# ADEQ OPERATING AIR PERMIT

Pursuant to the Regulations of the Arkansas Operating Air Permit Program, Regulation No. 26:

Permit No.: 1819-AOP-R4

Renewal #1

**IS ISSUED TO:** 

Jonesboro – City Water & Light - Northwest Substation 1400 Hanley Drive Jonesboro, AR 72401 Craighead County AFIN: 16-00412

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

IS SUBJECT TO ALL LIMITS AND CONDITIONS CONTAINED HEREIN.

Signed:

Michael Bonds Chief, Air Division

Date

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# **Table 1 - List of Acronyms**

A.C.A.	Arkansas Code Annotated
AFIN	ADEQ Facility Identification Number
CFR	Code of Federal Regulations
СО	Carbon Monoxide
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
$PM_{10}$	Particulate matter smaller than ten microns
SNAP	Significant New Alternatives Program (SNAP)
$SO_2$	Sulfur dioxide
SSM	Startup, Shutdown, and Malfunction Plan
Тру	Ton per year
UTM	Universal Transverse Mercator
VOC	Volatile Organic Compound

# Section I: FACILITY INFORMATION

PERMITTEE:	Jonesboro – City Water and Light – Northwest Substation
AFIN:	16-00142
PERMIT NUMBER:	1819-AR-4
FACILITY ADDRESS:	1400 Hanley Drive
	Jonesboro, AR 72401
MAILING ADDRESS:	P.O. Box 1289
	Jonesboro, AR 72403-1289
COUNTY:	Craighead
CONTACT POSITION:	Senior Engineer - Rick White
TELEPHONE NUMBER:	(870)930-3323
REVIEWING ENGINEER:	Paul Osmon
UTM North - South (Y):	Zone 14 - 3969.3 km N
UTM East - West (X):	Zone 15 – 705.4 km E

## Section II: INTRODUCTION

#### **Summary of Permit Activity**

The City of Jonesboro operates a turbine powered peaking power plant located at the Northwest Substation at 1400 Hanley Drive. The facility was originally constructed in early 1999 with two GE LM2500 turbine driven generators rated 23 MW per unit and a fuel storage tank under a minor source permit. The original Title V permit was issued to allow the addition of a GE LM6000 turbine driven generator rated approximately 45 MW. A later modification was issued to allow the addition of a fourth turbine driven generator which will also be powered by a GE LM6000 rated approximately 49 MW. Emissions consist of products of combustion from the turbine exhausts, volatile organic compounds from the fuel storage tank, and particulate matter from the cooling tower drift.

This permit modification is issued to renew the initial Title V permit. No changes occur in the emission units or processes at this facility. The criteria emission limits remain unchanged for the facility. The non-criteria pollutant emission limits for the turbines have been recalculated based on the latest AP-42 factors for stationary turbines (Table 3.1-3, Emission Factors for HAPs from NG Fired Stationary Gas Turbines and Table 3.1-4 and 3.1-5 – Emission Factors for HAPs from Oil Fired Stationary Gas Turbines). Based on the newly calculated emission limits, the facility will no longer be a major source for HAP emissions and will not be subject to 40 CFR 63, Subpart YYYY - National Emission Standards for Hazardous Air Pollutants for Stationary Combustion Turbines as it is currently permitted.

#### **Process Description**

Four simple-cycle combustion turbines (which will be water injected for nitrogen oxides emissions control) will be utilized at a peaking power plant at the Northwest Substation, owned by City Water & Light in Jonesboro, Arkansas to drive electric generators to produce electricity.

The two original simple-cycle turbine units are General Electric LM2500 turbines capable of producing approximately twenty-three (23) megawatts of power each. Each of the original turbines can be fired with natural gas or fuel oil. Hot turbine exhaust gases are discharged from the power turbines through stacks designated as SN-01 for the first power turbine and SN-02 for the second power turbine. These units are permitted to fire either natural gas or diesel fuel oil.

The third and fourth simple-cycle turbine units have been added which are General Electric LM6000 turbines. The No. 3 unit is capable of producing approximately forty-five (45) megawatts of power, and the No. 4 unit is capable of producing approximately forty-nine (49) megawatts of power. Hot turbine exhaust gases are discharged from the power turbine through a stack designated as SN-04 for the No. 3 unit and SN-06 for the No. 4 unit. These units are permitted to fire either natural gas or diesel fuel oil.

A cooling tower is used to cool the inlet air to the LM6000 units (SN-04 and SN-06) allowing them to operate at a higher rated power level during high ambient air temperatures. The drift from the cooling tower (SN-05) will contain particulate matter.

A third emission point, identified as SN-03, is the fuel oil storage tank.

Estimations of hazardous air pollutant (HAP) emission rates are based on AP-42 – Table 3.1-3 – Emission Factors for HAPs from NG fired Stationary Gas Turbines (while fired with natural gas) and AP-42 – Table 3.1-4 and 3.1-5 – Emission Factors for HAPs from Oil Fired Stationary Gas Turbines (when fired with fuel oil). Emissions limits for criteria pollutants are also based on the current AP-42 factors and the carbon monoxide, sulfur dioxide, and oxides of nitrogen limits have been confirmed by initial stack testing.

## Regulations

The following table contains the regulations applicable to this permit.

Source No.	Regulation Citations
Facility	The Arkansas Air Pollution Control Code (Regulation 18)
Facility	Regulations of the Arkansas Plan of Implementation for Air Pollution Control (Regulation 19)
Facility	<i>Regulations of the Arkansas Operating Air Permit Program</i> (Regulation 26).
SN-01, SN-02, SN-04, and SN-06	New Source Performance Standards (NSPS), 40 CFR Part 60, Subpart GG
SN-04 and SN-06	Federal Acid Rain Program, specifically the requirements of 40 CFR Parts 72, 73, and 75
SN-03	40 CFR 60 Subpart Kb - Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced after July 23, 1984

Table 2	- Regulations
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This permit contains Specific Conditions limiting operating hours and fuel restrictions only for SN-04 and SN-06 such that they can be classified as peaking units as defined in 40 CFR 72.2.

## Jonesboro – City Water and Light Permit No. 1819-AOP-R4 AFIN: 16-00142 This allows a PEMS to be substituted for a CEMS for SO<sub>2</sub> and NO<sub>x</sub> monitoring, no continuous opacity monitor required, and other provisions of the acid rain sections to not be applicable.

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.

EMISSION SUMMARY					
Source No.	Description	Pollutant	Emission Rates		Cross Reference Page
			lb/hr	tpy	
		РМ	60.8	71.7	
		PM <sub>10</sub>	60.8	71.7	
Total Allo	wable Emissions	SO <sub>2</sub>	226.0	221.5	
		VOC	60.6	85.8	
		СО	100.0	153.6	
		NO <sub>x</sub>	244.0	239.0	
	HAPS	Acrolein* Formaldehyde* PAH <sup>**</sup> Benzene* 1,3-Butadiene* Arsenic Beryllium Cadmium Lead Manganese Mercury Selenium	8.55E -03 9.49E -01 5.34E -02 7.35E -02 2.12E -02 1.47E -02 4.14E -04 6.41E -03 1.87E -02 1.06E+00 1.60E -03 3.24E -02	3.8E -02 4.2E +00 2.4E -01 3.2E -01 9.3E -02 6.4E -02 1.8E -03 2.8E -02 8.2E -02 4.7E +00 7.0E -03 1.5E -01	

# Table 3 – Emission Summary

EMISSION SUMMARY					
Source No.	Description	Pollutant	Emission Rates		Cross Reference Page
			lb/hr	tpy	
01	General Electric LM 2500 Combustion Turbine Natural Gas Fired 228 MMBtu/Hr (1999)	PM PM <sub>10</sub> SO <sub>2</sub> VOC CO NO <sub>x</sub> Acrolein Formaldehyde PAH <sup>•</sup>	8 8 10 25 38.9 1.46E-03 1.62E-01 5.02E-04	68.2** 68.2** 221.5** 85.4** 153.6** 239.0**	16
02	General Electric LM 2500 Combustion Turbine Natural Gas Fired 228 MMBtu/Hr (1999)	PM PM <sub>10</sub> SO <sub>2</sub> VOC CO NO <sub>x</sub> Acrolein Formaldehyde PAH <sup>•</sup>	8 8 8 10 25 38.9 1.46E-03 1.62E-01 5.02E-04		16
04	General Electric LM 6000 Combustion Turbine Natural Gas Fired 440 MMBtu/Hr (2000)	PM PM <sub>10</sub> SO <sub>2</sub> VOC CO NO <sub>x</sub> Acrolein Formaldehyde PAH <sup>•</sup>	16 16 15 20 25 56 2.82E-03 3.12E-01 9.68E-04		16

		EMISSION SUMM	ARY		
Source No.	Description Pollutant Emission Rates		on Rates	Cross Reference Page	
			lb/hr	tpy	
06	General Electric LM 6000 Combustion Turbine Natural Gas Fired 440 MMBtu/Hr (2002)	PM PM <sub>10</sub> SO <sub>2</sub> VOC CO NO <sub>x</sub> Acrolein Formaldehyde PAH <sup><math>\bullet</math></sup>	16 16 15 20 25 56 2.82E-03 3.12E-01 9.68E-04		16
01	General Electric LM 2500 Combustion Turbine Fuel Oil Fired 234 MMBtu/Hr (1999)	PM PM <sub>10</sub> SO <sub>2</sub> VOC CO NO <sub>x</sub> Benzene 1,3-Butadiene Formaldehyde PAH <sup>•</sup> Arsenic Beryllium Cadmium Lead Manganese Mercury Selenium	10 10 38 10 25 41 1.25E-02 3.65E-03 6.38E-02 9.12E-03 2.51E-03 7.07E-05 1.09E-03 3.19E-03 1.80E-01 2.74E-04 5.70E-03		16

	EMISSION SUMMARY					
Source No.	Description	Pollutant	Emission Rates		Cross Reference Page	
			lb/hr	tpy		
02	General Electric LM 2500 Combustion Turbine Fuel Oil Fired 234 MMBtu/Hr (1999)	PM PM <sub>10</sub> SO <sub>2</sub> VOC CO NO <sub>x</sub> Benzene 1,3-Butadiene Formaldehyde PAH <sup>•</sup> Arsenic Beryllium Cadmium Lead Manganese Mercury Selenium	10 10 38 10 25 41 1.25E-02 3.65E-03 6.38E-02 9.12E-03 2.51E-03 7.07E-05 1.09E-03 3.19E-03 1.80E-01 2.74E-04 5.70E-03		16	

	EMISSION SUMMARY					
Source No.	Description	Pollutant	Emission Rates		Cross Reference Page	
			lb/hr	tpy		
04	General Electric LM 6000 Combustion Turbine Fuel Oil Fired 440 MMBtu/Hr (2000)	PM PM <sub>10</sub> SO <sub>2</sub> VOC CO NO <sub>x</sub> Benzene 1,3-Butadiene Formaldehyde PAH <sup>•</sup> Arsenic Beryllium Cadmium Lead Manganese Mercury Selenium	20 20 75 20 25 81 2.42E-02 7.04E-03 1.23E-01 1.76E-02 4.84E-03 1.36E-04 2.11E-03 6.16E-03 3.48E-01 5.28E-04 1.10E-02		16	

	EMISSION SUMMARY				
Source No.	Description	Pollutant	Emission Rates		Cross Reference Page
			lb/hr	tpy	
06	General Electric LM 6000 Combustion Turbine Fuel Oil Fired 440 MMBtu/Hr (2002)	PM PM <sub>10</sub> SO <sub>2</sub> VOC CO NO <sub>x</sub> Benzene 1,3-Butadiene Formaldehyde PAH <sup>•</sup> Arsenic Beryllium Cadmium Lead Manganese Mercury Selenium	20 20 75 20 25 81 2.42E-02 7.04E-03 1.23E-01 1.76E-02 4.84E-03 1.36E-04 2.11E-03 6.16E-03 3.48E-01 5.28E-04 1.10E-02		16
Facility- All Turbines	HAPS	Acrolein* Formaldehyde* PAH <sup>**</sup> Benzene* 1,3-Butadiene* Arsenic Beryllium Cadmium Lead Manganese Mercury Selenium		3.8E -02 4.2E +00 2.4E -01 3.2E -01 9.3E -02 6.4E -02 1.8E -03 2.8E -02 8.2E -02 4.7E +00 7.0E -03 1.5E -01	16

EMISSION SUMMARY						
Source No.	Description	Pollutant	Emission Rates		Cross Reference Page	
			lb/hr	tpy		
03	Vertical Fuel Oil Storage Tank 15' High x 80' Diameter (1999)	VOC	0.4	0.4	26	
05	Cooling Tower (2000)	PM PM <sub>10</sub>	0.8 0.8	3.5 3.5	27	

\*HAPs included in the VOC totals. Other HAPs are not included in any other totals unless specifically stated.

\*\* Emission limits for combustion products from the turbines are a PAL based on Specific Condition No. 3.

\* - Polycyclic Aromatic Hydrocarbons

#### **PERMIT HISTORY**

Permit No. 1819-A was issued on June 3, 1999 to Jonesboro - City Water and Light for the installation and operation of a peaking power plant powered by two 23 MW GE LM-2500 turbines. Permit limits were listed as  $PM/PM_{10}$  - 17.6 tpy,  $SO_2$  - 26.8 tpy, VOC - 21.4 tpy, CO - 89.9 tpy and  $NO_x$  - 83.5 tpy.

Permit No. 1819-AOP-R0 was issued on March 10, 2000 to Jonesboro - City Water and Light for the addition of a third unit at the power plant which was driven by a 45 MW GE LM-6000 turbine. Hours of operation limits were taken to classify the unit as a "peaking unit" as defined in 40 CFR Part 75. Permit limits were listed as  $PM/PM_{10}$  - 75.0 tpy,  $SO_2$  - 83.9 tpy, VOC - 89.0 tpy, CO - 239.0 tpy,  $NO_x$  - 239.0 tpy and acetaldehyde - 14.1 tpy.

Permit No. 1819-AOP-R1 was issued on May 17, 2001 to Jonesboro - City Water and Light to allow the GE LM6000 unit to also be fired for a limit amount of time on fuel oil. Permit limits were listed as  $PM/PM_{10}$  - 72.1 tpy,  $SO_2$  - 93.6 tpy, VOC - 88.6 tpy, CO - 239.0 tpy,  $NO_x$  - 239.0 tpy and acetaldehyde - 14.1 tpy.

Permit No. 1819-AOP-R2 was issued on March 18, 2003 to Jonesboro - City Water and Light to allow the second GE LM6000 unit to be installed at the facility. Permit limits were listed as  $PM/PM_{10} - 75.6 \text{ tpy}$ ,  $SO_2 - 93.6 \text{ tpy}$ , VOC - 89.1 tpy, CO - 239.0 tpy,  $NO_x - 239.0 \text{ tpy}$  and acetaldehyde - 14.1 tpy.

Permit No. 1819-AOP-R3 was issued on January 26, 2004 to Jonesboro - City Water and Light to allow 4 minor changes to the permit. These included revising emission limits to agree with the stack testing and to revise the annual emission limits formulas. Permit limits were listed as  $PM/PM_{10} - 71.7$  tpy,  $SO_2 - 221.5$  tpy, VOC - 85.5 tpy, CO - 153.6 tpy,  $NO_x - 239.0$  tpy and acetaldehyde - 14.1 tpy.

#### Section III: SPECIFIC CONDITIONS

## Source No. SN-01, SN-02, SN-04, and SN-06 General Electric Turbine Drive Generators

#### **Source Description**

The two original simple-cycle turbine units are General Electric LM2500 turbines capable of producing approximately twenty-three (23) megawatts each. Each simple cycle turbine will be fired with natural gas or fuel oil. The fuel burns in a combustor with air pressurized by the axial air compressor. Combustion products exit the combustor and drive the power turbine which powers both the electric generator and the axial air compressor. Hot turbine exhaust gases are discharged from the power turbines through stacks designated as SN-01 for the first power turbine and SN-02 for the second power turbine. These two turbines are subject to 40 CFR 60, Subpart GG - *New Source Performance Standards for Stationary Gas Turbines*. The non-criteria pollutant emission limits for the turbines have been recalculated based on the latest AP-42 factors for stationary turbines (Table 3.1-3, Emission Factors for HAPs from NG Fired Stationary Gas Turbines). Based on the newly calculated emission limits, the facility will no longer be a major emitter of HAP emissions and will not be subject to 40 CFR 63, Subpart YYYY - National Emission Standards for Hazardous Air Pollutants for Stationary Combustion Turbines as it is currently permitted.

The third and fourth turbine units are General Electric LM6000 turbines. The third unit is capable of producing approximately forty-five (45) megawatts and the fourth unit capable of producing approximately forty-nine (49) megawatts. The fuel burns in a combustor with air pressurized by the axial air compressor. Combustion products exit the combustor and drive the power turbine which powers both the electric generator and the axial air compressor. Hot turbine exhaust gases are discharged from the power turbine through stacks designated as SN-04 and SN-06. These turbines are subject to 40 CFR 60, Subpart GG - *New Source Performance Standards for Stationary Gas Turbines*. They are also subject to regulation by the Federal Acid Rain Program, specifically the requirements of 40 CFR Parts 72, 73, and 75. This permit contains Specific Conditions limiting operating hours for SN-04 and SN-06 such that they can be classified as peaking units as defined in 40 CFR 72.2. This allows a PEMS to be substituted for a CEMS for SO<sub>2</sub> and NOx monitoring, no continuous opacity monitor required, and other provisions of the acid rain sections to not be applicable.

All four turbines are water injected to control the level of nitrogen oxides emissions.

The criteria pollutant permitted pollutants in pounds per hour for each individual turbine are based on maximum capacity of the equipment and the fuel utilized. The tons per year emission limits for criteria pollutants for the turbines for all pollutants are based on limiting the hours of operation by the formula included in the permit in Specific Condition No.3 to prevent exceeding

# **Specific Conditions**

The permittee shall not exceed the emission rates set forth in the following table. The lb/hr
emission limits are based on the maximum capacity of the equipment. Compliance with the
ton per year limits will be demonstrated by completion of the formulas contained in Specific
Condition No. 3. [Regulation No. 19 §19.501 *et seq.* effective December 19, 2004, and 40
CFR Part 52, Subpart E]

SN	Description	Pollutant	Lb/hr	tpy
01	General Electric LM 2500 Combustion Turbine Natural Gas Fired 228 MMBtu/Hr	PM <sub>10</sub> SO <sub>2</sub> VOC CO NO <sub>x</sub>	8 8 10 25 38.9	68.2** 221.5** 85.4** 153.6** 239.0**
02	General Electric LM 2500 Combustion Turbine Natural Gas Fired 228 MMBtu/Hr	PM <sub>10</sub> SO <sub>2</sub> VOC CO NO <sub>x</sub>	8 8 10 25 38.9	
04	General Electric LM 6000 Combustion Turbine Natural Gas Fired 440 MMBtu/Hr	PM <sub>10</sub> SO <sub>2</sub> VOC CO NO <sub>x</sub>	16 15 20 25 56	
06	General Electric LM 6000 Combustion Turbine Natural Gas Fired 440 MMBtu/Hr	PM <sub>10</sub> SO <sub>2</sub> VOC CO NO <sub>x</sub>	16 15 20 25 56	

01	General Electric LM 2500 Combustion Turbine Fuel Oil Fired 234 MMBtu/Hr	PM <sub>10</sub> SO <sub>2</sub> VOC CO NO <sub>x</sub>	10 38 10 25 41	
02	General Electric LM 2500 Combustion Turbine Fuel Oil Fired 234 MMBtu/Hr	PM <sub>10</sub> SO <sub>2</sub> VOC CO NO <sub>x</sub>	10 38 10 25 41	
04	General Electric LM 6000 Combustion Turbine Fuel Oil Fired 440 MMBtu/Hr	PM <sub>10</sub> SO <sub>2</sub> VOC CO NO <sub>x</sub>	20 75 20 25 81	
06	General Electric LM 6000 Combustion Turbine Fuel Oil Fired 440 MMBtu/Hr	PM <sub>10</sub> SO <sub>2</sub> VOC CO NO <sub>x</sub>	20 75 20 25 81	

\*\* Emission limits for combustion products from the turbines are a PAL based on Specific Condition No. 3.

2. The permittee shall not exceed the emission rates set forth in the following table. The lb/hr emission limits for particulate matter are based on capacity of the equipment and tpy emission limits for particulate matter are based on the formulas in Specific Condition No. 3. Compliance with the ton per year limits will be demonstrated by completion of the formulas contained in Specific Condition No. 3. The emission rates for hazardous air pollutants are based on the maximum capacity of the equipment. [Regulation No. 18 §18.801, effective February 15, 1999, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

SN	Description	Pollutant	Lb/hr	tpy
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Facility	Plantwide Limits	PM Acrolein Formaldehyde PAH <sup>*</sup> Benzene 1,3-Butadiene Arsenic Beryllium Cadmium Lead Manganese Mercury Selenium		68.2 3.8E -02 4.2E +00 2.0E -01 3.2E -01 9.3E -02 6.4E -02 1.8E -03 2.8E -02 8.2E -02 4.7E +00 7.0E -03 1.5E -01
01	General Electric LM 2500 Combustion Turbine Natural Gas Fired 228 MMBtu/Hr	PM Acrolein Formaldehyde PAH <sup>•</sup>	8 1.46E-03 1.62E-01 5.02E-04	
02	General Electric LM 2500 Combustion Turbine Natural Gas Fired 228 MMBtu/Hr	PM Acrolein Formaldehyde PAH <sup>•</sup>	8.0 1.46E-03 1.62E-01 5.02E-04	
04	General Electric LM 6000 Combustion Turbine Natural Gas Fired 440 MMBtu/Hr	PM Acrolein Formaldehyde PAH <sup>*</sup>	16.0 2.82E-03 3.12E-01 9.68E-04	

06		General Electric LM 6000 Combustion Turbine Natural Gas Fired 440 MMBtu/Hr	PM Acrolein Formaldehyde PAH <sup>*</sup>	16.0 2.82E-03 3.12E-01 9.68E-04	
01		General Electric LM 2500 Combustion Turbine Fuel Oil Fired 234 MMBtu/Hr	PM Benzene 1,3-Butadiene Formaldehyde PAH <sup>*</sup> Arsenic Beryllium Cadmium Lead Manganese Mercury Selenium	10 1.25E-02 3.65E-03 6.38E-02 9.12E-03 2.51E-03 7.07E-05 1.09E-03 3.19E-03 1.80E-01 2.74E-04 5.70E-03	
	02	General Electric LM 2500 Combustion Turbine Fuel Oil Fired 234 MMBtu/Hr	PM Benzene 1,3-Butadiene Formaldehyde PAH <sup>•</sup> Arsenic Beryllium Cadmium Lead Manganese Mercury Selenium	10 1.25E-02 3.65E-03 6.38E-02 9.12E-03 2.51E-03 7.07E-05 1.09E-03 3.19E-03 1.80E-01 2.74E-04 5.70E-03	

\*\* Emission limits for combustion products from the turbines are a PAL based on Specific Condition No. 3.

• - Polycyclic Aromatic Hydrocarbons

3. The permittee shall calculate the tons per previous years emissions based on the following formulas during each month the facility is operated. [§19.705 or regulation 19, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, 40 CFR 70.6]

CO (tpy) = [(25 lb/hr x DF12) + (25 lb/hr x NG12) + (25 lb/hr x DF46) + (25 lb/hr x NG46)] / 2000

NOx (tpy) = [(41 lb/hr x DF12) + (38.9 lb/hr x NG12) + (81 lb/hr x DF46) + (56 lb/hr x NG46)] / 2000

 $SO_2(tpy) = [(38 lb/hr x DF12) + (8 lb/hr x NG12) + (75 lb/hr x DF46) + (15 lb/hr x NG46)] / 2000$ 

VOC (tpy) = [(10 lb/hr x DF12) + (10 lb/hr x NG12) + (20 lb/hr x DF46) + (20lb/hr x NG46)] / 2000

 $PM_{10}(tpy) = [10 lb/hr x DF12) + (8 lb/hr x NG12) + (20 lb/hr x DF46) + (16 lb/hr x NG46)] / 2000$ 

PM (tpy) = [10 lb/hr x DF12) + (8 lb/hr x NG12) + (20 lb/hr x DF46) + (16 lb/hr x NG46)] / 2000

Where:

DF12 = total operating hours of SN-01 and SN-02 when firing diesel fuel previous 12 months

NG12 = total operating hours of SN-01 and SN-02 when firing natural gas previous 12 months

DF46 = total operating hours of SN-04 and SN-06 when firing diesel fuel previous 12 months

NG46 = total operating hours of SN-04 and Sn-06 when firing natural gas previous 12 months

A resultant from the above formulas of greater than the limits listed in Specific Condition No. 1 & 2 shall be considered a violation of this permit. The results of these calculations shall be completed by the 15<sup>th</sup> of the month for the previous month, kept on site, and made available to Department personnel upon request. A copy of the results of these calculations for each month operated shall be submitted in accordance with General Provision No. 7.

4. Visible emissions shall not exceed the limits specified in the following table of this permit as measured by EPA Reference Method No. 9. [A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

SN	Limit	Regulatory Citation
SN-01, SN-02, SN-04, SN-06 (gas fired)	5 %	§18.501
SN-01, SN-02, SN-04, SN-06 (oil fired)	20 %	§19.503

- 5. One observation of the opacity from either SN-01 or SN-02 and one observation of the opacity from either SN-04 or SN-06 (while they are being fired with fuel oil) shall be measured during each calendar year using personnel trained in EPA Reference Method 9. Should visible emissions appear in excess of the permitted opacity, the permittee shall immediately take action to identify the cause of the visible emissions, implement corrective action, and document that visible emissions did not appear to be in excess of the permitted opacity following the corrective action. The permittee shall maintain records which contain the records of the visible emissions while firing with fuel oil in order to demonstrate compliance with Specific Condition No.4. These records shall be updated yearly, kept on site, and made available to Department personnel upon request. [§18.1004 of Regulation 18 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]
- 6. The natural gas fired at the facility shall be only pipeline quality natural gas. Pipeline quality

natural gas contains less than 0.3 grains of hydrogen sulfide per hundred standard cubic feet and hydrogen sulfide constitutes greater than 50% of the sulfur (by weight) in the natural gas. [§19.705 of Regulation 19 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

- The facility shall use only fuel oil with a sulfur content of less than 0.16 weight per cent when firing on fuel oil. [§19.705 of Regulation 19 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]
- 8. The permittee shall maintain monthly records which demonstrate compliance with Specific Condition No. 7. Records shall be updated by the fifteenth day of the month following the month for which the records pertain. These records shall be kept on site, and shall be made available to Department personnel upon request. [§19.705 of Regulation 19 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]
- 9. The permittee shall not exceed, from SN-04 and SN-06, a NO<sub>x</sub> emission concentration of 75 ppmvd corrected to 15% O<sub>2</sub> at ISO conditions and an average hourly rate of 56 lb/hr when being fired on natural gas. Compliance shall be demonstrated by PEMS required by Specific Condition 10. [§19.501 of Regulation 19and 40 CFR Part 52, Subpart E]

## **NSPS Requirements**

10. SN-01, SN-02, SN-04, and SN-06 are subject to 40 CFR Subpart 60, Subpart A, General Provisions and 40 CFR Subpart 60, Subpart GG, Standards of Performance for Stationary Gas Turbines due to being a stationary gas turbine greater than 10.7 gigajoules per hour installed after October 3, 1977. The NSPS requirements are summarized below. Details of these requirements can be found in the subpart which is attached to this permit.

NSPS REQUIREMENT	NSPS REQUIREMENTS SUMMARY				
Subpart GG Reference	Requirement				
60.332(a)(1) 60.332(b)	<ul> <li>Allowable NOx emissions must be less than the values obtained by completing the following formula for each fuel:</li> <li>STD = 0.0075(14.4)/Y + F</li> <li>Where:</li> <li>Y = Manufacturer's rated heat rate at manufacturer's rated load (kilojoules per watt hour)</li> <li>F = emission allowance for fuel bound nitrogen</li> <li>Units No. 1 and No. 2:</li> <li>CALCULATED LIMIT THIS APPLICATION FOR GAS FUEL: 100 PPM</li> <li>CALCULATED LIMIT THIS APPLICATION FOR OIL FUEL: 102 PPM</li> <li>Units No. 4 and No. 6:</li> <li>CALCULATED LIMIT THIS APPLICATION FOR GAS FUEL: 75 PPM</li> </ul>				
60 333(b)	CALCULATED LIMIT THIS APPLICATION FOR OIL FUEL: 77 PPM Sulfur content of fuel being fired shall not exceed 0.8 percent by weight. This				

	limit is superceded by a voluntary limit take by the permittee in Specific
	Condition No.7 which specifies a 0.16 weight percent limit.
60.334(a)	A continuous monitoring system will record the fuel consumption and the
	ratio of water to fuel being fired. This system shall be accurate within $\pm$ 5%.
60.334(b)(1)	Monitoring and recording of sulfur and nitrogen content of fuel being fired is
60.334(b)(2)	required. Liquid fuel need only be monitored each time that fuel is
	transferred to the storage tank.
	Liquid fuel monitoring is to be completed per 40CFR60.334(b)(1) or as
	approved in the alternate plan approved by EPA dated February 15, 2004.
	(Appendix F)
	Gaseous fuel monitoring is to be completed per Appendix C – Special Fuel
	Monitoring Protocol for Jonesboro CWL or other approved method.
60.334(c)	Semiannually report:
	Any hour during which the water-to-fuel ratio as measured by the continuous
	monitoring system falls below the water-to-fuel ratio determined to
	demonstrate compliance; Any period which the fuel bound nitrogen exceeds
	the fuel-bound allowance used in the formula in $60.332(a)(2)$ .
	Any daily period during which the sulfur content of the fuel being fired
	exceed 0.80 weight percent by volume.
	Any period during which the water injection was stepped to provent ice for
	Any period during which the water injection was stopped to prevent ice log
60.335(c)(1)	The NOv emissions shall be computed for each test run (required by Specific
00.335(C)(1)	Condition 13) using the following equation:
	$NOx = (NOx_0)(Pr/P_0)^{0.5} [e^{-19(Ho-0.00633)}] (288/T_0)^{1.53}$
	Where $(100x0)(1110)$ [c ] (200/1a)
	NOx = emission rate at 15% $O_2$ and ISO standard ambient conditions, ppm by
	volume
	NOxo = observed NOx concentration, ppm by volume at 15%
	Pf = reference combustor inlet absolute pressure at 101.3 kilopascals ambient
	pressure, mm Hg
	Po = observed combustor inlet absolute pressure at test, mm Hg
	Ho = specific humidity of ambient air, gram $H_2O$ per gram air
	e = transcendental constant, 2.718
	Ta = ambient temperature, °K.
60.335(c)(2)	Method 20 shall be used to determine the nitrogen oxides, sulfur dioxide, and
60.335(c)(3)	oxygen concentrations. The span values shall be 300 ppm of nitrogen oxide
	and 21 percent oxygen. The NOx emissions shall be determined at 30, 50, 75,
	and 100 percent of peak load or at four points in the normal operating range
	of the gas turbine, including the minimum point in the range and peak load.
60.335(d)	The owner or operator shall determine compliance with the sulfur content
	standards as follows:
	ASTM D 2880-71 shall be used to determine sulfur content in liquid fuels
	ASTM D 10/2-8, D 3031-81, D 4084-82, D 3246-81 or another approved
(0.225())	ASTM D 1072-8, D 3031-81, D 4084-82, D 3246-81 or another approved method shall be used to determine sulfur content of gaseous fuels.
60.335(a)	ASTM D 1072-8, D 3031-81, D 4084-82, D 3246-81 or another approved method shall be used to determine sulfur content of gaseous fuels. The owner or operator shall use analytical methods accurate to within 5% to

- 11. The permittee shall compile a monthly report (for any month the generators are operated) detailing the required ratio of water to fuel being fired called for by the digital control system (and established by Specific Condition 13) versus actual ratio of water to fuel being fired for each hour a unit is operated (§60.334(a)). A semi-annual report shall be submitted detailing the total hours for which the actual ratio of water to fuel falls below the water-to-fuel ratio necessary to demonstrate compliance with the permit nitrogen oxide emission levels (§60.334(c)(1)). [§19.304 of Regulation 19 and 40 CFR, Part 60, Subpart GG]
- 12. The permittee is not required to operate the water injection equipment when the ice fog hazard exemption in §60.332(f) applies. The permittee shall report all such instances in the semi-annual report. [§19.304 of Regulation 19 and 40 CFR, Part 60, Subpart GG]
- 13. The permittee shall measure the emissions of both of the General Electric LM2500 simple-cycle combustion turbines while using fuel oil and while using natural gas (2 separate tests) and both of the General Electric LM6000 simple-cycle combustion turbines while using fuel oil and while using natural gas (2 separate tests). Periodic performance testing shall be performed every five (5) years on one of each model of engines installed with each LM2500 unit being tested alternated every five (5) years. The turbine shall be tested for NO<sub>x</sub> and SO<sub>2</sub> using EPA Method 20, and CO using EPA Method 10. These three pollutant tests shall be done simultaneously. The turbine shall be tested in accordance with the New Source Performance Standard, Subpart GG, Sections 60.335 (c)(1) and (c)(3). The water to fuel ratio used during each test point (30, 50, 75, and 100 percent of peak load or at four points in the normal operating range of the gas turbine) shall be submitted in the report. The test results shall be submitted to the Department (Compliance Section Manager) within 30 days after the completion of the testing. [§19.304 of Regulation 19 and 40 CFR, Part 60, Subpart GG]

# **Acid Rain Requirements**

- 14. The General Electric LM6000 units (SN-04 and SN-06) are subject to and shall comply with all applicable provisions of the Acid Rain Program (40 CFR Parts 72, 73, and 75). A copy of 40 CFR Part 75 is provided in Appendix C.
  - 1. Pursuant to 40 CFR Part 75 .14 (c) Continuous Opacity Monitoring SN-04 and SN-06 are exempt from the requirement for a continuous opacity monitor based on using only natural gas fuel and low sulfur diesel fuel.
  - 2. Pursuant to 40 CFR Part 75 SN-04 and SN-06 are new "peaking units" as defined :
    - A. An average capacity factor of 10.0 percent during any 3 consecutive calendar years.

- B. A capacity factor of no more than 20.0 percent during any of those years.
- 15. The hours of operation for the General Electric LM6000 Combustion Turbines (SN-04 and SN-06) shall not exceed 1,752 rated hours full load equivalent each as calculated in 40 CFR Part 75 during any single calendar year and shall not exceed 2,628 rated hours full load equivalent each as calculated in 40 CFR Part 75 for any consecutive 3 calendar year period. [§19.304 of Regulation 19 and 40 CFR 75]
- 16. The permittee shall maintain monthly records which demonstrate compliance with Specific Condition No. 15. Records shall be updated by the fifteenth day of the month following the month for which the records pertain. These records shall be kept on site, and shall be made available to Department personnel upon request. [§19.705 of Regulation 19 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

## SN-03 Fuel Oil Storage Tank

## **Source Description**

A fuel storage tank is utilized for storing the fuel oil for the turbines. The tank has a shell height of fifteen feet (15') and a diameter of eighty feet (80'). This tank has a storage capacity of 564,076 gallons. The net emissions are calculated based on throughput of 1,128,000 gallons per year. The fuel oil storage tank is subject to 40 CFR 60 Subpart Kb - *Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced after July 23, 1984* which is attached as Appendix E. Since the tank has a capacity greater than 151 cubic meters and stores a liquid with a true maximum vapor pressure of less than 3.5 kPa, this equipment is probably only subject to the provisions of §60.110b(c), §60.116b(a), and §60.116b(b).

## **Specific Conditions**

17. The permittee shall not exceed the emission rates set forth in the following table. The emission limits are based on the maximum capacity of the equipment. [§19.501 of Regulation #19 and 40 CFR Part 52, Subpart E]

SN	Description	Pollutant	lb/hr	tpy
03	Fuel Storage Tank - 15' x 80'	VOC	0.4	0.4

#### **NSPS Requirement**

18. The facility shall keep readily accessible records showing the dimensions of the fuel oil storage tank and an analysis showing the capacity of the storage tank for the life of the facility. All volatile organic liquids stored in the fuel oil storage tank must have a true vapor pressure of less than 3.5 kPa (0.5 psia). [§19.304 of Regulation 19 and 40 CFR, Part 60, Subpart Kb]

# SN-05 Cooling Tower

## **Source Description**

A cooling tower will circulate water which will be used on hot days to cool the inlet air to the turbine. This will allow the turbine to maintain rated power on high ambient temperature days. The cooling tower drift will contain water with total dissolved solids. The total dissolved solids are considered to be particulate emissions. The cooling tower will be equipped with drift eliminators to control these particulate emissions.

## **Specific Conditions**

 The permittee shall not exceed the emission rates set forth in the following table. The lb/hr and tons per year emission limits are based on the maximum capacity of the equipment and compliance with Specific Condition No. 21. [§19.501 of Regulation #19 and 40 CFR Part 52, Subpart E]

SN	Description	Pollutant	lb/hr	tpy
05	Cooling Tower	$PM_{10}$	0.8	3.5

20. The permittee shall not exceed the emission rates set forth in the following table. The lb/hr and tons per year emission limits are based on the maximum capacity of the equipment and compliance with Specific Condition No. 21. [§18.801 of Regulation #18 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

SN	Description	Pollutant	lb/hr	tpy
05	Cooling Tower	РМ	0.8	3.5

21. The permittee shall test and record the total dissolved solids of the cooling water on a weekly basis when SN-05 is operating. Results less than 1,500 ppm total dissolved solids will assure compliance with Specific Conditions No. 19 and 20 of this permit. The results shall be kept on site and made available to Department personnel upon request. [§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 52, Subpart E]

## Section IV: COMPLIANCE PLAN AND SCHEDULE

Jonesboro City Water and Light – Northwest Substation will continue to operate in compliance with those identified regulatory provisions. The facility will examine and analyze future regulations that may apply and determine their applicability with any necessary action taken on a timely basis.

## Section V: PLANT WIDE CONDITIONS

- The permittee will notify the Director in writing within thirty (30) days after commencing construction, completing construction, first placing the equipment and/or facility in operation, and reaching the equipment and/or facility target production rate. [Regulation No. 19 §19.704, 40 CFR Part 52, Subpart E, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]
- 2. If the permittee fails to start construction within eighteen months or suspends construction for eighteen months or more, the Director may cancel all or part of this permit. [Regulation No.19 §19.410(B) and 40 CFR Part 52, Subpart E]
- 3. The permittee must test any equipment scheduled for testing, unless stated in the Specific Conditions of this permit or by any federally regulated requirements, within the following time frames: (1) New Equipment or newly modified equipment within sixty (60) days of achieving the maximum production rate, but no later than 180 days after initial start-up of the permitted source or (2) operating equipment according to the time frames set forth by the Department or within 180 days of permit issuance if no date is specified. The permittee must notify the Department of the scheduled date of compliance testing at least fifteen (15) days in advance of such test. The permittee will submit the compliance test results to the Department within thirty (30) days after completing the testing. [Regulation No.19 §19.702 and/or Regulation No.18 §18.1002 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]
- 4. The permittee must provide: [Regulation No.19 §19.702 and/or Regulation No.18 §18.1002 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]
  - a. Sampling ports adequate for applicable test methods;
  - b. Safe sampling platforms;
  - c. Safe access to sampling platforms; and
  - d. Utilities for sampling and testing equipment.
- 5. The permittee must operate the equipment, control apparatus and emission monitoring equipment within the design limitations. The permittee will maintain the equipment in good condition at all times. [Regulation No.19 §19.303 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]
- 6. This permit subsumes and incorporates all previously issued air permits for this facility. [Regulation No. 26 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

# Acid Rain (Title IV)

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

# **Title VI Provisions**

- 8. The permittee must comply with the standards for labeling of products using ozone-depleting substances. [40 CFR Part 82, Subpart E]
  - a. All containers containing a class I or class II substance stored or transported, all products containing a class I substance, and all products directly manufactured with a class I substance must bear the required warning statement if it is being introduced to interstate commerce pursuant to \$82.106.
  - b. The placement of the required warning statement must comply with the requirements pursuant to §82.108.
  - c. The form of the label bearing the required warning must comply with the requirements pursuant to \$82.110.
  - d. No person may modify, remove, or interfere with the required warning statement except as described in §82.112.
- 9. The permittee must comply with the standards for recycling and emissions reduction, except as provided for MVACs in Subpart B. [40 CFR Part 82, Subpart F]
  - a. Persons opening appliances for maintenance, service, repair, or disposal must comply with the required practices pursuant to §82.156.
  - b. Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to §82.158.
  - c. Persons performing maintenance, service repair, or disposal of appliances must be certified by an approved technician certification program pursuant to §82.161.
  - d. Persons disposing of small appliances, MVACs, and MVAC-like appliances must comply with record keeping requirements pursuant to §82.166. ("MVAC-like appliance" as defined at §82.152.)
  - e. Persons owning commercial or industrial process refrigeration equipment must comply with leak repair requirements pursuant to §82.156.

- f. Owners/operators of appliances normally containing 50 or more pounds of refrigerant must keep records of refrigerant purchased and added to such appliances pursuant to §82.166.
- 10. If the permittee manufactures, transforms, destroys, imports, or exports a class I or class II substance, the permittee is subject to all requirements as specified in 40 CFR Part 82, Subpart A, Production and Consumption Controls.
- 11. If the permittee performs a service on motor (fleet) vehicles when this service involves ozone-depleting substance refrigerant (or regulated substitute substance) in the motor vehicle air conditioner (MVAC), the permittee is subject to all the applicable requirements as specified in 40 CFR part 82, Subpart B, Servicing of Motor Vehicle Air Conditioners.

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

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

# **Permit Shield**

13. Compliance with the conditions of this permit shall be deemed compliance with all applicable requirements, as of the date of permit issuance, included in and specifically identified in Table 4 - Applicable Regulations of this condition. The permit specifically identifies the following as applicable requirements based upon the information submitted by the permittee in an application dated August 25, 2004.

Source No.	Regulation	Description
Facility	Regulation 18	Arkansas Air Pollution Code
Facility	Regulation 19	Regulations of the Arkansas Plan of Implementation for Air Pollution Control
Facility	Regulation 26	Regulations of the Arkansas Operating Air Permit Program
SN-04 SN-06	40 CFR Parts 72, 73, and 75	Title IV Federal Clean Air Act Amendments
Facility	40 CFR Part 50	National Ambient Air Quality Standards
SN-01, SN-02,	40 CFR 60 – Subpart	Standards of Performance for Stationary Gas

Table 4	-	Appl	icable	Regu	lations
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SN-04, SN-06	GG	Turbines
SN-03	40 CFR 60 – Subpart Kb	Standards of Performance for Volatile Organic Liquid Storage Vessels
SN-01, SN-02, SN-04, SN-06	40 CFR Part 64	Compliance Assurance Monitoring

The permit specifically identifies the following as inapplicable based upon information submitted by the permittee in an application dated August 25, 2004.

Source No.	Regulation	Description
SN-01, SN-02, SN-05, SN-06	40 CFR 63, Subpart YYYY	National Emission Standards for Hazardous Air Pollutants: Combustion Turbines
SN-01, SN-02, SN-05, SN-06	40 CFR 63, Subpart ZZZZ	National Emission Standards for Hazardous Air Pollutants: Internal Combustion Engines
Facility	40 CFR 52.21	Prevention of Significant Deterioration

# **Table 5 - Inapplicable Regulations**

# Section VI: 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 August 25, 2004. No insignificant activities were listed.

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

## Section VII: GENERAL PROVISIONS

- Any terms or conditions included in this permit which specify and reference Arkansas Pollution Control & Ecology Commission Regulation No. 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.[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 No. 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 No. 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 No. 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 five (5) years from the date of the monitoring sample, measurement, report, or application. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit. [40 CFR 70.6(a)(3)(ii)(B) and Regulation No. 26 §26.701(C)(2)(b)]
- 7. The permittee must submit reports of all required monitoring every six (6) months. If permit establishes no other reporting period, the reporting period shall end on the last day of the anniversary month of the initial Title V permit. The report is due within thirty (30) days of the end of the reporting period. Although 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 No. 26 §26.2 must certify all required reports. The permittee will send the reports to the address below: [40 C.F.R. 70.6(a)(3)(iii)(A) and §26.701(C)(3)(a) of Regulation #26]
- 8. The permittee will report to the Department all deviations from permit requirements, including those attributable to upset conditions as defined in the permit.
  - a. For all upset conditions (as defined in Regulation 19.601), the permittee will make an initial report to the Department by the next business day after the discovery of the occurrence. The initial report may be made by telephone and shall include:
    - i. The facility name and location,
    - ii. The process unit or emission source deviating from the permit limit,
    - iii. The permit limit, including the identification of pollutants, from which deviation occurs,
    - iv. The date and time the deviation started,
    - v. The duration of the deviation,
    - vi. The average emissions during the deviation,
    - vii. The probable cause of such deviations,
    - viii. Any corrective actions or preventive measures taken or being taken to prevent such deviations in the future, and
    - ix. The name of the person submitting the report.

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

writing (by facsimile, overnight courier, or other means) by the next business day after discovery of the occurrence, and the report will serve as both the initial report and full report.

- b. For all deviations, the permittee will report such events in semi-annual reporting and annual certifications required in this permit. This includes all upset conditions reported in 8a. above. The semi-annual report must include all the information as required in the initial and full report required in 8a. {40 CFR 70.6(a)(3)(iii)(B), Regulation No. 26 §26.701(C)(3)(b), Regulation No. 19 §19.601 and §19.602]
- 9. If any provision of the permit or the application thereof to any person or circumstance is held invalid, such invalidity will not affect other provisions or applications hereof which can be given effect without the invalid provision or application, and to this end, provisions of this Regulation are declared to be separable and severable. [40 CFR 70.6(a)(5), §26.701(E) of Regulation No. 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 No. 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 §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 Regulation No. 26 §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 No. 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 No. 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 No. 26 §26.701(F)(5)]
- 15. The permittee must pay all permit fees in accordance with the procedures established in Regulation No. 9. [40 CFR 70.6(a)(7) and Regulation No. 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 No. 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 No. 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 No. 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 No. 26 §26.2. [40 CFR 70.6(c)(1) and Regulation No. 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 No. 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 must submit the compliance certification annually within 30 days following the last day of the anniversary month of the initial Title V permit. The permittee must also submit the compliance certification to the Administrator as well as to the Department. All compliance certifications required by this permit must include the following: [40 CFR 70.6(c)(5) and Regulation No. 26 §26.703(E)(3)]
  - a. The identification of each term or condition of the permit that is the basis of the certification;

- b. The compliance status;
- c. Whether compliance was continuous or intermittent;
- d. The method(s) used for determining the compliance status of the source, currently and over the reporting period established by the monitoring requirements of this permit; and
- e. Such other facts as the Department may require elsewhere in this permit or by \$114(a)(3) and \$504(b) of the Act.
- 22. Nothing in this permit will alter or affect the following: [Regulation No. 26 §26.704(C)]
  - a. The provisions of Section 303 of the Act (emergency orders), including the authority of the Administrator under that section;
  - b. The liability of the permittee for any violation of applicable requirements prior to or at the time of permit issuance;
  - c. The applicable requirements of the acid rain program, consistent with §408(a) of the Act or,
  - d. The ability of EPA to obtain information from a source pursuant to \$114 of the Act.
- 23. This permit authorizes only those pollutant-emitting activities addressed in this permit. [A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

# **APPENDIX A**

# **ADEQ CEMS Conditions**

# **APPENDIX B**

40CFR 60, Subpart GG

# **APPENDIX C**

Special fuel Monitoring Protocol for Jonesboro CWL (natural gas)

# **APPENDIX D**

# 40 CFR Part 75, Continuous Emissions Monitoring

## **APPENDIX E**

Special Fuel Monitoring for Jonesboro CWL (diesel fuel)

# **APPENDIX F**

# COMPLIANCE ASSURANCE MONITORING PLAN