit expiration. Permit expiration terminates the permittee's right to operate unless the permittee submitted a complete renewal application at least six (6) months before permit expiration. If the permittee submits a complete application, the existing permit will remain in effect until the Department takes final action on the renewal application. The Department will not necessarily notify the permittee when the permit renewal application is due. [Regulation #26 §26.406]

4. Where an applicable requirement of the Clean Air Act, as amended, 42 U.S.C. 7401, *et seq.* (Act) is more stringent than an applicable requirement of regulations promulgated under Title IV of the Act, the permit incorporates both provisions into the permit, and the Director or the Administrator can enforce both provisions. [40 CFR 70.6(a)(1)(ii) and Regulation #26 §26.701(A)(2)]

5. The permittee must maintain the following records of monitoring information as required by this permit. [40 CFR 70.6(a)(3)(ii)(A) and Regulation #26 §26.701(C)(2)]

   a. The date, place as defined in this permit, and time of sampling or measurements;
   b. The date(s) analyses performed;
   c. The company or entity performing the analyses;
   d. The analytical techniques or methods used;
   e. The results of such analyses; and
   f. The operating conditions existing at the time of sampling or measurement.

6. The permittee must retain the records of all required monitoring data and support information for at least 5 years from the date of the monitoring sample, measurement, report, or application. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit. [40 CFR 70.6(a)(3)(ii)(B) and Regulation #26 §26.701(C)(2)(b)]

7. The permittee must submit reports of all required monitoring every 6 months. If no other reporting period has been established, the reporting period will end on the last day of the anniversary month of the initial Title V permit. The report is due within 30 days of the end of the reporting period. Even though the reports are due every six months, each report shall contain a full year of data. The report must clearly identify all instances of deviations from permit requirements. A responsible official as defined in Regulation #26 §26.2 must certify all required reports. The permittee will send the reports to the address below: [40 CFR 70.6(a)(3)(ii)(B) and §26.701(C)(2)(b)]

   Arkansas Department of Environmental Quality
   Air Division
   ATTN: Compliance Inspector Supervisor
   Post Office Box 8913
   Little Rock, AR 72219

8. The permittee will report to the Department all deviations from permit requirements, including those attributable to upset conditions as defined in the permit.

   a. For all upset conditions (as defined in Regulation 19.601), the permittee will make an initial report to the Department by the next business day after the discovery of the occurrence. The initial report may be made by telephone and shall include:

      i. The facility name and location,
      ii. The process unit or emission source deviating from the permit limit,
      iii. The permit limit, including the identification of pollutants, from which deviation occurs,
      iv. The date and time the deviation started,
      v. The duration of the deviation,
      vi. The average emissions during the deviation,
      vii. The probable cause of such deviations,
      viii. Any corrective actions or preventive measures taken or being taken to prevent such deviations in the future, and
      ix. The name of the person submitting the report.

      The permittee will make a full report in writing to the Department within five (5) business days of discovery of the occurrence. The report must include, in addition to the information required by the initial report, a schedule of actions taken or planned to eliminate future occurrences and/or to minimize the amount the permit's limits

were exceeded and to reduce the length of time the limits were exceeded. The permittee may submit a full report in writing (by facsimile, overnight courier, or other means) by the next business day after discovery of the occurrence, and the report will serve as both the initial report and full report.

b. For all deviations, the permittee will report such events in semi-annual reporting and annual certifications required in this permit. This includes all upset conditions reported in 8a. above. The semi-annual report must include all the information as required in the initial and full report required in 8a.

[40 CFR 70.6(a)(3)(iii)(B), Regulation No. 26 §26.701(C)(3)(b), Regulation No. 19 §19.601 and §19.602]

9. If any provision of the permit or the application thereof to any person or circumstance is held invalid, such invalidity will not affect other provisions or applications hereof which can be given effect without the invalid provision or application, and to this end, provisions of this Regulation are declared to be separable and severable. [40 CFR 70.6(a)(5) and §26.701(E) of Regulation #26, and A.C.A. §8-4-203, as referenced by §8-4-304 and §8-4-311]

10. The permittee must comply with all conditions of this Part 70 permit. Any permit noncompliance with applicable requirements as defined in Regulation #26 constitutes a violation of the Clean Air Act, as amended, 42 U.S.C. §7401, *et seq.* and is grounds for enforcement action; for permit termination, revocation and reissuance, for permit modification; or for denial of a permit renewal application. [40 CFR 70.6(a)(6)(i) and Regulation No. §26.701(F)(1)]

11. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity to maintain compliance with the conditions of this permit. [40 CFR 70.6(a)(6)(ii) and §26.701(F)(2)]

12. The Department may modify, revoke, reopen and reissue the permit or terminate the permit for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, termination, or of a notification of planned changes or anticipated noncompliance does not stay any permit condition. [40 CFR 70.6(a)(6)(iii) and Regulation #26 §26.701(F)(3)]

13. This permit does not convey any property rights of any sort, or any exclusive privilege. [40 CFR 70.6(a)(6)(iv) and Regulation #26 §26.701(F)(4)]

14. The permittee must furnish to the Director, within the time specified by the Director, any information that the Director may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit. Upon request, the permittee must also furnish to the Director copies of records required by the permit. For information the permittee claims

confidentiality, the Department may require the permittee to furnish such records directly to the Director along with a claim of confidentiality. [40 CFR 70.6(a)(6)(v) and Regulation #26 §26.701(F)(5)]

15. The permittee must pay all permit fees in accordance with the procedures established in Regulation #19. [40 CFR 70.6(a)(7) and Regulation #26 §26.701(G)]

16. No permit revision shall be required, under any approved economic incentives, marketable permits, emissions trading and other similar programs or processes for changes provided for elsewhere in this permit. [40 CFR 70.6(a)(8) and Regulation #26 §26.701(H)]

17. If the permit allows different operating scenarios, the permittee will, contemporaneously with making a change from one operating scenario to another, record in a log at the permitted facility a record of the operational scenario. [40 CFR 70.6(a)(9)(i) and Regulation #26 §26.701(I)(1)]

18. The Administrator and citizens may enforce under the Act all terms and conditions in this permit, including any provisions designed to limit a source's potential to emit, unless the Department specifically designates terms and conditions of the permit as being federally unenforceable under the Act or under any of its applicable requirements. [40 CFR 70.6(b) and Regulation #26 §26.702(A) and (B)]

19. Any document (including reports) required by this permit must contain a certification by a responsible official as defined in Regulation #26 §26.2. [40 CFR 70.6(c)(1) and Regulation #26 §26.703(A)]

20. The permittee must allow an authorized representative of the Department, upon presentation of credentials, to perform the following: [40 CFR 70.6(c)(2) and Regulation #26 §26.703(B)]

    a. Enter upon the permittee's premises where the permitted source is located or emissions-related activity is conducted, or where records must be kept under the conditions of this permit;
    b. Have access to and copy, at reasonable times, any records required under the conditions of this permit;
    c. Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit; and
    d. As authorized by the Act, sample or monitor at reasonable times substances or parameters for assuring compliance with this permit or applicable requirements.

21. The permittee will submit a compliance certification with the terms and conditions contained in the permit, including emission limitations, standards, or work practices. The permittee will submit the compliance certification annually within 30 days following the

last day of the anniversary month of the initial Title V permit. The permittee must also submit the compliance certification to the Administrator as well as to the Department. All compliance certifications required by this permit must include the following: [40 CFR 70.6(c)(5) and Regulation #26 §26.703(E)(3)]

a. The identification of each term or condition of the permit that is the basis of the certification;
b. The compliance status;
c. Whether compliance was continuous or intermittent;
d. The method(s) used for determining the compliance status of the source, currently and over the reporting period established by the monitoring requirements of this permit; and
e. Such other facts as the Department may require elsewhere in this permit or by §114(a)(3) and §504(b) of the Act.

22. Nothing in this permit will alter or affect the following: [Regulation #26 §26.704(C)]

a. The provisions of Section 303 of the Act (emergency orders), including the authority of the Administrator under that section;
b. The liability of the permittee for any violation of applicable requirements prior to or at the time of permit issuance;
c. The applicable requirements of the acid rain program, consistent with §408(a) of the Act or,
d. The ability of EPA to obtain information from a source pursuant to §114 of the Act.

23. This permit authorizes only those pollutant-emitting activities addressed in this permit. [A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

APPENDIX A

40 CFR Part 60, Subpart D -- Standards of Performance for Fossil-Fuel-Fired Steam Generators for Which Construction is Commenced After August 17, 1971

§60.40 Applicability and designation of affected facility.

(a) The affected facilities to which the provisions of this subpart apply are:

(1) Each fossil-fuel-fired steam generating unit of more than 73 megawatts heat input rate (250 million Btu per hour).

(2) Each fossil-fuel and wood-residue-fired steam generating unit capable of firing fossil fuel at a heat input rate of more than 73 megawatts (250 million Btu per hour).

(b) Any change to an existing fossil-fuel-fired steam generating unit to accommodate the use of combustible materials, other than fossil fuels as defined in this subpart, shall not bring that unit under the applicability of this subpart.

(c) Except as provided in paragraph (d) of this section, any facility under paragraph (a) of this section that commenced construction or modification after August 17, 1971, is subject to the requirements of this subpart.

(d) The requirements of §§60.44 (a)(4), (a)(5), (b) and (d), and 60.45(f)(4)(vi) are applicable to lignite-fired steam generating units that commenced construction or modification after December 22, 1976.

(e) Any facility covered under subpart Da is not covered under this subpart.

[42 FR 37936, July 25, 1977, as amended at 43 FR 9278, Mar. 7, 1978; 44 FR 33612, June 17, 1979]

§60.41 Definitions.

As used in this subpart, all terms not defined herein shall have the meaning given them in the Act, and in subpart A of this part.

(a) *Fossil-fuel fired steam generating unit* means a furnace or boiler used in the process of burning fossil fuel for the purpose of producing steam by heat transfer.

(b) *Fossil fuel* means natural gas, petroleum, coal, and any form of solid, liquid, or gaseous fuel derived from such materials for the purpose of creating useful heat.

(c) *Coal refuse* means waste-products of coal mining, cleaning, and coal preparation operations (e.g. culm, gob, etc.) containing coal, matrix material, clay, and other organic and inorganic material.

(d) *Fossil fuel and wood residue-fired steam generating unit* means a furnace or boiler used in the process of burning fossil fuel and wood residue for the purpose of producing steam by heat transfer.

(e) *Wood residue* means bark, sawdust, slabs, chips, shavings, mill trim, and other wood products derived from wood processing and forest management operations.

(f) *Coal* means all solid fuels classified as anthracite, bituminous, subbituminous, or lignite by ASTM D388-77, 90, 91, 95, or 98a (incorporated by reference -- see §60.17).

[39 FR 20791, June 14, 1974, as amended at 40 FR 2803, Jan. 16, 1975; 41 FR 51398, Nov. 22, 1976; 43 FR 9278, Mar. 7, 1978; 48 FR 3736, Jan. 27, 1983; 65 FR 61752, Oct. 17, 2000]

§60.42 Standard for particulate matter.

(a) On and after the date on which the performance test required to be conducted by §60.8 is completed, no owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any affected facility any gases which:

(1) Contain particulate matter in excess of 43 nanograms per joule heat input (0.10 lb per million Btu) derived from fossil fuel or fossil fuel and wood residue.

(2) Exhibit greater than 20 percent opacity except for one six-minute period per hour of not more than 27 percent opacity.

(b)(1) On or after December 28, 1979, no owner or operator shall cause to be discharged into the atmosphere from the Southwestern Public Service Company's Harrington Station #1, in Amarillo, TX, any gases which exhibit greater than 35 percent opacity, except that a maximum or 42 percent opacity shall be permitted for not more than 6 minutes in any hour.

(2) Interstate Power Company shall not cause to be discharged into the atmosphere from its Lansing Station Unit No. 4 in Lansing, IA, any gases which exhibit greater than 32 percent opacity, except that a maximum of 39 percent opacity shall be permitted for not more than six minutes in any hour.

[39 FR 20792, June 14, 1974, as amended at 41 FR 51398, Nov. 22, 1976; 42 FR 61537, Dec. 5, 1977; 44 FR 76787, Dec. 28, 1979; 45 FR 36077, May 29, 1980; 45 FR 47146, July 14, 1980; 46 FR 57498, Nov. 24, 1981; 61 FR 49976, Sept. 24, 1996; 65 FR 61752, Oct. 17, 2000]

§60.43 Standard for sulfur dioxide.

(a) On and after the date on which the performance test required to be conducted by §60.8 is completed, no owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any affected facility any gases which contain sulfur dioxide in excess of:

(1) 340 nanograms per joule heat input (0.80 lb per million Btu) derived from liquid fossil fuel or liquid fossil fuel and wood residue.

(2) 520 nanograms per joule heat input (1.2 lb per million Btu) derived from solid fossil fuel or solid fossil fuel and wood residue, except as provided in paragraph (e) of this section.

(b) When different fossil fuels are burned simultaneously in any combination, the applicable standard (in ng/J) shall be determined by proration using the following formula:

$$PSSO2=[y(340)+z(520)]/(y+z)$$

where:

PSSO2 is the prorated standard for sulfur dioxide when burning different fuels simultaneously, in nanograms per joule heat input derived from all fossil fuels fired or from all fossil fuels and wood residue fired,

y is the percentage of total heat input derived from liquid fossil fuel, and

z is the percentage of total heat input derived from solid fossil fuel.

(c) Compliance shall be based on the total heat input from all fossil fuels burned, including gaseous fuels.

(d) [Reserved]

(e) Units 1 and 2 (as defined in appendix G) at the Newton Power Station owned or operated by the Central Illinois Public Service Company will be in compliance with paragraph (a)(2) of this section if Unit 1 and Unit 2 individually comply with paragraph (a)(2) of this section or if the combined emission rate from Units 1 and 2 does not exceed 470 nanograms per joule (1.1 lb per million Btu) combined heat input to Units 1 and 2.

[39 FR 20792, June 14, 1974, as amended at 41 FR 51398, Nov. 22, 1976; 52 FR 28954, Aug. 4, 1987]

§60.44 Standard for nitrogen oxides.

(a) On and after the date on which the performance test required to be conducted by §60.8 is completed, no owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any affected facility any gases which contain nitrogen oxides, expressed as NO2 in excess of:

(1) 86 nanograms per joule heat input (0.20 lb per million Btu) derived from gaseous fossil fuel.

(2) 129 nanograms per joule heat input (0.30 lb per million Btu) derived from liquid fossil fuel, liquid fossil fuel and wood residue, or gaseous fossil fuel and wood residue.

(3) 300 nanograms per joule heat input (0.70 lb per million Btu) derived from solid fossil fuel or solid fossil fuel and wood residue (except lignite or a solid fossil fuel containing 25 percent, by weight, or more of coal refuse).

(4) 260 nanograms per joule heat input (0.60 lb per million Btu) derived from lignite or lignite and wood residue (except as provided under paragraph (a)(5) of this section).

(5) 340 nanograms per joule heat input (0.80 lb per million Btu) derived from lignite which is mined in North Dakota, South Dakota, or Montana and which is burned in a cyclone-fired unit.

(b) Except as provided under paragraphs (c) and (d) of this section, when different fossil fuels are burned simultaneously in any combination, the applicable standard (in ng/J) is determined by proration using the following formula:

$$PS_{NOx} = \frac{w(260) + x(86) + y(130) + z(300)}{w + x + y + z}$$

where:

*PS*NOx=is the prorated standard for nitrogen oxides when burning different fuels simultaneously, in nanograms per joule heat input derived from all fossil fuels fired or from all fossil fuels and wood residue fired;

w= is the percentage of total heat input derived from lignite;

x= is the percentage of total heat input derived from gaseous fossil fuel;

y= is the percentage of total heat input derived from liquid fossil fuel; and

z= is the percentage of total heat input derived from solid fossil fuel (except lignite).

(c) When a fossil fuel containing at least 25 percent, by weight, of coal refuse is burned in combination with gaseous, liquid, or other solid fossil fuel or wood residue, the standard for nitrogen oxides does not apply.

(d) Cyclone-fired units which burn fuels containing at least 25 percent of lignite that is mined in North Dakota, South Dakota, or Montana remain subject to paragraph (a)(5) of this section regardless of the types of fuel combusted in combination with that lignite.

[39 FR 20792, June 14, 1974, as amended at 41 FR 51398, Nov. 22, 1976; 43 FR 9278, Mar. 7, 1978; 51 FR 42797, Nov. 25, 1986]

§60.45 Emission and fuel monitoring.

(a) Each owner or operator shall install, calibrate, maintain, and operate continuous monitoring systems for measuring the opacity of emissions, sulfur dioxide emissions, nitrogen oxides emissions, and either oxygen or carbon dioxide except as provided in paragraph (b) of this section.

(b) Certain of the continuous monitoring system requirements under paragraph (a) of this section do not apply to owners or operators under the following conditions:

(1) For a fossil fuel-fired steam generator that burns only gaseous fossil fuel, continuous monitoring systems for measuring the opacity of emissions and sulfur dioxide emissions are not required.

(2) For a fossil fuel-fired steam generator that does not use a flue gas desulfurization device, a continuous monitoring system for measuring sulfur dioxide emissions is not required if the owner or operator monitors sulfur dioxide emissions by fuel sampling and analysis.

(3) Notwithstanding §60.13(b), installation of a continuous monitoring system for nitrogen oxides may be delayed until after the initial performance tests under §60.8 have been conducted. If the owner or operator demonstrates during the performance test that emissions of nitrogen oxides are less than 70 percent of the applicable standards in §60.44, a continuous monitoring system for measuring nitrogen oxides emissions is not required. If the initial performance test results show that nitrogen oxide emissions are greater than 70 percent of the applicable standard, the owner or operator shall install a continuous monitoring system for nitrogen oxides within one year after the date of the initial performance tests under §60.8 and comply with all other applicable monitoring requirements under this part.

(4) If an owner or operator does not install any continuous monitoring systems for sulfur oxides and nitrogen oxides, as provided under paragraphs (b)(1) and (b)(3) or paragraphs (b)(2) and (b)(3) of this section a continuous monitoring system for measuring either oxygen or carbon dioxide is not required.

(c) For performance evaluations under §60.13(c) and calibration checks under §60.13(d), the following procedures shall be used:

(1) Methods 6, 7, and 3B, as applicable, shall be used for the performance evaluations of sulfur dioxide and nitrogen oxides continuous monitoring systems. Acceptable alternative methods for Methods 6, 7, and 3B are given in §60.46(d).

(2) Sulfur dioxide or nitric oxide, as applicable, shall be used for preparing calibration gas mixtures under Performance Specification 2 of appendix B to this part.

(3) For affected facilities burning fossil fuel(s), the span value for a continuous monitoring system measuring the opacity of emissions shall be 80, 90, or 100 percent and for a continuous monitoring system measuring sulfur oxides or nitrogen oxides the span value shall be determined as follows:

[In parts per million]

Fossil fuel	Span value for sulfur dioxide	Span value for nitrogen oxides
Gas	(\1\ )	500
Liquid	1,000	500
Solid	1,500	1000
Combinations	1,000y+1,500z	500(x+y)+1,000z

\1\ Not applicable.

where:

x=the fraction of total heat input derived from gaseous fossil fuel, and

y=the fraction of total heat input derived from liquid fossil fuel, and

z=the fraction of total heat input derived from solid fossil fuel.

(4) All span values computed under paragraph (c)(3) of this section for burning combinations of fossil fuels shall be rounded to the nearest 500 ppm.

(5) For a fossil fuel-fired steam generator that simultaneously burns fossil fuel and nonfossil fuel, the span value of all continuous monitoring systems shall be subject to the Administrator's approval.

(d) [Reserved]

(e) For any continuous monitoring system installed under paragraph (a) of this section, the following conversion procedures shall be used to convert the continuous monitoring data into units of the applicable standards (ng/J, lb/million Btu):

(1) When a continuous monitoring system for measuring oxygen is selected, the measurement of the pollutant concentration and oxygen concentration shall each be on a consistent basis (wet or dry). Alternative procedures approved by the Administrator shall be used when measurements are on a wet basis. When measurements are on a dry basis, the following conversion procedure shall be used:

$E=CF$[20.9/(20.9 -- percent O2)]

where:

E, C, F, and %O2 are determined under paragraph (f) of this section.

(2) When a continuous monitoring system for measuring carbon dioxide is selected, the measurement of the pollutant concentration and carbon dioxide concentration shall each be on a consistent basis (wet or dry) and the following conversion procedure shall be used:

$E=CF$c [100/percent CO2]

where:

E, C, Fc and %CO2 are determined under paragraph (f) of this section.

(f) The values used in the equations under paragraphs (e) (1) and (2) of this section are derived as follows:

(1) E=pollutant emissions, ng/J (lb/million Btu).

(2) C=pollutant concentration, ng/dscm (lb/dscf), determined by multiplying the average concentration (ppm) for each one-hour period by 4.15×10^{4} M ng/dscm per ppm (2.59×10^{-9} M lb/dscf per ppm) where M=pollutant molecular weight, g/g-mole (lb/lb-mole). M=64.07 for sulfur dioxide and 46.01 for nitrogen oxides.

(3) %O2, %CO2=oxygen or carbon dioxide volume (expressed as percent), determined with equipment specified under paragraph (a) of this section.

(4) F, Fc=a factor representing a ratio of the volume of dry flue gases generated to the calorific value of the fuel combusted (F), and a factor representing a ratio of the volume of carbon dioxide generated to the calorific value of the fuel combusted (Fc), respectively. Values of F and Fc are given as follows:

(i) For anthracite coal as classified according to ASTM D388-77, 90, 91, 95, or 98a (incorporated by reference -- see §60.17), F=2,723×10^{-17} dscm/J (10,140 dscf/million Btu and Fc=0.532×10^{-17} scm CO2/J (1,980 scf CO2/million Btu).

(ii) For subbituminous and bituminous coal as classified according to ASTM D388-77, 90, 91, 95, or 98a (incorporated by reference -- see §60.17), F=2.637×10^{-7} dscm/J (9,820 dscf/million Btu) and Fc=0.486×10^{-7} scm CO2/J (1,810 scf CO2/million Btu).

(iii) For liquid fossil fuels including crude, residual, and distillate oils, *F*=2.476×10^{-7} dscm/J (9,220 dscf/million Btu) and *F*c=0.384×10^{-7} scm *CO*2/J (1,430 scf *CO*2/million Btu).

(iv) For gaseous fossil fuels, *F*=2.347×10^{-7} dscm/J (8,740 dscf/million Btu). For natural gas, propane, and butane fuels, *F*c=0.279×10^{-7} scm *CO*2/*J* (1,040 scf *CO*2/million Btu) for natural gas, 0.322×10^{-7} scm *CO*2/*J* (1,200 scf *CO*2/million Btu) for propane, and 0.338×10^{-7} scm *CO*2/*J* (1,260 scf *CO*2/million Btu) for butane.

(v) For bark F=2.589×10^{-7} dscm/J (9,640 dscf/million Btu) and Fc=0.500×10^{-7} scm CO2/J (1,840 scf CO2/ million Btu). For wood residue other than bark F=2.492×10^{-7} dscm/J (9,280 dscf/million Btu) and Fc=0.494×10^{-7} scm CO2/J (1,860 scf CO2/ million Btu).

(vi) For lignite coal as classified according to ASTM D388-77, 90, 91, 95, or 98a (incorporated by reference -- see §60.17), F=2.659×10^{-7} dscm/J (9,900 dscf/million Btu) and Fc=0.516×10^{-7} scm CO2/J (1,920 scf CO2/million Btu).

(5) The owner or operator may use the following equation to determine an *F* factor (dscm/J or dscf/million Btu) on a dry basis (if it is desired to calculate *F* on a wet basis, consult the Administrator) or *F*c factor (scm *CO*2/*J*, or scf *CO*2/million Btu) on either basis in lieu of the *F* or *F*c factors specified in paragraph (f)(4) of this section:

$$F = 10^{-6} \frac{[227.2\,(pct.\,H) + 95.5\,(pct.\,C) + 35.6\,(pct.\,S) + 8.7\,(pct.\,N) - 28.7\,(pct.\,O)]}{GCV}$$

$$F_c = \frac{2.0 \times 10^{-5}\,(pct.\,C)}{GCV\,(SI\ units)}$$

$$F = \frac{10^{6}\,[3.64\,(\%H) + 1.53\,(\%C) + 0.57\,(\%S) + 0.14\,(\%N) - 0.46\,(\%O)]}{GCV\,(English\ units)}$$

$$F_c = \frac{20.0\,(\%C)}{GCV\,(SI\ units)}$$

$$F_c = \frac{321 \times 10^{3}\,(\%C)}{GCV\,(English\ units)}$$

(i) H, C, S, N, and O are content by weight of hydrogen, carbon, sulfur, nitrogen, and oxygen (expressed as percent), respectively, as determined on the same basis as GCV by ultimate analysis of the fuel fired, using ASTM D3178-73 (Reapproved 1979), 89, or D3176-74 or 89 (solid fuels) or computed from results using ASTM D1137-53 or 75, D1945-64, 76, 91, or 96 or D1946-77 or 90 (Reapproved 1994) (gaseous fuels) as applicable. (These five methods are incorporated by reference -- see §60.17.)

(ii) GVC is the gross calorific value (kJ/kg, Btu/lb) of the fuel combusted determined by the ASTM test methods D2015-77 (Reapproved 1978), 96, or D5865-98 for solid fuels and ASTM D1826-77 or 94 for gaseous fuels as applicable. (These two methods are incorporated by reference -- see §60.17.)

(iii) For affected facilities which fire both fossil fuels and nonfossil fuels, the *F* or *F*c value shall be subject to the Administrator's approval.

(6) For affected facilities firing combinations of fossil fuels or fossil fuels and wood residue, the *F* or *F*c factors determined by paragraphs (f)(4) or (f)(5) of this section shall be prorated in accordance with the applicable formula as follows:

$$F = \sum_{i=1}^{n} X_i F_i \ or\ F_c = \sum_{i=1}^{n} X_i (F_c)_i$$

where:

*X*i=the fraction of total heat input derived from each type of fuel (e.g. natural gas, bituminous coal, wood residue, etc.)

*F*i or (*F*c)i=the applicable *F* or *F*c factor for each fuel type determined in accordance with paragraphs (f)(4) and (f)(5) of this section.

n=the number of fuels being burned in combination.

(g) Excess emission and monitoring system performance reports shall be submitted to the Administrator semiannually for each six-month period in the calendar year. All semiannual reports shall be postmarked by the 30th day following the end of each six-month period. Each excess emission and MSP report shall include the information required in §60.7(c). Periods of excess emissions and monitoring systems (MS) downtime that shall be reported are defined as follows:

(1) *Opacity.* Excess emissions are defined as any six-minute period during which the average opacity of emissions exceeds 20 percent opacity, except that one six-minute average per hour of up to 27 percent opacity need not be reported.

(i) For sources subject to the opacity standard of §60.42(b)(1), excess emissions are defined as any six-minute period during which the average opacity of emissions exceeds 35 percent opacity, except that one six-minute average per hour of up to 42 percent opacity need not be reported.

(ii) For sources subject to the opacity standard of §60.42(b)(2), excess emissions are defined as any six-minute period during which the average opacity of emissions exceeds 32 percent opacity, except that one six-minute average per hour of up to 39 percent opacity need not be reported.

(2) *Sulfur dioxide.* Excess emissions for affected facilities are defined as:

(i) Any three-hour period during which the average emissions (arithmetic average of three contiguous one-hour periods) of sulfur dioxide as measured by a continuous monitoring system exceed the applicable standard under §60.43.

(3) *Nitrogen oxides.* Excess emissions for affected facilities using a continuous monitoring system for measuring nitrogen oxides are defined as any three-hour period during which the average emissions (arithmetic average of three contiguous one-hour periods) exceed the applicable standards under §60.44.

[40 FR 46256, Oct. 6, 1975]

Editorial Note 1: For FEDERAL REGISTER citations affecting §60.45, see the List of CFR Sections Affected, which appears in the Finding Aids section of the printed volume and on GPO Access.

§60.46 Test methods and procedures.

(a) In conducting the performance tests required in §60.8, the owner or operator shall use as reference methods and procedures the test methods in appendix A of this part or other methods and procedures as specified in this section, except as provided in §60.8(b). Acceptable alternative methods and procedures are given in paragraph (d) of this section.

(b) The owner or operator shall determine compliance with the particulate matter, SO2, and NOX standards in §§60.42, 60.43, and 60.44 as follows:

(1) The emission rate (E) of particulate matter, SO2, or NOX shall be computed for each run using the following equation:

E=C Fd (20.9)/(20.9-% 02)

E = emission rate of pollutant, ng/J (1b/million Btu).

C = concentration of pollutant, ng/dscm (1b/dscf).

%O2 = oxygen concentration, percent dry basis.

Fd = factor as determined from Method 19.

(2) Method 5 shall be used to determine the particular matter concentration (C) at affected facilities without wet flue-gas-desulfurization (FGD) systems and Method 5B shall be used to determine the particulate matter concentration (C) after FGD systems.

(i) The sampling time and sample volume for each run shall be at least 60 minutes and 0.85 dscm (30 dscf). The probe and filter holder heating systems in the sampling train shall be set to provide an average gas temperature of 160±14 °C (320±25 °F).

(ii) The emission rate correction factor, integrated or grab sampling and analysis procedure of Method 3B shall be used to determine the O2 concentration (%O2). The O2 sample shall be obtained simultaneously with, and at the same traverse points as, the particulate sample. If the grab sampling procedure is used, the O2 concentration for the run shall be the arithmetic mean of the sample O2 concentrations at all traverse points.

(iii) If the particulate run has more than 12 traverse points, the O2 traverse points may be reduced to 12 provided that Method 1 is used to locate the 12 O2 traverse points.

(3) Method 9 and the procedures in §60.11 shall be used to determine opacity.

(4) Method 6 shall be used to determine the SO2 concentration.

(i) The sampling site shall be the same as that selected for the particulate sample. The sampling location in the duct shall be at the centroid of the cross section or at a point no closer to the walls than 1 m (3.28 ft). The sampling time and sample volume for each sample run shall be at least 20 minutes and 0.020 dscm (0.71 dscf). Two samples shall be taken during a 1-hour period, with each sample taken within a 30-minute interval.

(ii) The emission rate correction factor, integrated sampling and analysis procedure of Method 3B shall be used to determine the O2 concentration (%O2). The O2 sample shall be taken simultaneously with, and at the same point as, the SO2 sample. The SO2 emission rate shall be computed for each pair of SO2 and O2 samples. The SO2 emission rate (E) for each run shall be the arithmetic mean of the results of the two pairs of samples.

(5) Method 7 shall be used to determine the NOX concentration.

(i) The sampling site and location shall be the same as for the SO2 sample. Each run shall consist of four grab samples, with each sample taken at about 15-minute intervals.

(ii) For each NOX sample, the emission rate correction factor, grab sampling and analysis procedure of Method 3B shall be used to determine the O2 concentration (%O2). The sample shall be taken simultaneously with, and at the same point as, the NOX sample.

(iii) The NOX emission rate shall be computed for each pair of NOX and O2 samples. The NOX emission rate (E) for each run shall be the arithmetic mean of the results of the four pairs of samples.

(c) When combinations of fossil fuels or fossil fuel and wood residue are fired, the owner or operator (in order to compute the prorated standard as shown in §§60.43(b) and 60.44(b)) shall determine the percentage (w, x, y, or z) of the total heat input derived from each type of fuel as follows:

(1) The heat input rate of each fuel shall be determined by multiplying the gross calorific value of each fuel fired by the rate of each fuel burned.

(2) ASTM Methods D2015-77 (Reapproved 1978), 96, or D5865-98 (solid fuels), D240-76 or 92 (liquid fuels), or D1826-77 or 94 (gaseous fuels) (incorporated by reference -- see §60.17) shall be used to determine the gross calorific values of the fuels. The method used to determine the calorific value of wood residue must be approved by the Administrator.

(3) Suitable methods shall be used to determine the rate of each fuel burned during each test period, and a material balance over the steam generating system shall be used to confirm the rate.

(d) The owner or operator may use the following as alternatives to the reference methods and procedures in this section or in other sections as specified:

(1) The emission rate (E) of particulate matter, SO2 and NOX may be determined by using the Fc factor, provided that the following procedure is used:

(i) The emission rate (E) shall be computed using the following equation:

$$E=C\ Fc\ (100/\%CO2)$$

where:

E=emission rate of pollutant, ng/J (lb/million Btu).

C=concentration of pollutant, ng/dscm (lb/dscf).

%CO2=carbon dioxide concentration, percent dry basis.

Fc=factor as determined in appropriate sections of Method 19.

(ii) If and only if the average Fc factor in Method 19 is used to calculate E and either E is from 0.97 to 1.00 of the emission standard or the relative accuracy of a continuous emission monitoring system is from 17 to 20 percent, then three runs of Method 3B shall be used to determine the O2 and CO2 concentration according to the procedures in paragraph (b) (2)(ii), (4)(ii), or (5)(ii) of this section. Then if Fo (average of three runs), as calculated from the equation in Method 3B, is more than ±3 percent than the average Fo value, as determined from

the average values of Fd and Fc in Method 19, i.e., Foa=0.209 (Fda/Fca), then the following procedure shall be followed:

(A) When Fo is less than 0.97 Foa, then E shall be increased by that proportion under 0.97 Foa, e.g., if Fo is 0.95 Foa, E shall be increased by 2 percent. This recalculated value shall be used to determine compliance with the emission standard.

(B) When Fo is less than 0.97 Foa and when the average difference (d) between the continuous monitor minus the reference methods is negative, then E shall be increased by that proportion under 0.97 Foa, e.g., if Fo is 0.95 Foa, E shall be increased by 2 percent. This recalculated value shall be used to determine compliance with the relative accuracy specification.

(C) When Fo is greater than 1.03 Foa and when the average difference d is positive, then E shall be decreased by that proportion over 1.03 Foa, e.g., if Fo is 1.05 Foa, E shall be decreased by 2 percent. This recalculated value shall be used to determine compliance with the relative accuracy specification.

(2) For Method 5 or 5B, Method 17 may be used at facilities with or without wet FGD systems if the stack gas temperature at the sampling location does not exceed an average temperature of 160 °C (320 °F). The procedures of sections 2.1 and 2.3 of Method 5B may be used with Method 17 only if it is used after wet FGD systems. Method 17 shall not be used after wet FGD systems if the effluent gas is saturated or laden with water droplets.

(3) Particulate matter and SO2 may be determined simultaneously with the Method 5 train provided that the following changes are made:

(i) The filter and impinger apparatus in sections 2.1.5 and 2.1.6 of Method 8 is used in place of the condenser (section 2.1.7) of Method 5.

(ii) All applicable procedures in Method 8 for the determination of SO2 (including moisture) are used:

(4) For Method 6, Method 6C may be used. Method 6A may also be used whenever Methods 6 and 3B data are specified to determine the SO2 emission rate, under the conditions in paragraph (d)(1) of this section.

(5) For Method 7, Method 7A, 7C, 7D, or 7E may be used. If Method 7C, 7D, or 7E is used, the sampling time for each run shall be at least 1 hour and the integrated sampling approach shall be used to determine the O2 concentration (%O2) for the emission rate correction factor.

(6) For Method 3, Method 3A or 3B may be used.

(7) For Method 3B, Method 3A may be used.

[54 FR 6662, Feb. 14, 1989; 54 FR 21344, May 17, 1989, as amended at 55 FR 5212, Feb. 14, 1990; 65 FR 61752, Oct. 17, 2000]

APPENDIX B

APPENDIX C