ADEQ
OPERATING
AIR PERMIT

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

Permit No. : 1903-AOP-R4

Renewal #1

IS ISSUED TO:

Associated Electric Cooperative, Inc. – Dell Power Plant

Dell, AR 72426

Mississippi County

AFIN: 47-00448

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:

August 15, 2005 AND August 14, 2010

IS SUBJECT TO ALL LIMITS AND CONDITIONS CONTAINED HEREIN.

Signed:

Mike Bates
Chief, Air Division

Date

Facility: Associated Electric Cooperative, Inc. – Dell Power Plant
Permit No.: 1903-AOP-R4
AFIN: 47-00448

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List of Acronyms

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

Section I: FACILITY INFORMATION

PERMITTEE:	Associated Electric Cooperative, Inc. – Dell Power Plant
AFIN:	47-00448
PERMIT NUMBER:	1903-AOP-R4
FACILITY ADDRESS:	301 E. Hwy 18
	Dell, AR 72426
MAILING ADDRESS:	301 E. Hwy 18
	Dell, AR 72426
COUNTY:	Mississippi County
CONTACT POSITION:	Tadd Henry – Environmental Specialist
TELEPHONE NUMBER:	417-885-9222
REVIEWING ENGINEER:	Wesley Crouch
UTM Zone:	15
UTM North - South (Y):	3972.666
UTM East - West (X):	768.674

Section II: INTRODUCTION

Summary of Permit Activity

Associated Electric Cooperative, Inc. – Dell Power Plant, is constructing a natural gas fired power plant in Dell, Arkansas. This facility will be a combined cycle electrical generating plant with a nominal rating of 528 MW (with a peak of 640 MW), supplying electrical energy to the Entergy Power Grid via the pre-existing Entergy sub-station located adjacent to the planned site. With this modification, the facility is changing its name from TPS, Dell LLC to Associated Electric Cooperative, Inc. – Dell Power Plant. This modification will also increase the permitted hours of operation of SN-03 from 1000 hours per year to 8760 hours per year. Permitted emissions increases from this change are 2.5 tpy PM/PM_{10}, 0.2 tpy SO_2, 1.8 tpy VOC, 27.0 tpy CO and 16.1 tpy NO_x.

The determination of BACT for SN-03 is based on it being a natural gas fired source. Controls were determined to be good combustion practices, low sulfur fuels, and low NO_x burners. Increasing the hours of operation does not affect the BACT limits as they are given as a lb/MMbtu emission rate. Also, the modeling/increment analysis are unaffected as they are based on hourly emission rates which are unchanged by this modification.

Process Description

This TPS facility will be comprised of two GE S207FA combustion turbine-generators; two heat recovery steam generators (HRSG) configured for enhanced thermal efficiency; and steam turbine-generating equipment (SN-01 and SN-02). Additional emission generating equipment includes an auxiliary boiler (SN-03), an emergency generator (SN-23), a diesel fired fire pump (insignificant), a cooling tower system (SN-04 through SN-15), an inlet cooling system (SN-16 through SN-27) consisting of three four-cell mechanical draft cooling towers and a four cell wastewater cooling tower (SN-28 through SN-31). In order to reduce nitrogen oxide (NOx) emissions for the facility and meet Arkansas emission guidelines, the facility will be using Selective Catalytic Reduction (SCR) for the combustion turbine-generators.

Regulations

The following table contains the regulations applicable to this permit.

Regulations

Source No.	Regulation Citations
Facility	Arkansas Air Pollution Control Code, Regulation 18, effective February 15, 1999
Facility	Regulations of the Arkansas Plan of Implementation for Air Pollution Control, Regulation 19, effective December 19, 2004

Source No.	Regulation Citations
Facility	Regulations of the Arkansas Operating Air Permit Program, Regulation 26, effective September 26, 2002
01 and 02	40 CFR Part 60, Subpart GG - Standards of Performance for Stationary Gas Turbines
01 and 02	40 CFR Part 60, Subpart Da - Standards of Performance for Electric Utility Steam Generating Units
03	40 CFR Part 60, Subpart Dc - Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units
01 and 02	40 CFR Part 63, Subpart YYYY – National Emission Standards for Hazardous Air Pollutants for Stationary Combustion Turbines
03	40 CFR Part 63, Subpart DDDDD - National Emission Standards for Hazardous Air Pollutants for Industrial/Commercial/Institutional Boilers and Process Heaters

The facility is considered a major stationary source under the Prevention of Significant Deterioration (PSD) regulations as found in 40 CFR 52.21.

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

EMISSION SUMMARY					
Source No.	Description	Pollutant	Emission Rates		Cross Reference Page
			lb/hr	tpy	
Total Allowable Emissions		PM	70.9	307.2	N/A
		PM_{10}	48.1	207.1	
		SO_2	8.7	35.4	
		VOC	24.8	105.6	
		CO	127.5	551.1	

EMISSION SUMMARY					
Source No.	Description	Pollutant	Emission Rates		Cross Reference Page
			lb/hr	tpy	
		NO_x	71.8	282.0	
		Lead*	0.3	0.3	
		1,3-Butadiene*	0.04	0.04	
		Acetaldehyde*	0.20	0.75	
		Acrolein*	0.06	0.14	
		Benzene*	0.09	0.25	
		Ethylbenzene*	0.16	0.60	
	HAPS	Formaldehyde*	2.89	12.59	
		Naphthalene*	0.05	0.07	
		PAH*	0.04	0.06	
		Propylene Oxide*	0.13	0.54	
		Toluene*	0.57	2.33	
		Xylene*	0.28	1.18	
		Arsenic*	0.01	0.01	
		Beryllium*	0.01	0.01	
		Cadmium*	0.01	0.01	
		Chromium*	0.01	0.01	
		Cobalt*	0.01	0.01	
		Dichlorobenzene*	0.01	0.01	
		Hexane	0.2	0.7	

EMISSION SUMMARY					
Source No.	Description	Pollutant	Emission Rates		Cross Reference Page
			lb/hr	tpy	
		Manganese*	0.01	0.01	
		Mercury*	0.01	0.01	
		Nickel*	0.01	0.01	
		Phenantharene*	0.01	0.01	
		Pyrene*	0.01	0.01	
		Selenium*	0.01	0.01	
Air Contaminants		Ammonia**	49.20	215.40	
01	East Side Combustion Turbine/HRSG Stack	PM	32.0	140.1	24
		PM_{10}	23.0	100.7	
		SO_2	4.0	17.5	
		VOC	11.8	51.7	
		CO	59.4	260.2	
		NO_x	30.0	131.4	
		Lead*	0.1	0.1	
		1,3-Butadiene*	0.01	0.01	
		Acetaldehyde*	0.09	0.36	
		Acrolein*	0.02	0.06	
		Benzene*	0.03	0.11	
		Ethylbenzene*	0.07	0.29	
		Formaldehyde*	1.43	6.27	

EMISSION SUMMARY					
Source No.	Description	Pollutant	Emission Rates		Cross Reference Page
			lb/hr	tpy	
		Naphthalene*	0.01	0.02	
		PAH*	0.01	0.02	
		Propylene Oxide*	0.06	0.26	
		Toluene*	0.27	1.15	
		Xylene*	0.13	0.57	
		Ammonia**	24.60	107.70	
02	West Side Combustion Turbine/HRSG Stack	PM	32.0	140.1	24
		PM_{10}	23.0	100.7	
		SO_2	4.0	17.5	
		VOC	11.8	51.7	
		CO	59.4	260.2	
		NO_x	30.0	131.4	
		Lead*	0.1	0.1	
		1,3-Butadiene*	0.01	0.01	
		Acetaldehyde*	0.09	0.36	
		Acrolein*	0.02	0.06	
		Benzene*	0.03	0.11	
		Ethylbenzene*	0.07	0.29	
		Formaldehyde*	1.43	6.27	
		Naphthalene*	0.01	0.02	

EMISSION SUMMARY					
Source No.	Description	Pollutant	Emission Rates		Cross Reference Page
			lb/hr	tpy	
		PAH*	0.01	0.02	
		Propylene Oxide*	0.06	0.26	
		Toluene*	0.27	1.15	
		Xylene*	0.13	0.57	
		Ammonia**	24.60	107.70	
03	Auxiliary Boiler	PM	0.7	2.8	33
		PM_{10}	0.7	2.8	
		SO_2	0.1	0.3	
		VOC	0.5	2.1	
		CO	7.0	30.5	
		NO_x	4.2	18.2	
		Arsenic*	0.01	0.01	
		Benzene*	0.01	0.01	
		Beryllium*	0.01	0.01	
		Cadmium*	0.01	0.01	
		Chromium*	0.01	0.01	
		Cobalt*	0.01	0.01	
		Dichlorobenzene*	0.01	0.01	
		Formaldehyde*	0.01	0.01	
		Hexane	0.2	0.7	

EMISSION SUMMARY					
Source No.	Description	Pollutant	Emission Rates		Cross Reference Page
			lb/hr	tpy	
		Manganese*	0.01	0.01	
		Mercury*	0.01	0.01	
		Naphthalene*	0.01	0.01	
		Nickel*	0.01	0.01	
		Phenanathrene*	0.01	0.01	
		Pyrene*	0.01	0.01	
		Selenium*	0.01	0.01	
		Toluene*	0.01	0.01	
04 thru 15	12-Cell Cooling Tower	PM	3.9	16.9	36
		PM_{10}	0.6	2.3	
16-22 and 24-27	Inlet Cooling System	PM	0.2	0.6	36
		PM_{10}	0.1	0.4	
23	500 Kilowatt Emergency Generator	PM	0.6	0.1	39
		PM_{10}	0.6	0.1	
		SO_2	0.5	0.1	
		VOC	0.7	0.1	
		CO	1.7	0.2	
		NO_x	7.6	1.0	
		Lead*	0.1	0.1	
		1,3-Butadiene*	0.01	0.01	

EMISSION SUMMARY					
Source No.	Description	Pollutant	Emission Rates		Cross Reference Page
			lb/hr	tpy	
		Acetaldehyde*	0.01	0.01	
		Acrolein*	0.01	0.01	
		Benzene*	0.01	0.01	
		Ethylbenzene*	0.01	0.01	
		Formaldehyde*	0.01	0.01	
		Naphthalene*	0.01	0.01	
		PAH*	0.01	0.01	
		Toluene*	0.01	0.01	
		Xylene*	0.01	0.01	
28-31	Wastewater Cooling Tower	PM	1.5	6.6	41
		PM_{10}	0.1	0.1	

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

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

Section III: PERMIT HISTORY

Permit #1903-AOP-R0 was issued on August 8, 2000, this was the initial Title V permit for GenPower - Dell. The permit introduced the installation of two GE turbines totaling 640 megawatts. GenPower underwent PSD review for the initial permit which is outlined below.

As a part of the PSD review for GenPower, a Best Available Control Technology (BACT) analysis was required. The BACT analysis for GenPower considers emission controls for PM, PM_{10}, VOC, CO, and NO_X (SO_2 emissions are only 35.2 tpy).

BACT Summary

The following table is a summary of the BACT determinations for the facility. In the event of any disagreement between this table and subsequent permit conditions, the permit conditions shall take precedence.

Source	Pollutant	BACT Determination		
Combustion Turbines with Duct Burners (SN-01 and SN-02)	PM/PM_{10}	Clean fuel/Good combustion practices	0.021 lb/MMBtu	Natural Gas
	SO_2	Combustion of low sulfur fuels	0.002 lb/MMBtu	Natural Gas
	CO	Good combustion practices and design	0.032 lb/MMBtu	Natural Gas
	VOC	Good combustion practices and design	0.0049 lb/MMBtu	Natural Gas
	NO_x	SCR and DLN combustion	(3.5 ppm at 0.015 lb/MMBtu)	Natural Gas
Auxiliary Boiler (SN-03)	PM/PM_{10}	Clean fuel/Good combustion practices	0.010 lb/MMBtu	Natural Gas
	SO_2	Combustion of low sulfur fuels	0.001 lb/MMBtu	Natural Gas
	CO	Good combustion practices and design	0.08 lb/MMBtu	Natural Gas
	VOC	Good combustion practices and design	0.005 lb/MMBtu	Natural Gas
	NO_x	Low NO_x Burner	0.04 lb/MMBtu	Natural Gas
Cooling Tower (SN-04 through SN-15)	PM/PM_{10}	Drift Eliminators and Good Operating Practices	0.003% Drift from the water flow	-
Emergency Generator (SN-23)	PM/PM_{10} SO_2 CO VOC NO_x	0.5% Sulfur Fuel and 250 hours/year usage	-	Diesel Fuel

Source	Pollutant	BACT Determination		
Fire Pump Engine (Insignif.)	PM/PM_{10} SO_2 CO VOC NO_x	0.5% Sulfur Fuel and 250 hours/year usage	-	Diesel Fuel

Permit #1903-AOP-R1 was issued on September 17, 2001. This modification was made to include ammonia emissions from the SCR. It also changed the name of the facility from Genpower - Dell, LLC to TPS - Dell, LLC.

Permit #1903-AOP-R2 was issued on May 1, 2002. This modification updated the calculations used to determine the emission rates from the cooling towers and added an inlet cooling system (SN-16 through SN-27) consisting of three four-cell mechanical draft cooling towers and a four cell wastewater cooling tower (SN-28 through SN-31). A suspension of construction extension was issued on December 20, 2004 that lasts until August 7, 2005.

Permit #1903-AOP-R3 was issued on August 15, 2005. This was the initial Title V permit renewal. The facility has a suspension of construction extension that expires on February 7, 2007. This permit modified the permitted HAP emissions based upon more representative emission factors and corrected the emissions from the wastewater cooling tower (SN-28 through SN-31). The changes resulted in increases of permitted emissions of PM by 3.3 tons per year (tpy) and HAPs by 9.21 tpy.

Section IV: SPECIFIC CONDITIONS

Source No. SN- 01 and SN-02 Description
Combustion Turbine Generators/Heat Recovery Steam Generators (HRSG) with Duct Burners

The main emission sources of the facility are the two combustion turbine generators. These generators will be supplied by General Electric, and are the GE Frame 7FA models, which will be used in their combined cycle mode. These combustion turbines will be limited to using natural gas as a fuel, which will be obtained from a pipeline approximately 3 miles south of the facility. The GE Frame 7FA model combustion turbines incorporate lean pre-mix dry low NO_X combustors as well as the add-on Selective Catalytic Reduction (SCR) to minimize NO_X formation.

The turbine exhaust gas will duct through a natural gas fired heat recovery steam generator (HRSG) where steam will be produced and used by a steam turbine to generate additional electricity. Each HRSG is specifically designed to match the operating characteristics of the GE combustion turbines to provide optimum performance for the total power cycle. Each HRSG is a three-pressure, reheat, duct fired, natural circulation unit with a horizontal gas turbine exhaust flow receiver containing vertical heat tube transfer sections. Both HRSGs will utilize duct firing at 100% load. Duct firing generates additional heat to the exhaust gases of the combustion turbines by burning natural gas. This heat energy is then converted to steam and electricity.

The primary consumer of the steam is a reheat, condensing steam turbine. It consists of a high-pressure section, which receives high-pressure superheated steam from the HRSGs and exhausts to the reheat section of the HRSG. The steam from the reheat section is then supplied to the intermediate-pressure section of the turbine, which expands to the low-pressure section. The low-pressure section of the steam turbine also receives excess low-pressure superheated steam from the HRSGs and exhausts to the condenser unit.

Emissions from the combustion gas turbine generator and the duct fired HRSG system will be exhausted through two stacks 165 feet above the ground surface. The combustion gas turbine generators will be shut down as necessary for scheduled maintenance, or as dictated by economic or electrical demand.

Specific Conditions

1. The permittee shall not exceed the emission rates set forth in the following table. Initial compliance with the emission rates set forth in the following table shall be demonstrated by the initial performance test of the two Turbine/HRSG stacks. Continuing compliance with this condition will be demonstrated by meeting the requirements set forth in Specific Conditions 3 through 16. Hourly emission rates are based on a worst-case scenario. [Regulation No. 19 §19.501 *et seq.* effective December 19, 2004, and 40 CFR Part 52, Subpart E]

Maximum Criteria Emission Rates

Source	Pollutant	lb/hr	tpy
SN-01	PM_{10}	23.0	100.7
	SO_2	4.0	17.5
	VOC	11.8	51.7
	CO	59.4	260.2
	NO_X	30.0	131.4
	Lead	0.1	0.1
SN-02	PM_{10}	23.0	100.7
	SO_2	4.0	17.5
	VOC	11.8	51.7
	CO	59.4	260.2
	NO_X	30.0	131.4
	Lead	0.1	0.1

2. The permittee shall not exceed the emission rates set forth in the following table. Initial compliance with the emission rates set forth in the following table shall be demonstrated by the initial performance test of the two Turbine/HRSG stacks. Continuing compliance with this condition will be demonstrated by meeting the requirements set forth in Specific Conditions 4 through 9, 17, and 18. Hourly emission rates are based on a worse-case scenario. [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]

Maximum Non-Criteria Emission Rates

Source	Pollutant	lb/hr	tpy
SN-01	PM	32.0	140.1
	1,3-Butadiene	0.01	0.01
	Acetaldehyde	0.09	0.36

Source	Pollutant	lb/hr	tpy
	Acrolein	0.02	0.06
	Benzene	0.03	0.11
	Ethylbenzene	0.07	0.29
	Formaldehyde	1.43	6.27
	Naphthalene	0.01	0.02
	PAH	0.01	0.02
	Propylene Oxide	0.06	0.26
	Toluene	0.27	1.15
	Xylene	0.13	0.57
	Ammonia	24.60	107.70
SN-02	PM	32.0	140.1
	1,3-Butadiene	0.01	0.01
	Acetaldehyde	0.09	0.36
	Acrolein	0.02	0.06
	Benzene	0.03	0.11
	Ethylbenzene	0.07	0.29
	Formaldehyde	1.43	6.27
	Naphthalene	0.01	0.02
	PAH	0.01	0.02
	Propylene Oxide	0.06	0.26
	Toluene	0.27	1.15
	Xylene	0.13	0.57

Source	Pollutant	lb/hr	tpy
	Ammonia	24.60	107.70

3. The permittee shall comply with the following BACT determinations for the two combustion turbine/heat recovery system generators. Initial compliance with the emission limits set forth in the following table shall be demonstrated by the initial performance test of each of the two stacks at the generators. [Regulation No. 19 §19.901 *et seq.* and 40 CFR Part 52, Subpart E]

Sources	Pollutant	BACT Determination		
Each 7FA Combustion Turbine / HRSG with Duct Burner (SN-01 and SN-02)	PM_{10}	Use of clean fuels and good combustion practice	0.021 lb/MMBtu	Stack Testing
	SO_2	Use of low-sulfur fuel and good combustion practice	0.002 lb/MMBtu	Fuel Monitoring
	VOC	Use of clean fuels and good combustion practice	0.0049 lb/MMBtu	Stack Testing
	CO	Use of clean fuels and good combustion practice	0.032 lb/MMBtu	24-hour average (CEMS)
Each Combustion Turbine (with and without Duct Burner firing)	NO_x	Dry Low NO_x Combustors with SCR	3.5 ppmvd at 15% O_2	3-hour average (CEMS)

4. Visible emissions may not exceed the limits specified in the following table of this permit as measured by EPA Reference Method 9. Compliance with this opacity limit shall be demonstrated by the use of natural gas as a fuel. [Note: NSPS Subpart Da requires an initial test of opacity from the Duct Burner.]

Visible Emissions

SN	Limit	Regulatory Citation
01	5%	Regulation 18 §18.501
02	5%	Regulation 18 §18.501

5. The combustion turbine units may only fire pipeline natural gas. [Regulation No. 18 §18.1004, Regulation No. 19 §19.705 and §19.901 *et seq.*, 40 CFR Part 52, Subpart E, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR §70.6]

6. The permittee shall maintain monthly records which demonstrate compliance with Specific Condition 5. These records shall be a copy of the page or pages that contain the gas quality characteristics specified in either a purchase contract or pipeline transportation contract. These records shall be kept on site, and shall be submitted in accordance with General Condition 7. [Regulation No. 19 §19.705 and 40 CFR Part 52, Subpart E]

7. Natural gas firing for the combustion turbine units shall be limited to a total of 39,500 million standard cubic feet per twelve consecutive months. [Regulation No. 18 §18.1004, Regulation No. 19 §19.705 and §19.901 *et seq*., 40 CFR Part 52, Subpart E, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR §70.6]

8. The permittee shall maintain monthly records which demonstrate compliance with Specific Condition 7. Records shall be updated by the fifteenth day of the month following the month to which the records pertain. These records shall be kept on site, and shall be made available to Department personnel upon request. A twelve month rolling total and each individual month's data shall be submitted in accordance with General Condition 7. [Regulation No. 19 §19.705 and 40 CFR Part 52, Subpart E]

Testing and Monitoring Requirements

9. The permittee shall perform an initial stack test on each Combustion Turbine/HRSG with Duct Burner stack for PM and PM_{10} to demonstrate compliance with the limits specified in Specific Conditions 1, 2, and 3. Testing shall be performed every five years in accordance with Plant Wide Condition 3. The PM test shall be performed using EPA Reference Methods 5 and 202 as found in 40 CFR Part 60, Appendix A. The PM_{10} test shall be performed by using either EPA Reference Method 201A and 202 or 5 and 202 as found in 40 CFR Part 60, Appendix A. By using Method 5 and 202 for PM_{10}, the facility will assume that all collected particulate is PM_{10}. Testing shall be performed at 90% or above of the maximum operating load. [Regulation No. 19 §19.702 and §19.901 *et seq*. and 40 CFR Part 52, Subpart E]

10. Monitoring requirements relative to SO_2 emissions from the Combustion Turbine/HRSG shall be as follows: [Regulation No. 19 §19.703, 40 CFR Part 52, Subpart E, 40 CFR Part 60, Subpart GG, 40 CFR Part 75, Subpart B, and A.C.A. §8- 4-203 as referenced by §8-4-304 and §8-4-311]

    A. The permittee shall monitor the natural gas fuel sulfur content daily (unless an alternative monitoring plan is approved by the U.S. EPA).

    B. The permittee shall conduct SO_2 emission monitoring procedures in accordance with Appendix D of 40 CFR Part 75. These procedures shall include: measuring pipeline natural gas fuel flow rate using an in-line fuel flow meter, determining the gross calorific value of the pipeline natural gas at least once per month, and using the default the emission rate of 0.0006 pounds of SO_2 per million Btu of heat input.

    C. The permittee shall maintain records which demonstrate compliance with Specific Condition #10(A) and (B).

11. The permittee shall perform an initial stack test on each Combustion Turbine/HRSG with Duct Burner stack for VOC to demonstrate compliance with the limits specified in Specific Conditions 1 and 3. Testing shall be performed every five years in accordance with Plant Wide Condition 3 and EPA Reference Method 25A as found in 40 CFR Part

60, Appendix A. Testing shall be performed at 90% or above of the maximum operating load. [Regulation No. 19 §19.702 and §19.901 *et seq*. and 40 CFR Part 52, Subpart E]

12. The permittee shall perform an initial stack test on each Combustion Turbine/HRSG with Duct Burner stack for CO to demonstrate compliance with the limits specified in Specific Conditions 1 and 3. Testing shall be performed every five years in accordance with Plant Wide Condition 3 and EPA Reference Method 10 as found in 40 CFR Part 60, Appendix A. Testing shall be performed at 90% or above of the maximum operating load. [Regulation No. 19 §19.702 and §19.901 *et seq*. and 40 CFR Part 52, Subpart E]

13. The permittee shall install, calibrate, maintain, and operate a CO CEMS on each Combustion Turbine/Duct Burner stack. The measured concentration of CO and O_2 in the flue gas along with the measured fuel flow shall be used to calculate CO mass emissions. The CEMS shall be used to demonstrate compliance with the CO mass emission limits specified in Specific Conditions 1 and 3. CO CEMS shall comply with the ADEQ CEMS Conditions, see Appendix G. [Regulation No. 19 §19.703 and §19.901 *et seq*., 40 CFR Part 52, Subpart E, and A.C.A. §8- 4-203 as referenced by §8-4-304 and §8-4-311]

14. The permittee shall perform an initial stack test on each Combustion Turbine/HRSG with Duct Burner stack for NO_X to demonstrate compliance with the limits specified in Specific Conditions 1 and 3. Testing shall be performed every five years in accordance with Plant Wide Condition 3 and EPA Reference Method 7E as found in 40 CFR Part 60, Appendix A. Testing shall be performed at 90% or above of the maximum operating load. [Regulation No. 19 §19.702 and §19.901 *et seq*. and 40 CFR Part 52, Subpart E]

15. Monitoring requirements relative to NO_X emissions from the Combustion Turbine/HRSG shall be as follows: [Regulation 19 §19.703, 40 CFR Part 52, Subpart E, 40 CFR Part 60, Subpart GG, 40 CFR Part 75, Subpart B, and A.C.A. §8- 4-203 as referenced by §8-4-304 and §8-4-311]

    A. The permittee shall install, calibrate, maintain, and operate a NO_X CEMS on each Combustion Turbine/HRSG with Duct Burner stack. The CEMS shall comply with 40 CFR Part 75 and with ADEQ CEMS Conditions, see Appendix G. The permittee shall use the measured concentrations of NO_X and O_2 in the flue gas along with the measured fuel flow (or another 40 CFR Part 75 procedure) to calculate NO_X mass emissions. The CEMS shall be used to demonstrate compliance with the NO_X mass emission limits in Specific Conditions 1 and 3.

    B. The permittee shall monitor fuel nitrogen content (The permittee shall use the fuel monitoring protocol contained in Appendix F).

    C. The permittee shall maintain records which demonstrate compliance with Specific Condition 15(A).

16. CEMS shall be used to demonstrate compliance with the emission limits in Specific Condition 1 and NO_X ppm limits listed in Specific Condition 3. [Regulation No. 19

§19.901 *et seq.*, 40 CFR Part 52, Subpart E, Regulation No. 19 §19.304, and 40 CFR Part 75]

17. The permittee shall perform an initial stack test on one of the Combustion Turbine/HRSG with Duct Burner stacks for 1, 3-butadiene, acetaldehyde, acrolein, benzene, Ethylbenzene, formaldehyde, naphthalene, PAH, propylene oxide, toluene, xylene, and ammonia, and to quantify other non-criteria pollutants not accounted for in this permit. This test will be used to demonstrate compliance with the limits specified in Specific Condition 2. Testing shall be performed every five years in accordance with Plant Wide Condition 3 and EPA Reference Method 18 as found in 40 CFR Part 60, Appendix A. Testing shall be performed at 90% or above of the maximum operating load. [Regulation No. 18 §18.1002 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

18. The permittee shall perform an initial stack test on one of the Combustion Turbine/HRSG with Duct Burner stacks for lead. This test will be used to demonstrate compliance with the limits specified in Specific Condition 2. Testing shall be performed every five years in accordance with Plant Wide Condition 3 and EPA Reference Method 12 as found in 40 CFR Part 60, Appendix A. Testing shall be performed at 90% or above of the maximum operating load. [Regulation No. 18 §18.1002 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

19. The Combustion Turbine/HRSG system (SN-01 and SN-02) is subject to 40 CFR Part 60, subpart GG. The permittee shall comply with all applicable provisions of 40 CFR Part 60, Subpart A - General Provisions and Subpart GG - Standards of Performance for Stationary Gas Turbines. A copy of Subpart GG is provided in Appendix A. Applicable provisions of Subpart GG include, but are not limited to the following: [Regulation No. 19 §19.304 and 40 CFR Part 60, Subpart GG]

    A. Pursuant to 40 CFR §60.332(a)(1), NO_X emissions shall not exceed 163.1 ppmvd at 15% O_2 at ISO conditions. This condition will be met by complying with Specific Condition 3.

    B. Pursuant to 40 CFR §60.333(b), no fuel shall be fired at SN-01 or SN-02 that contains sulfur in excess of 0.8 percent by weight.

    C. Pursuant to 40 CFR §60.334(b), the sulfur content of the natural gas fired at SN-01 and SN-02 shall be initially sampled daily for a period of two weeks to establish that the pipeline quality natural gas fuel supply is low in sulfur content.

    D. Pursuant to 40 CFR §60.334(c)(1), periods of excess emissions for NO_X is defined as any period during which the fuel-bound nitrogen in the fuel is greater than the maximum nitrogen content allowed per the performance test. A report of excess emissions shall include the average fuel consumption, ambient conditions, gas turbine load, nitrogen content of the fuel during the period of excess emissions, and copies of any graphs/figures developed during the performance testing.

E. Pursuant to 40 CFR §60.334(c)(2), periods of excess emissions for SO_2 is defined as any daily period during which the sulfur content of the fuel being fired exceeds 0.8 percent.

F. Pursuant to 40 CFR §60.335 and §60.8, initial compliance testing for NO_X and SO_2 is required within 180 days after start-up. The SO_2 demonstration required will be analysis of the sulfur content of the natural gas using ASTM D 1072-80, D 3031-81, D 4084-82, or D 3246-81. The NO_X testing shall be conducted in accordance with testing methods in 40 CFR Part 60 Appendix A or alternative approved methods. The testing shall be conducted for each fuel, at four points in the normal operating range of the turbine.

G. The monitoring and testing requirements of Specific Condition 18(C) and 18(F) are waived if EPA approves the use of 40 CFR Part 75 NO_X CEMS monitoring procedures as an alternative to these requirements. If this approval is granted, excess emissions reporting per Specific Condition 18(D) shall be based on the 40 CFR Part 75 CEMS data.

20. The Duct Burners in the Combustion Turbine/HRSG system (SN-01 and SN-02) are subject to 40 CFR Part 60, Subpart Da. The permittee shall comply with all applicable provisions of 40 CFR Part 60, Subpart A - General Provisions and Subpart Da - Standards of Performance for Electric Utility Steam Generating Units. A copy of Subpart Da is provided in Appendix B. Applicable provisions of Subpart Da include, but are not limited to the following: [Regulation No. 19 §19.304 and 40 CFR Part 60, Subpart Da]

A. Pursuant to §60.42a(a), no gases shall be discharged into the atmosphere which contain particulate matter in excess of 0.03 lb/million Btu heat input.

B. Pursuant to §60.42a(b), no gases shall be discharged into the atmosphere which exhibit greater than 20 percent opacity (6-minute average), except for one 6-minute period per hour or not more than 27 percent opacity.

C. Pursuant to §60.43a(b) and (g), no gases shall be discharged into the atmosphere which contain sulfur dioxide in excess of 0.20 lb/million Btu heat input based on a 30-day rolling average. During the performance test, one sampling site shall be located as close as practicable to the exhaust of the turbine. A second sampling site shall be located at the outlet to the steam generating unit. Measurements of sulfur dioxide shall be taken at both sampling sites during the performance test. The sulfur dioxide emission rate from the combined cycle system shall be calculated by subtracting the sulfur dioxide emission rate measured at the sampling site and at the outlet from the turbine from the sulfur dioxide emission rate measured at the sampling site at the outlet from the steam generating unit.

D. Pursuant to §60.44a(d)(1), no gases shall be discharged into the atmosphere which contain nitrogen oxides in excess of 1.6 lb/megawatt-hour gross energy output

based on a 30-day rolling average. During the performance test, one sampling site shall be located as close as practicable to the exhaust of the turbine. A second sampling site shall be located at the outlet to the steam generating unit. Measurements of nitrogen oxides and oxygen shall be taken at both sampling sites during the performance test. The nitrogen oxides emission rate from the combined cycle system shall be calculated by subtracting the nitrogen oxides emission rate measured at the sampling site and at the outlet from the turbine from the nitrogen oxides emission rate measured at the sampling site at the outlet from the steam generating unit.

E. Pursuant to §60.46a(c), the particulate matter and nitrogen oxide emission standards apply at all times except during periods of startup, shutdown, or malfunction. The sulfur dioxide emission standards apply at all times except during periods of startup and shutdown.

F. Pursuant to §60.46a(e), compliance with the sulfur dioxide and nitrogen oxide emission limitations is based on the average emission rate for 30 successive boiler operating days. A separate performance test is completed at the end of each boiler operating day after the initial performance test, and a new 30-day average emission rate for both sulfur dioxide and nitrogen oxides are calculated to show compliance with the standards.

G. Pursuant to §60.46a(i), nitrogen oxide emissions shall be calculated by multiplying the average hourly flow rate and divided by the average hourly gross heat rate and measured according to §60.47a(k).

H. Pursuant to §60.47a(c), the permittee shall install, calibrate, maintain, and operate a continuous monitoring system for NOx, and record the output of the system. If CEMS are installed to meet the requirements of part 75 and is continuing to meet the requirements of part 75, that CEMS may be used to meet this condition, except that the permittee shall also meet the requirements of §60.49a.

I. Pursuant to §60.47a(d), the permittee shall install, calibrate, maintain, and operate a continuous monitoring system, and record the output of the system, for measuring the oxygen or carbon dioxide content of the flue gases at each location where sulfur dioxide or nitrogen oxides emissions are monitored.

J. Pursuant to 40 CFR Part 60, Subpart Da, initial compliance testing for PM/PM_{10}, opacity, and NO_C (at 100% boiler load) is required within 180 days after startup. Testing shall be conducted in accordance with the test methods in 40 CFR Part 60 Appendix A or alternative approved methods.

21. The following notifications to the Department are required for SN-01 and SN-02: (a) date of construction commenced postmarked no later than 30 days after such date, (b) anticipated date of initial startup between 30-60 days prior to such date, (c) actual date of

initial startup postmarked within 15 days after such date, and (d) CEMS, opacity, and emissions performance testing 30 days prior to testing. [40 CFR §60.7(a)]

NESHAP Conditions

22. The permittee shall comply with the notification requirements of 40 CFR §63.6145 which include but are not limited to the following but need not comply with any other requirement of 40 CFR Part 63, Subpart YYYY until EPA takes final action to require compliance and publishes a document in the **Federal Register**:

    (a) The owner or operator must submit all of the notifications in §63.7(b) and (c), 63.8(e), 63.8(f)(4), and 63.9(b) and (h) that apply to the facility by the dates specified.

    (b) The owner or operator must submit an initial notification not later than 120 calendar days after becoming subject to the subpart.

    [Regulation No. 19 §19.304 and 40 CFR 63.6095]

Acid Rain Program

23. The Combustion Turbine and HRSG Duct Burner are subject to and shall comply with applicable provisions of the Acid Rain Program (40 CFR Parts 72, 73 and 75). [Regulation No. 19 §19.304]

24. The submission of the NO_X, SO_2, and O_2 or CO_2 monitoring plans and notice of CEMS initial certification testing is required at least 45 days prior to the CEMS initial certification testing. [Regulation No. 19 §19.304 and 40 CFR Part 75 - Continuous Emission Monitoring Subpart G]

25. A monitoring plan is required to be submitted for NO_X, SO_2, and O_2 or CO_2 monitoring. [Regulation No. 19 §19.304 and 40 CFR Part 75 - Continuous Emission Monitoring Subpart G]

26. The initial NO_X, SO_2, and O_2 or CO_2 CEMS certification testing is to occur no later than 90 days after the unit commences commercial operation. [Regulation No. 19 §19.304 and 40 CFR Part 75 Subpart A]

27. The permittee shall ensure that the continuous emissions monitoring systems are in operation and monitoring all unit emissions at all times except during periods of calibration, quality assurance, preventative maintenance or repair, periods of backups of data from the data acquisition and handling system, or recertification. [Regulation No. 19 §19.304 and 40 CFR §75.10]

28. For the purposes of this permit, "upset condition" reports as required by §19.601 of Regulation 19 shall not be required for periods of startup or shutdown of SN-01 and SN-02. The record keeping requirements detailed below shall only apply for emissions which

directly result from the start-up and/or shutdown of one or more of the combustion turbine units (SN-01 and SN-02). All other "upset conditions" must be reported as required by Regulation 19. The following conditions must be met during startup and shutdown periods.

a. All CEM systems required for SN-01 and SN-02 must be operating during start-up and shutdown. The emissions recorded during these periods shall count toward the annual ton per year emission limits.

b. The permittee shall maintain a log or equivalent electronic data record which shall indicate the date, start time, and duration of each start up and shut down event. "Startup" shall be defined as the period of time beginning with the first fire within the combustion turbine firing chamber until the unit(s) are in "6Q" mode of operation. "Shutdown" shall be defined as the period of time having initiated the shut down event that the unit(s) drop below "6Q" mode of operation until fuel is no longer combusted in the firing chamber. Minute data that does not fall in the "6Q" mode of operation shall not be included in the hourly calculations for NOx and CO rolling averages for the purpose of compliance with permit conditions. This log or equivalent electronic data record shall be made available to Department personnel upon request.

c. Opacity is not included. If any occurrences should ever occur, "upset condition" reporting is required.

d. The facility shall comply with 40 CFR 60.7 reporting and recordkeeping requirements as applicable to NSPS limits and applicable parts of the ADEQ CEMS Conditions. [Regulation 19, §19.601 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

Source No. SN- 03 Description
Auxiliary Boiler

One natural gas fired, low NO_X boiler, rated at 83 million BTU/hr, will be located on site to supply steam for startup use at the Dell facility. Steam from this boiler will maintain the operating temperatures of the HRSGs and steam turbine while the combustion turbines are off line. By maintaining operating temperatures the auxiliary boiler will reduce the time necessary to bring the combustion turbines on line. The auxiliary boiler will not be used to augment the power output of the facility during normal operating conditions.

Specific Conditions

29. The permittee shall not exceed the emission rates set forth in the following table. Compliance with this condition will be demonstrated by meeting the requirements of Specific Conditions 32 through 35. [Regulation No. 19 §19.501 *et seq.* effective December 19, 2004, and 40 CFR Part 52, Subpart E]

Maximum Criteria Emission Rates

Pollutant	lb/hr	tpy
PM_{10}	0.7	2.8
SO_2	0.1	0.3
VOC	0.5	2.1
CO	7.0	30.5
NO_X	4.2	18.2

30. The permittee shall not exceed the emission rates set forth in the following table. Compliance with this condition shall be demonstrated through compliance with Specific Condition 33. [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]

Maximum Non-Criteria Emission Rates

Pollutant	lb/hr	tpy
PM	0.7	2.8
Arsenic	0.01	0.01
Benzene	0.01	0.01

Pollutant	lb/hr	tpy
Beryllium	0.01	0.01
Cadmium	0.01	0.01
Chromium	0.01	0.01
Cobalt	0.01	0.01
Dichlorobenzene	0.01	0.01
Formaldehyde	0.01	0.01
Hexane	0.2	0.7
Manganese	0.01	0.01
Mercury	0.01	0.01
Naphthalene	0.01	0.01
Nickel	0.01	0.01
Phenanathrene	0.01	0.01
Pyrene	0.01	0.01
Selenium	0.01	0.01
Toluene	0.01	0.01

31. Visible emissions may not exceed the limits specified in the following table of this permit as measured by EPA Reference Method 9. Compliance with this opacity limit shall be demonstrated by the use of natural gas as a fuel.

Visible Emissions

Limit	Regulatory Citation
5%	Regulation 18 §18.501

32. The permittee shall comply with all applicable provisions of 40 CFR Part 60, Subpart A - General Provisions and Subpart Dc - Standards of Performance for Small Industrial-

Commercial-Institutional Steam Generating Units. A copy of Subpart Dc is provided in Appendix C. Applicable provisions of Subpart Dc include, but are not limited to the following: [Regulation 19 §19.304 and 40 CFR Part 60, Subpart Dc]

A. Pursuant to §60.48c(a), the owner or operator shall submit notification of the date of construction or reconstruction, anticipated startup, and actual startup. This notification shall include:

1. The design heat input capacity of the boiler and identification of fuels to be combusted in the affected facility.

2. The annual capacity factor at which the owner or operator anticipates operating the affected facility based on all fuels fired.

B. Pursuant to §60.48c(g) and (i), records of the amounts of fuel combusted each month must be kept for SN-03. These records shall be kept on site for two years following the date of such records.

33. The auxiliary boiler may only fire pipeline natural gas. [Regulation No. 18 §18.1004, Regulation No. 19 §19.705 and §19.901 *et seq.*, 40 CFR Part 52 Subpart E, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR §70.6]

34. The permittee shall maintain monthly records which demonstrate compliance with Specific Condition 33. These records shall be a copy of the page or pages that contain the gas quality characteristics specified in either a purchase contract or pipeline transportation contract. These records shall be kept on site and provided to Department personnel upon request. [Regulation 19 §19.705 and 40 CFR Part 52, Subpart E]

35. The permittee shall comply with the following BACT determinations for the auxiliary boiler. Compliance with the emission limits set forth in the following table shall be demonstrated by meeting the requirements of Specific Condition 33. [Regulation No. 19 §19.901 *et seq*. and 40 CFR Part 52, Subpart E]

Pollutant	BACT Determination	
PM/PM_{10}	Clean fuel/Good combustion practices	0.010 lb/MMBtu
CO	Good combustion practices and design	0.08 lb/MMBtu
VOC	Good combustion practices and design	0.005 lb/MMBtu
NO_x	Low NO_x Burner	0.04 lb/MMBtu

36. The permittee shall perform an initial stack test on the auxiliary boiler (SN-03) for NO_X to demonstrate compliance with the limits specified in Specific Condition 35. Testing

shall be performed in accordance with Plant Wide Condition 3 and EPA Reference Method 7E as found in 40 CFR Part 60, Appendix A. Testing shall be performed at 90% or above of the maximum operating load. [Regulation 19 §19.702 and §19.901 *et seq*. and 40 CFR Part 52, Subpart E]

NESHAP Conditions

37. The permittee shall submit an Initial Notification for 40 CFR Part 63, Subpart DDDDD not later than 15 days after the actual date of start-up of the affected source. [Regulation No. 19 §19.304 and 40 CFR §63.7545]

Source No. SN-04 - SN-22 and SN-24 - SN-27 Description
Primary, Auxiliary, and Inlet Cooling Systems

The power plant will employ a closed loop, non-contact cooling water system for the condenser cooling water and other equipment cooling needs. Large quantities of cooling water are required for removal of heat from the steam turbine condensers. Therefore, there are two cooling water systems associated with the Dell facility.

The "primary" cooling system (SN-04 through SN-15) incorporates a twelve cell mechanical draft cooling tower. This consists of a dedicated set of cooling water pumps and associated piping and controls to supply and retrieve water required to absorb excess heat generated by the combined cycle combustion turbines through the surface condenser.

Additional cooling water will be required to support the auxiliary and inlet cooling system (SN-16 through SN-22 and SN-24 through SN-27), which is a closed loop system to cool essential station equipment such as generator hydrogen coolers, turbine lube oil system coolers, and boiler feed pump and motor bearings. This auxiliary system is comprised of a three cell evaporative cooler, a four-cell inlet chiller, a dedicated set of circulating pumps, an expansion tank and piping. Makeup water for the condenser cooling water system, to replace water lost through evaporation and cooling tower drift, will be supplied from deep-well pumps. The water in this system will be treated to retard algae growth in the cooling towers.

Water treatment at the facility will consist of the demineralizer system and the chemical waste neutralization system. The steam generators will require very clean water for the steam generating system. The demineralizer provides high quality demineralized water for use as makeup to the HRSGs. This clean water will be provided from a small treatment plant consisting of demineralizing trains for removal of solids and other impurities; treatment to maintain pH; and treatment to remove dissolved oxygen. TPS Dell will use automatic water analyzers and chemical feed stations to maintain the desired water quality in the condensate and steam systems.

Emissions from the cooling water system include evaporative emissions of particulate matter entrained in the cooling water. This system is not subject to 40 CFR Part 63, Subpart Q for National Emission Standards for Hazardous Air Pollutants for Industrial Process Cooling Towers since TPS Dell will use a non-chromate water treatment system.

Specific Conditions

38. The permittee shall not exceed the emission rates set forth in the following table. Compliance with this condition will be demonstrated by meeting the requirements of Specific Conditions 40 through 42. [Regulation No. 19 §19.501 *et seq.* effective December 19, 2004, and 40 CFR Part 52, Subpart E]

Maximum Criteria Emission Rates

Source	Pollutant	lb/hr	tpy
SN-04 - SN-15	PM_{10}	0.6	2.3
SN-16 - SN-22 and SN-24 - SN-27	PM_{10}	0.1	0.4

39. The permittee shall not exceed the emission rates set forth in the following table. Compliance with this condition will be demonstrated by meeting the requirements of Specific Conditions 42 through 44. [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]

Maximum Non-Criteria Emission Rates

Source	Pollutant	lb/hr	tpy
SN-04 to SN-15	PM	3.9	16.9
SN-16 to SN-22 and SN-24 to SN-27	PM	0.2	0.6

40. Visible emissions may not exceed the limits specified in the following table of this permit as measured by EPA Reference Method 9. Compliance with this opacity limit shall be demonstrated by Specific Conditions 43 and 44.

Visible Emissions

SN	Limit	Regulatory Citation
04 - 22 and 24 -27	20%	Regulation 18 §18.501

41. The total dissolved solids concentration for SN-04 through SN-15 shall not exceed 8,000 parts per million in the water. [Regulation No. 19 §19.705, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6]

42. The total dissolved solids concentration for SN-16 through SN-22 and SN-24 through SN-27 shall not exceed 1,500 parts per million in the water. [Regulation No. 19 §19.705, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6]

43. The permittee shall monitor weekly the total dissolved solids concentration to demonstrate compliance with Specific Conditions 41 and 42. Records shall be updated by the fifteenth day of the month following the month to which the records pertain. These records shall be kept on site, and shall be made available to Department personnel

upon request. Each individual month's data shall be submitted in accordance with General Condition 7. [Regulation 19 §19.705 and 40 CFR Part 52, Subpart E]

44. The permittee shall comply with the following BACT determinations for the cooling towers. Compliance with the emission limit set forth in the following table shall be demonstrated by meeting the requirements of Specific Conditions 41 and 42. [Regulation 19 §19.901 *et seq*. and 40 CFR Part 52, Subpart E]

Pollutant	BACT Determination	
PM/PM_{10}	Drift Eliminators and Good Operating Practices	0.0005% Drift from the water flow

Source No. SN-23 Description
500 Kilowatt Emergency Generator

One emergency generator will be installed to provide emergency power for maintaining plant control and critical systems operations during emergencies. The generator, rated at 500kW, will not be operated more than 250 hours per year, and is not intended to provide power for a black start.

Specific Conditions

45. The permittee shall not exceed the emission rates set forth in the following table. Compliance with this condition will be demonstrated by meeting the requirements of Specific Conditions 47 through 52. [Regulation No. 19 §19.501 *et seq.* effective December 19, 2004, and 40 CFR Part 52, Subpart E]

Maximum Criteria Emission Rates

Pollutant	lb/hr	tpy
PM_{10}	0.6	0.1
SO_2	0.5	0.1
VOC	0.7	0.1
CO	1.7	0.2
NO_X	7.6	1.0
Lead	0.1	0.1

46. The permittee shall not exceed the emission rates set forth in the following table. Compliance with this condition will be demonstrated by meeting the requirements of Specific Conditions 47, 48, 51, and 52. [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]

Maximum Non-Criteria Emission Rates

Pollutant	lb/hr	tpy
PM	0.6	0.1
1,3-Butadiene	0.01	0.01
Acetaldehyde	0.01	0.01
Acrolein	0.01	0.01

Pollutant	lb/hr	tpy
Benzene	0.01	0.01
Ethylbenzene	0.01	0.01
Formaldehyde	0.01	0.01
Naphthalene	0.01	0.01
PAH	0.01	0.01
Toluene	0.01	0.01
Xylene	0.01	0.01

47. Visible emissions may not exceed the limits specified in the following table of this permit as measured by EPA Reference Method 9. Compliance with this opacity limit shall be demonstrated by Specific Condition 48.

Visible Emissions

SN	Limit	Regulatory Citation
23	20%	Regulation 18 §18.501

48. The permittee will conduct daily observations when the generator is operated more than 3 consecutive hours of the opacity from SN-23 by a person trained in EPA Reference Method 9 and keep a record of these observations. If the permittee detects visible emissions in excess of the permitted limit, the permittee must immediately take action to identify and correct the cause of the excess visible emissions. After implementing the corrective action, the permittee must document the source complies with the visible emissions requirements. The permittee shall maintain records of the cause of any visible emissions and the corrective action taken. The permittee must keep the records onsite and make the records available to Department personnel upon request. Each opacity record shall be submitted in accordance with General Condition 7.

49. The emergency generator may only fire diesel fuel containing a maximum of 0.5% sulfur. [Regulation No. 18 §18.1004, Regulation No. 19 §19.705 and §19.901 *et seq*., 40 CFR Part 52, Subpart E, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR §70.6]

50. The permittee shall maintain monthly records which demonstrate compliance with Specific Condition 49. Records shall be updated by the fifteenth day of the month following the month to which the records pertain. These records shall be kept on site, and shall be made available to Department personnel upon request. Each individual month's

data shall be submitted in accordance with General Condition 7. [Regulation 19 §19.705 and 40 CFR Part 52, Subpart E]

51. Operation of the emergency generator shall be limited to 250 hours per twelve consecutive months. [Regulation No. 18 §18.1004, Regulation No. 19 §19.705 and §19.901 *et seq*., 40 CFR Part 52, Subpart E, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR §70.6]

52. The permittee shall maintain monthly records which demonstrate compliance with Specific Condition 51. Records shall be updated by the fifteenth day of the month following the month to which the records pertain. These records shall be kept on site, and shall be made available to Department personnel upon request. A twelve month rolling total and each individual month's data shall be submitted in accordance with General Condition 7. [Regulation 19 §19.705 and 40 CFR Part 52, Subpart E]

Source No. SN- 28 - SN-31 Description
Wastewater Cooling Tower

The waste-water cooling system is part of the zero-liquid water discharge system. It consists of a four cell mechanical draft cooling tower (SN-28 through SN-31). It uses heat from the main cooling system to concentrate plant effluent. The concentrated "brine" is then forwarded to a forced circulation crystallizer for complete water removal and disposal in a solid form.

Specific Conditions

53. The permittee shall not exceed the emission rates set forth in the following table. Compliance with this condition will be demonstrated by meeting the requirements of Specific Condition 56. [Regulation No. 19 §19.501 *et seq.* effective December 19, 2004, and 40 CFR Part 52, Subpart E]

Maximum Criteria Emission Rates

Pollutant	lb/hr	tpy
PM_{10}	0.1	0.1

54. The permittee shall not exceed the emission rates set forth in the following table. Compliance with this condition will be demonstrated by meeting the requirements of Specific Condition 56. [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]

Maximum Non-Criteria Emission Rates

Pollutant	lb/hr	tpy
PM	0.8	3.3

55. Visible emissions may not exceed the limits specified in the following table of this permit as measured by EPA Reference Method 9. Compliance with this opacity limit shall be demonstrated by Specific Condition 56.

Visible Emissions

SN	Limit	Regulatory Citation
28 to 31	20%	Regulation 18 §18.501

56. The total suspended particulate concentration for SN-28 through SN-31 shall not exceed 75,000 parts per million in the water. Compliance shall be demonstrated through compliance with Specific Condition 57. [Regulation 19 §19.705, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6]

57. The permittee shall monitor weekly the total suspended particulate concentration to demonstrate compliance with the above condition. Records shall be updated by the fifteenth day of the month following the month to which the records pertain. These records shall be kept on site, and shall be made available to Department personnel upon request. A copy of these records shall be submitted in accordance with General Provision 7. [Regulation 19 §19.705 and 40 CFR Part 52, Subpart E]

Section V: COMPLIANCE PLAN AND SCHEDULE

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

Section VI: PLANT WIDE CONDITIONS

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

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

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

Section VII: INSIGNIFICANT ACTIVITIES

The following sources are insignificant activities. Any activity that has a state or federal applicable requirement shall be considered a significant activity even if this activity meets the criteria of §26.304 of Regulation 26 or listed in the table below. Insignificant activity determinations rely upon the information submitted by the permittee in an application dated 2/**7/2005.**

Description	Category
Four small fuel heaters (4.05 MMBtu/hr each)	A-1
Diesel Storage Tanks	A-3

Section VIII: GENERAL PROVISIONS

1. 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 September 26, 2002]

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]

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

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

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

i. The facility name and location,

ii. The process unit or emission source deviating from the permit limit,

iii. The permit limit, including the identification of pollutants, from which deviation occurs,

iv. The date and time the deviation started,

v. The duration of the deviation,

vi. The average emissions during the deviation,

vii. The probable cause of such deviations,

viii. Any corrective actions or preventive measures taken or being taken to prevent such deviations in the future, and

ix. The name of the person submitting the report.

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

b. For all deviations, the permittee will report such events in semi-annual reporting and annual certifications required in this permit**.** This includes all upset conditions reported in 8a above. The semi-annual report must include all the information as required in the initial and full report required in 8a**.** [40 CFR 70.6(a)(3)(iii)(B), Regulation No. 26 §26.701(C)(3)(b), Regulation No. 19 §19.601 and §19.602]

9. If any provision of the permit or the application thereof to any person or circumstance is held invalid, such invalidity will not affect other provisions or applications hereof which can be given effect without the invalid provision or application, and to this end, provisions of this Regulation are declared to be separable and severable. [40 CFR 70.6(a)(5), §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)]

e. The identification of each term or condition of the permit that is the basis of the certification;

f. The compliance status;

g. Whether compliance was continuous or intermittent;

h. 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

i. 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)]

j. The provisions of Section 303 of the Act (emergency orders), including the authority of the Administrator under that section;

k. The liability of the permittee for any violation of applicable requirements prior to or at the time of permit issuance;

l. The applicable requirements of the acid rain program, consistent with §408(a) of the Act or,

m. 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]