

# ADEQ OPERATING AIR PERMIT

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

Permit #: 263-AOP-R3

Renewal #1

IS ISSUED TO: Entergy Arkansas, Inc. - White Bluff

1100 White Bluff Road

Redfield, AR 72132

Jefferson County

AFIN: 35-00110

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:

AND

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

Signed:

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Michael Bonds  
Chief, Air Division

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Date

Facility: Entergy Arkansas, Inc. - White Bluff  
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AFIN: 35-00110

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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 <sub>x</sub>	Nitrogen Oxide
PM	Particulate matter
PM <sub>10</sub>	Particulate matter smaller than ten microns
SNAP	Significant New Alternatives Program (SNAP)
SO <sub>2</sub>	Sulfur dioxide
SSM	Startup, Shutdown, and Malfunction Plan
tpy	Ton per year
UTM	Universal Transverse Mercator
VOC	Volatile Organic Compound

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**Section I: FACILITY INFORMATION**

PERMITTEE: Entergy Arkansas, Inc. - White Bluff

AFIN: 35-00110

PERMIT NUMBER: 263-AOP-R3

FACILITY ADDRESS: 1100 White Bluff Road  
Redfield, AR 72132

MAILING ADDRESS 1100 White Bluff Road  
Redfield, AR 72132

COUNTY: Jefferson

CONTACT POSITION: Tracy Johnson

TELEPHONE NUMBER: (501) 377-4033

REVIEWING ENGINEER: Ann Sudmeyer

UTM North - South (Y): Zone 15 3809.2

UTM East - West (X): Zone 15 579.0

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## **Section II: INTRODUCTION**

### **Summary of Permit Activity**

Entergy Arkansas, Inc. - White Bluff located in Redfield, Arkansas is a two-unit electric generating station which generates electric energy for sale. 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 throughput of SN-14 and SN-16;
4. Update the PM and PM<sub>10</sub> emission rates (SN-01, SN-02, and SN-05) to include condensable particulate matter;
5. Update the insignificant activities list;
6. Add new stack testing requirements for PM, PM<sub>10</sub>, and CO;
7. Permit the degreasers (SN-20) which were previously submitted as insignificant;
8. Correct the fly ash silos (SN-04) permitted PM emission rates;
9. Correct the facility name to Entergy Arkansas, Inc. from Entergy Services, Inc.;
10. Remove emission point M32 (SN-06A) since this emission point has been removed from service;
11. Increase the cooling tower circulating water flow rates (SN-17 and SN-18); and
12. Reduce the permitted VOC content of the chemical foam spray used at SN-03 and SN-06A.

The total permitted emission rate increases due to this permitting action include: 1,013.6 tons per year (tpy) PM, 738.7 tpy PM<sub>10</sub>, 39.2 tpy SO<sub>2</sub>, and all hazardous air pollutant and air contaminant emission rates for this facility are increasing due to these pollutants previously not being permitted.

### **Process Description**

White Bluff Steam Electric Station operates currently as a base-load facility. The plant has two identical coal-fired units (Units 1 and 2) with a total capacity of approximately 1690 megawatts (MW). Low sulfur sub-bituminous coal is delivered by rail from northeastern Wyoming. 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 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.

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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 which obtain makeup water from the Arkansas 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, and particulates. 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 (NSPS). Oxides of nitrogen are subject to NSPS and Acid Rain requirements; particulates are subject to NSPS requirements; and sulfur dioxide emissions are subject to NSPS and Acid Rain requirements. Entergy elected to comply with a 0.45 lb/MMBtu annual average for NO<sub>x</sub> 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 - <i>Standards of Performance for Fossil-Fuel-Fired Steam Generators for Which Construction is Commenced After August 17, 1971</i>
Plantwide	40 CFR Part 61, Subpart M – <i>National Emissions Standard for Asbestos</i>
Plantwide	40 CFR Part 72, Subpart A-D – <i>Permits Regulation (Acid Rain)</i>
Plantwide	40 CFR Part 73, Subpart B – <i>Sulfur Dioxide Allowance System</i>
SN-01 and SN-02	40 CFR Part 75 – <i>Continuous Emission Monitoring</i>
Plantwide	40 CFR Part 76 – <i>Acid Rain Nitrogen Oxide Emission Reduction Program</i>

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Source No.	Regulation Citations
Plantwide	40 CFR Part 77 – Excess Emissions
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	1,128.5	4,628.9	N/A
		PM <sub>10</sub>	357.6	1,490.7	
		SO <sub>2</sub>	20,984.9	91,913.7	
		VOC	80.5	322.4	
		CO	6,500.7	28,473.1	
		NO <sub>x</sub>	12,212.1	53,488.9	
		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*	0.05	0.11	
		Cadmium*	0.07	0.25	
		Carbon Disulfide*	0.14	0.60	
		2-Chloroacetophenone*	0.02	0.04	
		Chloroform*	0.08	0.28	
		Chromium*	0.29	1.21	
		Chromium VI*	0.10	0.38	



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<b>Emission Summary</b>					
			<b>Emission Rates</b>		
<b>Source No.</b>	<b>Description</b>	<b>Pollutant</b>	<b>lb/hr</b>	<b>tpy</b>	<b>Cross Reference Page</b>
		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	1,260.00	5,518.80	
		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	
<b>Air Contaminants</b>		<b>N<sub>2</sub>O**</b>	<b>84.15</b>	<b>368.57</b>	<b>N/A</b>
SN-01 (C1)	Unit 1 Boiler – Coal Fired	PM	453.0	1,984.2	18
		PM <sub>10</sub>	140.0	613.1	
		SO <sub>2</sub>	10,440.0	45,727.2	
		VOC	35.0	153.3	
		CO	3,247.0	14,221.9	
		NO <sub>x</sub>	6,090.0	26,674.2	
		Lead	0.3	1.0	
		Acenaphthene	0.01	0.01	

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			<b>Emission Rates</b>		
<b>Source No.</b>	<b>Description</b>	<b>Pollutant</b>	<b>lb/hr</b>	<b>tpy</b>	<b>Cross Reference Page</b>
		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	
		Phenanthrene	0.01	0.01	
		Phenol	0.01	0.04	
		POM	0.03	0.10	
		Propionaldehyde	0.20	0.88	

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Emission Summary					
			Emission Rates		
Source No.	Description	Pollutant	lb/hr	tpy	Cross Reference Page
		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 <sub>2</sub> O	42.00	183.96	
SN-01 (C1)	Unit 1 Boiler – No. 2 Fuel Oil	PM	9.6	41.9	18
		PM <sub>10</sub>	9.6	41.9	
		SO <sub>2</sub>	10,440.0	45,727.2	
		VOC	35.0	153.3	
		CO	3,247.0	14,221.9	
		NO <sub>x</sub>	6,090.0	26,674.2	
		Lead	0.1	0.1	
		Arsenic	0.01	0.02	
		Beryllium	0.01	0.02	
		Cadmium	0.01	0.02	
		Chromium	0.01	0.02	
		Formaldehyde	0.36	1.54	
		Manganese	0.01	0.03	
		Mercury	0.01	0.02	
		Nickel	0.01	0.02	
		POM	0.03	0.11	
		Selenium	0.02	0.07	
		N <sub>2</sub> O	0.81	3.52	
SN-02 (C2)	Unit 2 Boiler – Coal Fired	PM	453.0	1,984.2	18
		PM <sub>10</sub>	140.0	613.1	
		SO <sub>2</sub>	10,440.0	45,727.2	
		VOC	35.0	153.3	
		CO	3,247.0	14,221.9	
		NO <sub>x</sub>	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	

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<b>Emission Summary</b>					
			<b>Emission Rates</b>		
<b>Source No.</b>	<b>Description</b>	<b>Pollutant</b>	<b>lb/hr</b>	<b>tpy</b>	<b>Cross Reference Page</b>
		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	
		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	

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Emission Summary					
			Emission Rates		
Source No.	Description	Pollutant	lb/hr	tpy	Cross Reference Page
		Toluene	0.13	0.56	
		2,3,7,8-TCDD	0.01	0.01	
		N <sub>2</sub> O	42.00	183.96	
SN-02 (C2)	Unit 2 Boiler – No. 2 Fuel Oil	PM	9.6	41.9	18
		PM <sub>10</sub>	9.6	41.9	
		SO <sub>2</sub>	10,440.0	45,727.2	
		VOC	35.0	153.3	
		CO	3,247.0	14,221.9	
		NO <sub>x</sub>	6,090.0	26,674.2	
		Lead	0.1	0.1	
		Arsenic	0.01	0.02	
		Beryllium	0.01	0.02	
		Cadmium	0.01	0.02	
		Chromium	0.01	0.02	
		Formaldehyde	0.36	1.54	
		Manganese	0.01	0.03	
		Mercury	0.01	0.02	
		Nickel	0.01	0.02	
		POM	0.03	0.11	
		Selenium	0.02	0.07	
		N <sub>2</sub> O	0.81	3.52	
SN-03 (M1)	Rail Car Rotary Dumper	PM	16.0	70.1	32
		PM <sub>10</sub>	0.1	0.1	
		VOC	1.3	***	
SN-04 (M30-31)	Fly Ash Silo with Fabric Filters	PM	4.0	17.6	37
		PM <sub>10</sub>	0.1	0.1	
SN-05 (C3)	Auxiliary Boiler	PM	4.5	19.4	18
		PM <sub>10</sub>	4.5	19.4	
		SO <sub>2</sub>	104.9	459.3	
		VOC	0.4	1.5	
		CO	6.7	29.3	
		NO <sub>x</sub>	32.1	140.5	
		Lead	0.1	0.1	
		Arsenic	0.01	0.01	

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			<b>Emission Rates</b>		
<b>Source No.</b>	<b>Description</b>	<b>Pollutant</b>	<b>lb/hr</b>	<b>tpy</b>	<b>Cross Reference Page</b>
		Beryllium	0.01	0.01	
		Cadmium	0.01	0.01	
		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 <sub>2</sub> O	0.15	0.65	
SN-06A	Handling/ Conveying Emissions	PM	0.9	3.7	32
		PM <sub>10</sub>	0.4	1.8	
		VOC	1.3	***	
SN-06B	Stacker/ Reclaimer Emissions	PM	0.6	2.3	32
		PM <sub>10</sub>	0.3	1.1	
SN-06C	Storage Piles/Haul Road Emissions	PM	187.3	507.6	32
		PM <sub>10</sub>	63.0	202.2	
SN-03, SN-06A	Dust Suppressant Chemical Foam Sprays Annual VOC Bubble	VOC	---	2.2	32
SN-07 (T1)	Fuel Oil Tank	VOC	0.4	1.6	39
SN-14 (T25)	Miscellaneous Storage Tanks	VOC	0.1	0.1	40
SN-15 (T26)	Miscellaneous Storage Tanks	VOC	0.1	0.1	40
SN-16 (T32)	Miscellaneous Storage Tanks	VOC	0.1	0.1	40

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			<b>Emission Rates</b>		
<b>Source No.</b>	<b>Description</b>	<b>Pollutant</b>	<b>lb/hr</b>	<b>tpy</b>	<b>Cross Reference Page</b>
SN-17 (X24)	Cooling Tower	PM PM <sub>10</sub>	4.6 4.6	19.9 19.9	42
SN-18 (X25)	Cooling Tower	PM PM <sub>10</sub>	4.6 4.6	19.9 19.9	42
SN-19	Barge Unloading Operations	Source Removed From Service 263-AOP-R2			
SN-20	Degreasing Operations	VOC	6.8	10.2	44

\* HAPs included in the PM or VOC totals.

\*\*Air Contaminants such as ammonia, acetone, and certain halogenated solvents are not VOCs or HAPs.

\*\*\* Denotes annual bubble of 2.2 tpy VOC for SN-03 and SN-06A.

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### **Section III: PERMIT HISTORY**

263-A was the first permit issued to the facility. 263-A permitted the installation of two coal-fired steam electric generating units served by a combined 1000 foot stack. The permit established the New Source Performance Standards limits for sulfur dioxide by usage of low sulfur coal.

263-AR-1 was issued to Arkansas Power & Light Company - White Bluff Steam Electric Station on April 9, 1991. After the issuance of permit 263-A, it was discovered that the particulate emission limitation was 0.027 lb/MMBtu heat input instead of the 40 CFR 60 Subpart D limit of 0.10 lb/MMBtu heat input. The more stringent limitation caused a problem with compliance with the operating permit. Due to the variability in the quality of coal, AP&L requested a revised particulate emission limit in order to maintain compliance with its operating permit. Air permit 263-AR-1 incorporated the new limits for particulate matter, identified source of pollution not previously addressed in the original permit, and estimated pollution emissions from fuel oil storage facilities and air toxic emissions.

263-AOP-R0 was the first operating air permit issued to Entergy-Arkansas, Inc. - White Bluff Steam Electric Station under Regulation 26. No physical changes in the method of operation at the facility occurred prompting this permit issuance.

Entergy-Arkansas, Inc. proposed to increase the CO limit for the White Bluff facility from 300 lb/hr (50 ppm) to 3247.0 lb/hr or 300 ppm hourly (100 ppm 24-hour average) to reflect actual emissions indicated by stack testing. This increase in CO emissions is not subject to PSD review, because previous permit limits were based on AP-42 factors that were inaccurate for this facility. Also, the White Bluff Steam Electric Station began construction before the PSD regulations were promulgated. Modeling analysis at a 500 ppm emission rate was conducted and showed no significant impact to the *NAAQS*.

Entergy-Arkansas, Inc. elected to take on a new NO<sub>x</sub> emission limit of 0.45 lb/MMBtu annual average at White Bluff Units 1 and 2. This early election was allowed under 40 CFR 76 of the Acid Rain Regulations. This limit applied beginning calendar year 1997. However, Entergy 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.

263-AOP-R1 was issued on May 30, 2000. The facility modified the Title V permit to allow for the receipt of coal via barge. Barges arrived at the plant on the Arkansas River. The coal was transferred from the barge to trucks through a series of conveyors and hoppers (SN-19). This modification also moved the following sources to the insignificant activities list: SN-08, SN-09, SN-10, SN-11, SN-12, and SN-13.

263-AOP-R2 was issued on December 20, 2002. This minor modification was necessary to replace the control equipment associated with the Rail Car Rotary Dumper (SN-03) and



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Handling/Conveying Emissions (SN-06) with non-hazardous dust suppressant chemical foam spraying stations. The volatile organic compound (VOC) emissions from the dust suppressant chemical foam spray were permitted at 17.7 tons per year. This permitting action also modified the visible emissions conditions for SN-06. In addition, the following sources no longer operate or never existed at the facility and were removed from the permit: Barge Unloading Operations (SN-19) and some of the Handling/Conveying Emissions (SN-06) M10 Emergency Stackout Pile, M12 Dead Storage Hopper 4A, M13 Dead Storage Hopper 3A, M14 Dead Storage Hopper 2A, and M33 Fly Ash Rail Car Loading Silo. The M15 Dead Storage Vault was removed from the permit as a source of emissions since it is completely enclosed, underground, and the rotoclone dust collector connected to it is inoperable. This rotoclone was removed or abandoned in place.

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## **Section IV: SPECIFIC CONDITIONS**

### **SN-01, 02, and 05**

#### **Boilers**

##### **Source Description**

SN-01 and SN-02 are 8700 million BTU per hour coal fired boilers. 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.

Particulate emissions from these two units are controlled with electrostatic precipitators. NSPS emissions standards for particulate matter are 0.1 lb/MMBtu and a maximum opacity of 20 percent. A continuous opacity monitor records emissions opacity.

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. A continuous emissions monitor measures sulfur dioxide emissions.

SN-05 is a 183 million BTU per hour boiler. This auxiliary boiler combusts No. 2 fuel oil in order to provide steam for unit start-up 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, when operating under Scenario I: coal firing, set forth in the following table. [§19.501 of Regulation 19 et seq, and 40 CFR Part 52, Subpart E]

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

Source No.	Pollutant	lb/hr	tpy
SN-01	PM <sub>10</sub>	140.0	613.1
	SO <sub>2</sub>	10,440.0	45,727.2
	VOC	35.0	153.3
	CO	3,247.0	14,221.9
	NO <sub>x</sub>	6,090.0	26,674.2
	Lead	0.3	1.0
SN-02	PM <sub>10</sub>	140.0	613.1
	SO <sub>2</sub>	10,440.0	45,727.2
	VOC	35.0	153.3
	CO	3,247.0	14,221.9
	NO <sub>x</sub>	6,090.0	26,674.2
	Lead	0.3	1.0

- The permittee shall not exceed the emission rates, when operating under Scenario I: coal 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 5 – 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

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Source No.	Pollutant	lb/hr	tpy
	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 <sub>2</sub> O	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
	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

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Source No.	Pollutant	lb/hr	tpy
	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
	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 <sub>2</sub> O	42.00	183.96

3. 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. Applicable provisions of Subpart D (Appendix A) include, but are not limited to the following [§19.304 of Regulation 19 and 40 CFR Part 60]:
  - 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 as except as provided by 40 CFR 60.8 and 60.11. [40 CFR 60.42(a)(2)]
  - c. SO<sub>2</sub> emissions shall not exceed 1.2 lb/MMBtu. [40 CFR 60.43]
  - d. NO<sub>x</sub> 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<sub>x</sub>, SO<sub>2</sub>, CO<sub>2</sub>, and opacity. The CO<sub>2</sub> monitor and analyzer serve as the diluent in this system. [40 CFR 60.45(a)]

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- f. 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)]
  - g. Excess SO<sub>2</sub> emissions are defined as any 3-hour period during which the average emissions (arithmetic average of three contiguous one-hour periods) of SO<sub>2</sub> as measured by a CEMS exceed the applicable standard under 60.43. [40 CFR 60.45(g)(2)]
  - h. Excess NO<sub>x</sub> emissions are defined as any 3-hour period during which the average emissions (arithmetic average of three contiguous one-hour periods) of NO<sub>x</sub> as measured by a CEMS exceed the applicable standard under 60.44. [40 CFR 60.45(g)(3)]
  - i. Excess emission and monitoring system performance reports shall be submitted to the ADPC&E 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). [40 CFR 60.45(g)]
4. The permittee shall maintain records which demonstrate compliance with the SO<sub>2</sub> emission limits set in Specific Conditions #1 and #3. 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 one-hour periods of SO<sub>2</sub> emissions as measured by the CEMS and converted to pounds per hour per 40 CFR Part 75. For Specific Conditions #3, compliance shall be determined as the arithmetic average of three contiguous one-hour periods of SO<sub>2</sub> 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]
5. The permittee shall maintain records which demonstrate compliance with the NO<sub>x</sub> emission limits set in Specific Condition #1 and #3. 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<sub>x</sub> emissions as measured by the CEMS and converted to pounds per hour per 40 CFR Part 75. For Specific Conditions #3, compliance shall be determined as the arithmetic average of three contiguous one-hour periods of NO<sub>x</sub> 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]
6. 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 #7. [§19.503 of Regulation 19, and 40 CFR Part 52, Subpart E and 40 CFR 60.42(a)(2)]

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7. The permittee shall install, calibrate, maintain, and operate a continuous emission monitoring system (CEMS) for measuring opacity of emissions and all SO<sub>2</sub>, NO<sub>x</sub>, and CO<sub>2</sub> emissions from SN-01 and SN-02 and record the output of the system. The CO<sub>2</sub> monitor and analyzer serve as the diluent in this system. This CEMS shall comply with the Air Division's "Continuous Emission Monitoring Systems 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 sudden and 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, 40 CFR Part 52, Subpart E, and A.C.A. §8- 4-203 as referenced by §8-4-304 and §8-4-311]

8. 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 time period of excess emissions, process operating time during reporting period, date and time of each period during which the CEMS were 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. [§19.304 of Regulation 19, and 40 CFR 60.7] Reports shall be sent to the following address:

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Arkansas Department of Environmental Quality  
 Air Division  
 Attn: Compliance Inspector Supervisor  
 P.O. Box 8913  
 Little Rock, AR 72219-8913

9. 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 75.10]
10. 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 6 – Maximum Criteria Pollutant Emission Rates for Scenario II: No. 2 Fuel Oil Firing**

Source No.	Pollutant	lb/hr	tpy
SN-01	PM <sub>10</sub>	9.6	41.9
	SO <sub>2</sub>	10,440.0	45,727.2
	VOC	35.0	153.3
	CO	3,247.0	14,221.9
	NO <sub>x</sub>	6,090.0	26,674.2
	Lead	0.1	0.1
SN-02	PM <sub>10</sub>	9.6	41.9
	SO <sub>2</sub>	10,440.0	45,727.2
	VOC	35.0	153.3
	CO	3,247.0	14,221.9
	NO <sub>x</sub>	6,090.0	26,674.2
	Lead	0.1	0.1

11. 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 7 – 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	0.01	0.02
	Beryllium	0.01	0.02
	Cadmium	0.01	0.02



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Source No.	Pollutant	lb/hr	tpy
	Chromium	0.01	0.02
	Formaldehyde	0.36	1.54
	Manganese	0.01	0.03
	Mercury	0.01	0.02
	Nickel	0.01	0.02
	POM	0.03	0.11
	Selenium	0.02	0.07
	N <sub>2</sub> O	0.81	3.52
SN-02	PM	9.6	41.9
	Arsenic	0.01	0.02
	Beryllium	0.01	0.02
	Cadmium	0.01	0.02
	Chromium	0.01	0.02
	Formaldehyde	0.36	1.54
	Manganese	0.01	0.03
	Mercury	0.01	0.02
	Nickel	0.01	0.02
	POM	0.03	0.11
	Selenium	0.02	0.07
	N <sub>2</sub> O	0.81	3.52

12. The permittee shall maintain records which demonstrate compliance with the SO<sub>2</sub> emission limits set in Specific Conditions #10. These records may be used by the Department for enforcement purposes. For Specific Condition #10, compliance shall be determined as the arithmetic average of three contiguous one-hour periods of SO<sub>2</sub> 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]
  
13. The permittee shall maintain records which demonstrate compliance with the NO<sub>x</sub> emission limits set in Specific Conditions #10. These records may be used by the Department for enforcement purposes. For Specific Condition #10, compliance shall be determined as the arithmetic average of three contiguous one-hour periods of NO<sub>x</sub> 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]
  
14. 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

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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]

15. 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]
16. The permittee shall not exceed 91,454.4 tons/year of SO<sub>2</sub> emissions for 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]
17. The permittee shall maintain monthly records which demonstrate compliance with the limit set in Specific Condition #16. These records may be used by the Department for enforcement purposes. The records shall be updated no later than the last day of the month following the month to which the records pertain. 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]
18. The permittee shall not exceed 53,348.4 tons/year of NO<sub>x</sub> emissions for 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]
19. The permittee shall maintain monthly records which demonstrate compliance with the limit set in Specific Condition #18. These records may be used by the Department for enforcement purposes. The records shall be updated no later than the last day of the month following the month to which the records pertain. 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]
20. 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]
21. The permittee shall submit the required Electronic Data Reports to EPA Headquarters. [§19.304 of Regulation 19, and 40 CFR 75]
22. The permittee will perform Relative Accuracy tests 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 75.10]

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23. 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. This calculation will meet the requirements under 40 CFR Part 60, Subpart D. [§19.304 of Regulation 19, and 40 CFR 75.10(c)]
24. The permittee shall test SN-01 and SN-02 for CO 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 derived from the average of three, one-hour tests to determine compliance. 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. [§19.702 of Regulation 19 and 40 CFR Part 52, Subpart E]
25. The permittee shall test SN-01 and SN-02 for PM and PM<sub>10</sub> 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<sub>10</sub> 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<sub>10</sub>

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

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<sub>10</sub> 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]

26. 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 greater than 20% on a three-hour average. Corrective action may include, but is

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not limited to, 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]

27. 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:

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- 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 #7. [§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]

28. 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 D4057-88. A 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 D4057-88 and the facility is able to meet*

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*the requirements of Specific Condition #29.)* [§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]

29. The permittee shall maintain records of fuel oil analysis. 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]
30. 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]
31. 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 8 – Maximum Criteria Pollutant Emission Rates for SN-05**

Source No.	Pollutant	lb/hr	tpy
SN-05	PM <sub>10</sub>	4.5	19.4
	SO <sub>2</sub>	104.9	459.3
	VOC	0.4	1.5
	CO	6.7	29.3
	NO <sub>x</sub>	32.1	140.5
	Lead	0.1	0.1

32. 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 9 – 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	0.01	0.01
	Cadmium	0.01	0.01
	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 <sub>2</sub> O	0.15	0.65

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33. The opacity shall not exceed 20% from SN-05 as measured by 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]
34. Weekly observations of the opacity from SN-05 shall be conducted by personnel familiar with the permittee's visible emissions, when operated 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]
35. 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]

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

**Rail Car Rotary Dumper and Handling/Conveying Emissions**

**Source Description**

SN-03 The coal for the White Bluff 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 (M1), is capable of emptying approximately 30 cars per hour. Emissions from the rail car rotary dumper are regulated under the State Implementation Plan (SIP), Regulation 19.

SN-06 Minor emission sources at the plant include coal handling/conveying operations (not subject to NSPS Subpart Y). For this permitting action, SN-06 was separated into three sources: SN-06A, SN-06B, and SN-06C. SN-06A includes those emission points that were previously permitted as controlled with Amerclones, rotoclones, and water sprays. These emissions are now controlled with dust suppressant chemical foam sprays; however, these sources are now permitted as uncontrolled or controlled with enclosures only. This includes emission points M2, M3, M5, M6, M7, M8, M9, M16, M24, M25, M26, M27, and M28. SN-06B includes those emission points associated with the stacker reclaimer. This includes emission points M17, M18, M20, M21, M22, and M23. SN-06C includes the emissions associated with the storage piles and haul roads. This includes emission points M4, M11, M19, and M34. The following emission points were removed from the permit since these emission points do not exist at the White Bluff facility: M10 and M33. The following emission points were removed from the permit as sources of emissions since they are inoperable: M12, M13, and M14. The M15 Dead Storage Vault was removed from the permit as a source of emissions since it is completely enclosed, underground, and the rotoclone dust collector connected to it is inoperable. This rotoclone will be removed or abandoned in place. M32 was removed from the permit since it has been removed from service. Emissions are regulated under the State Implementation Plan, (SIP), Regulation 19.

**Specific Conditions**

36. 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 10 – Maximum Criteria Pollutant Emission Rates for SN-03 and SN-06**

Source No.	Pollutant	lb/hr	tpy
SN-03 and SN-06A	VOC	---	2.2



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Source No.	Pollutant	lb/hr	tpy
SN-03	PM <sub>10</sub>	0.1	0.1
	VOC	1.3	*
SN-06A	PM <sub>10</sub>	0.4	1.8
	VOC	1.3	*
SN-06B	PM <sub>10</sub>	0.3	1.1
SN-06C	PM <sub>10</sub>	63.0	202.2

37. The permittee shall not exceed the emission rates specified 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 11 – 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	0.9	3.7
SN-06B	PM	0.6	2.3
SN-06C	PM	187.3	507.6

38. The permittee shall not cause to be discharged to the atmosphere any emissions which exhibit an opacity greater than 20 percent from 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]

39. The permittee shall use water and/or non-hazardous chemical sprays while the dumper is operating at SN-03, except when the ambient temperature is below 40 degrees F or while it is raining. Compliance with this condition shall represent compliance with this source’s applicable requirements. [§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]

40. 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. [§19.503 of Regulation 19, and 40 CFR Part 52, Subpart E]

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1. The date and time of the observation.
  2. If visible emissions were detected.
  3. 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.
  4. 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.
  5. The name of the person conducting the opacity observations.
41. The permittee shall conduct weekly observations of the opacity for the following 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. [§18.501 of Regulation 18 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]
1. The date and time of the observation.
  2. If visible emissions were detected.
  3. 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.
  4. If visible emissions were present following the corrective action, document that the visible emissions do not cause a nuisance beyond the property boundary.
  5. The name of the person conducting the opacity observations.
42. 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. [§18.501 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 dust suppressant chemical foam spray used at SN-03 and SN-06A shall not exceed 1.42 percent 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 70.6]

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44. The permittee shall maintain Material Safety Data Sheets which demonstrate compliance with Specific Condition #43. [§19.705 of Regulation 19 and 40 CFR Part 52, Subpart E]
45. The dust suppressant chemical foam spray used at SN-03 and SN-06A shall not contain any hazardous air pollutants. [§18.1004 of Regulation 18 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]
46. The permittee shall maintain Material Safety Data Sheets which demonstrate compliance with Specific Condition #45. [§18.1004 of Regulation 18 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]
47. Usage of the dust suppressant chemical foam spray at SN-03 and SN-06A shall not exceed 300,000 pounds per consecutive 12 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]
48. The permittee shall maintain monthly records which demonstrate compliance with Specific Condition #47. These records shall be updated no later than the last day of the month following the month to which the records pertain. Twelve month rolling totals and each individual month's data shall be kept on site, and shall be made available to Department personnel upon request. The twelve month rolling totals 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]
49. The permittee shall comply with the maintenance plan submitted to the Department for the rotary car dumper. The requirements shall include, but are not limited to, the inspection of the spray nozzles for pluggage. [A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]
50. The permittee shall not operate the following emission sources: M12 Dead Storage Hopper 4A, M13 Dead Storage Hopper 3A, and M14 Dead Storage Hopper 2A. [A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]
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. [§19.303 of Regulation 19 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]
52. The fly ash trucks hauling ash to 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]
53. The permittee shall maintain monthly records to demonstrate compliance with Specific Condition #52. 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:

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

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

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]

54. The permittee shall not operate the three Coal Yard Dozers more than a combined 12,000 hours per consecutive twelve (12) month period, and the water wagon shall not exceed 4,000 hours 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]
55. The permittee shall maintain monthly records to demonstrate compliance with Specific Condition #54. 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]
56. The cat scraper shall not exceed 1,500 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]
57. The permittee shall maintain monthly records to demonstrate compliance with Specific Condition #56. 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]

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## SN-04

### Fly Ash Silos (2) with fabric filters

#### Source Description

The White Bluff Steam Electric Station is equipped with two (2) fly ash silos. Particulate emissions from the silos are controlled by fabric filters, SN-04, with a control efficiency of 99.9% for PM and 99.8% for PM<sub>10</sub>. Emissions are regulated under the State Implementation Plan, (SIP), Regulation 19.

#### Specific Conditions

58. 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 12 – Maximum Criteria Pollutant Emission Rates for SN-04**

Source No.	Pollutant	lb/hr	tpy
SN-04 (M30-M31)	PM <sub>10</sub>	0.1	0.1

59. 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 13 – Maximum Non-Criteria Pollutant Emission Rates for SN-04**

Source No.	Pollutant	lb/hr	tpy
SN-04 (M30-M31)	PM	4.0	17.6

60. The permittee shall not cause to be discharged to the atmosphere any emissions 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]

61. 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

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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.
62. 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.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]
- 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 diffuser blower bearings for heat and vibration;
  - g. Check bags;
  - h. Check blower case for excessive heat buildup; and
  - i. Check inlet filter and change as needed.
63. 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 #62. 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]

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**SN-07**

**Fuel Oil Storage Tank**

**Source Description**

No. 2 Fuel Oil is stored in a storage tank (SN-07) 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 are regulated under the State Implementation Plan (SIP), Regulation 19.

**Specific Conditions**

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

**Table 14 – Maximum Criteria Pollutant Emission Rates for SN-07**

<b>Source No.</b>	<b>Pollutant</b>	<b>lb/hr</b>	<b>tpy</b>
SN-07	VOC	0.4	1.6

65. 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]

66. The permittee shall maintain records which demonstrate compliance with the limit set forth in Specific Condition #65. These records may be used by the Department for enforcement purposes. These records shall be updated on a monthly basis, shall be kept on site, and shall be provided to Department personnel upon request. The 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]

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## SN-14 through SN-16

### Miscellaneous Storage Tanks

#### Source Description

The White Bluff Steam Electric Station has numerous storage tanks which store fuel oil and gasoline. SN-14 is a 4,000 gallon capacity No. 2 fuel oil storage tank, SN-15 is a 10,000 gallon No. 2 fuel oil storage tank, and SN-16 is a 4,000 gallon gasoline storage tank. Emissions from the tanks are volatile organic compounds (VOCs) which are regulated under the State Implementation Plan (SIP), Regulation 19.

#### Specific Conditions

67. 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 15 – Maximum Criteria Pollutant Emission Rates for SN-14, SN-15, and SN-16**

Source No.	Pollutant	lb/hr	tpy
SN-14 (T25)	VOC	0.1	0.1
SN-15 (T26)	VOC	0.1	0.1
SN-16 (T32)	VOC	0.1	0.1

68. The permittee shall store only distillate fuel oil No.2 in storage tanks SN-14 and SN-15. 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 store only gasoline in storage tank SN-16. 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]
70. The permittee shall not exceed the annual throughput limit of 16,000 gallons of fuel at SN-14 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 not exceed the annual throughput limit of 180,000 gallons of fuel at SN-15 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]



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72. The permittee shall not exceed the annual throughput limit of 16,000 gallons of fuel at SN-16 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]
73. The permittee shall maintain records which demonstrate compliance with the limits set forth in the Specific Conditions #70, #71, and #72. These records may be used by the Department for enforcement purposes. These records shall be updated on a monthly basis, shall be kept on site, and shall be provided to Department personnel upon request. The 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]

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**SN-17 and SN-18**

**Cooling Towers**

**Source Description**

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

**Specific Conditions**

74. 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 16 – Maximum Criteria Pollutant Emission Rates for SN-17 and SN-18**

Source No.	Pollutant	lb/hr	tpy
SN-17 (X24)	PM <sub>10</sub>	4.6	19.9
SN-18 (X25)	PM <sub>10</sub>	4.6	19.9

75. 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 17 – Maximum Non-Criteria Pollutant Emission Rates for SN-17 and SN-18**

Source No.	Pollutant	lb/hr	tpy
SN-17 (X24)	PM	4.6	19.9
SN-18 (X25)	PM	4.6	19.9

76. The permittee shall not cause to be discharged to the atmosphere from these sources any emissions 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]

77. 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 #76. [§19.303 of Regulation 19, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

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78. Total dissolved solids shall not exceed 3,000 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]
79. The permittee shall monitor the total dissolved solids weekly when the unit is operating to demonstrate compliance with Specific Condition #78. 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]
80. The circulating water flow for SN-17 and SN-18 shall not exceed 20,700 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]
81. The permittee shall test the circulating water flow annually to demonstrate compliance with this Specific Condition #80. 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]

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**SN-20**

**Degreasing Operations**

**Source Description**

This source consists of eight degreasers with a total capacity of 605 gallons. Four (4) of the degreasers are used during outage periods only.

**Specific Conditions**

82. 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 18 – Maximum Criteria Pollutant Emission Rates for SN-20**

<b>Source No.</b>	<b>Pollutant</b>	<b>lb/hr</b>	<b>tpy</b>
SN-20	VOC	6.8	10.2

83. The VOC content of the solvent used at SN-20 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]

84. The throughput of SN-20 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 Condition #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]

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### **Section V: COMPLIANCE PLAN AND SCHEDULE**

Entergy Arkansas, Inc. - White Bluff 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.

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## **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. [§19.410(B) of Regulation 19 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: [§19.702 of Regulation 19 and/or §18.1002 of Regulation 18 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 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 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

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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.

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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”.
13. 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]
14. The permittee shall maintain records which demonstrate compliance with the limit set in Plantwide Condition #13. 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]
15. 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)]



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**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 December 16, 2002, and correspondence dated October 6, 2003, February 20, 2004, and July 22, 2004.

**Table 19 - Insignificant Activities**

Description	Category
Microwave Tower Propane Generators (C6a and C6b), Kerosene Fired Space Heaters (C7)	A-1
16 – Storage tanks less than 250 gallons storing organic liquids having a true vapor pressure less than or equal to 3.5 psia. (T6 – T10, T15 – T19, T31, T94, T95, T98, - T100)	A-2
18 – Storage tanks less than 10,000 gallons storing organic liquids having a true vapor pressure less than or equal to 0.5 psia. (T4, T5, T13, T14, T21, T22, T24, T27, T28 – T30, T33, T103, T113 - T116, T120)	A-3
Emissions from laboratory equipment/vents. (T93)	A-5
1 – Emergency Diesel Generator which is not operated on more than 90 days of any 12 consecutive months. (C4)	A-12
1 – Fire Pump Emergency Diesel Generator which is not operated on more than 90 days of any 12 consecutive months. (C5)	A-12

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Description	Category
<p>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.</p> <p>Unit 1 Turbine Lube Oil Storage Tank (T2), Unit 1 Turbine Lube Oil Reservoir (T3), Unit 2 Lube Oil Storage Tank (T11), Unit 2 Turbine Lube Oil Reservoir (T12), Unit 1 Glycol Air Preheater Expansion Tanks (T51A), Unit 2 Glycol Mixing Tank (T53), Unit 1 Glycol Mixing Tank (T57), Hydrazine Solution Bulk Containers (T59), EHC Fluid Storage (T71), Welding Area – Machine Shop (X10), Welding Area – Bowl Mill Shop (X11), Unleaded Gasoline Dispensing Station (X15), Diesel Dispensing Station (X16), Unit 1 ESP Transformer/Rectifiers (X31), Unit 2 ESP Transformer/Rectifier (X32), Spare ESP Transformer/Rectifier (X33), Transformers (X34), Switchyard Transformers &amp; Oil Circuit Breakers (X35), Aerosol Lubricant (X55), and Aerosol Degreaser (X56)</p>	A-13
18 - AC Chiller – Pressure Tanks (X36-X42 and X44-X54)	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.

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### 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

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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 the permit establishes no other reporting period, the reporting period will end on the last day of the anniversary month of this 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

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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)]

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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. 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;

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- 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]

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## **APPENDIX A**



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## **APPENDIX B**

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## **APPENDIX C**

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## **APPENDIX D**



