

**OKLAHOMA DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION**

MEMORANDUM

January 17, 2005

TO: Dawson Lasseter, P.E., Chief Engineer, Air Quality Division

THROUGH: John Howell, E.I., Existing Source Permits Section

THROUGH: Herb Neumann, P.E., Tulsa Regional Office

THROUGH: Peer Review

FROM: David Schutz, P.E., New Source Permits Section

SUBJECT: Evaluation of Permit Application No. **2004-106-C (PSD)**
Duke Energy Field Services LP.
Mooreland Gas Plant
Mooreland, Woodward County
Sec. 30 – 23N – 18W
Directions: From Mooreland, West on US-412 2 ¼ Miles, ¼ Mile North
into Facility

SECTION I. INTRODUCTION

Duke Energy Field Services submitted an application for a construction permit on March 24, 2004, for the replacement of a 2,200-hp engine at their existing Mooreland Gas Plant. The Mooreland Gas Plant (SIC Code 1321) is a cryogenic natural gas liquids extraction plant which includes various stationary internal combustion engines in compressor or refrigeration service, a liquids extraction skid, two glycol dehydration units, an amine sweetening unit, a plant flare, and various storage tanks. There are currently no permits in effect for this facility; a Title V operating permit was applied for on September 3, 1996.

This permitting action was triggered by the replacement of a 2,200-hp White Superior 16GTL engine. The original engine was installed in 1976 at a time when stationary engines were exempted by rule from all permitting requirements. That original engine operated from 1976 to 1991, when a mechanical failure led to it being shut down until 1996. Following a major overhaul, the engine operated until September 21, 1997, when it was shut down. Its replacement engine was installed on February 8, 1998. For purposes of PSD, the replacement is treated as first being the addition of the new engine, with net emissions changes calculated as the difference between new potential emissions minus the two-year average actual emissions of the old (removed) engine, taking into account any other creditable contemporaneous emissions changes. However, no permit was obtained for the replacement and PSD netting was not conducted. The facility was issued Notice of Violation No. 02-AQN-068 on May 13, 2002.

Subsequently, the facility was identified as a major source of hazardous air pollutants (HAPs). Notice of Violation No. 03-AQN-108 was issued to the facility on May 14, 2003, for failure to comply with 40 CFR Part 63, Subpart HH.

Duke Energy Field Services has entered into Consent Order No. 03-301 regarding the PSD issues and Consent Order No. 04-033 for the NESHAP, Subpart HH issues. This permit provides partial resolution of the issues of non-compliance.

The operator has committed to installing catalytic converters on three “grandfathered” engines, thereby reducing ambient impacts of air pollution and giving emissions credits for netting. The catalytic converters are to be installed prior to the Consent Order deadline of January 3, 2005.

SECTION II. FACILITY DESCRIPTION

The facility is capable of processing up to 130 MMSCFD of inlet gas. The facility consists of ten stationary internal combustion engines, six hydrocarbon storage tanks, six natural gas fired heaters, two glycol dehydration units, an amine sweetening unit, a cryogenic liquids extraction unit, and a flare. The engines are one 2,200-hp White Superior 16 GTLE engine, two 2,200-hp White Superior 16GTL-825 engines, two 825-hp White Superior 6GT-825 engines, one 1,100-hp White Superior 8GT-825 engine, two 842-hp Waukesha 5788 engines, and one 842-hp Waukesha 5790 engine. In addition to the gas processing engines, the facility includes a 300-hp Caterpillar G379 emergency generator engine. The fuel is sweet natural gas with negligible sulfur content.

An inlet separator is used to remove condensate which collects in the pipeline from the inlet gas. This condensate is heated then held in the heater treater to break any oil-water emulsions formed, with the water and condensate sent to separate storage tanks for disposal and sales, respectively.

Inlet gas is first processed by an inlet chiller driven by the three Waukesha engines. Chilled gas proceeds to a triethylene glycol dehydration unit, then to a molecular sieve dehydration unit. Off-gases from the glycol dehydration unit are first condensed, with uncondensed gases vented to the plant flare. Dehydrated gas is then processed by a cryogenic natural gas liquids plant for removal of natural gas liquids (ethane, propane, butane, pentane, etc.). “Residue gas” from the cryogenic process is then compressed into the sales pipeline, while liquids are treated by a CO₂ stripper (a flash distillation unit), an amine sweetening unit for further CO₂ removal, and a product dehydrator (all of these units vent to the plant flare). Sweetened/dehydrated liquid product is treated to remove methane before being pumped to liquids storage tanks prior to shipment by tank truck.

The facility emits more than 100 TPY of a regulated pollutant and is subject to Title V permitting requirements. Emission units (EUs) have been arranged into Emission Unit Groups (EUGs) in the following outline. Field-grade natural gas is the primary fuel with the emission units operating continuously.

SECTION III. EQUIPMENT

EUG 1: Engines Subject to Permitting Requirements

EU	Point	Make/Model	HP	Serial #	Installed Date
MC-1	MC-1	White Superior 16 GTLE	2,200	20835	1998
MC-7	MC-7	Waukesha L5788G with CC	842	174840	1964 (2005)*
MC-8	MC-8	Waukesha L5788G with CC	842	123641	1964 (2005)*
MC-9	MC-9	Waukesha L5790 with CC	842	126372	1963 (2005)*

* Catalytic converters to be added by January 2005.

EUG 2: Grandfathered/Exempted Engines

EU	Point	Make/Model	HP	Serial #	Installed Date
MC-2	MC-2	White Superior 16GLT	2,200	265959	1976
MC-3	MC-3	White Superior 16GLT	2,200	265969	1976
MC-4	MC-4	White Superior 6GT825	825	20247	1971
MC-5	MC-5	White Superior 6GT825	825	20246	1971
MC-6	MC-6	White Superior 8GT825	1,100	20245	1971

EUG 3. Other Fuel-Burning Equipment

EU	Point	Equipment	MMBTUH	Installed Date
MH-4	MH-4	Amine Reboiler	4.8	1975
MH-3	MH-3	Salt Bath Heater	3.85	1971
MH-6	MH-6	Mole Sieve Regenerator	5.142	1975
MH-5	MH-5	Condensate Heater Treater	0.75	1977
MH-2	MH-2	TEG Reboiler "A"	1.4	1963
MH-1S	MH-1S	TEG Reboiler "B"	1.9	1970
MGTS	MGTS	Emergency Generator (300-hp Caterpillar G379)	2.4	--

EUG 4. Fugitive VOC Leakage

EU	Point	Equipment	Number of Items	Installed Date
FUG	FUG	Fugitive VOC Leakage Sources	801 Light Liquid Valves	1976
			417 Heavy Liquid Valves	
			1186 Gas/Vapor Valves	
			409 Light Liquid Flanges	
			138 Heavy Liquid Flanges	
			691 Gas/Vapor Flanges	
			25 Liquid Relief Valves	
			110 Gas/Vapor Relief Valves	
			15 Compressor Seals	
32 Pump Seals				

EUG 5. Tanks

EU	Point	Contents	Gallons	Installed Date
TNK-1	TNK-1	Condensate (pressure tank)	5,880	NA
TNK-2	TNK-2	Methanol	4,200	NA
TNK-3	TNK-3	Lube Oil	4,200	NA
TNK-4	TNK-4	Antifreeze	4,200	NA
TNK-5	TNK-5	Lube Oil	4,200	NA
TNK-6	TNK-6	Monoethanolamine	8,400	NA

NA = Not available

EUG 6. Other Process Equipment

EU	Point	Equipment	Capacity	Installed Date
MF-1	MF-1	Flare	1.46 MMBTUH	1975

SECTION IV. EMISSIONS

Estimates of emissions and emissions changes are based on the following factors and references:

EUG-1 and EUG-2

Emissions estimates for engines MC-1 through MC-9 are based on continuous operation and the following manufacturers' emission data.

Engine Model	NOx g/hp-hr	CO g/hp-hr	VOC g/hp-hr
White Superior 16 GTLE	2.0	2.0	1.25
White Superior 16 GTL	15.0	3.0	0.6
White Superior 6GT-825	22.0	5.0	1.0
White Superior 8GT-825	22.0	5.0	1.0
Waukesha L5788	3.0	3.0	1.0
Waukesha L5790	3.0	3.0	1.0

EUG-3

Emissions from the gas-fired heaters are based on AP-42, Section 1.4 factors for natural gas combustion: 0.10 lb/MMBTU NOx, 0.084 lb/MMBTU CO, and 0.0055 lb/MMBTU VOC.

Emissions from the emergency generator engine are based on factors from the manufacturer: 11.4 g/hp-hr NOx, 11.5 g/hp-hr CO, and 0.8 g/hp-hr VOC. Maximum annual operations of 500 hours were used in emissions calculations.

EUG-4

Fugitive VOC emissions are based on EPA’s 1995 Protocol for Equipment Leak Emission Estimates (EPA-453/R-95-017) and an estimated number of components in C3+ service.

EUG-5

Estimated emissions for the tanks are based on TANKS4.0.

EUG-6

Emissions estimates for the flare are derived from the maximum anticipated venting rate of hydrocarbons as determined by GRI GLY-Calc and Amine-Calc. Emissions factors for the flare were taken from AP-42 (1/95), Section 13.5: 0.068 lb/MMBTU NOx, 0.37 lb/MMBTU CO, and 0.14 lb/MMBTU VOC.

BTEX emission estimates for venting the dehydrator still vent to the flare are based on GRI-GLYCalc® version 3.0 modeling software and an analysis of the gas being treated. 95% control efficiency for the flare was used in emissions calculations.

Calculated Emissions

EUG-1:

EU	Make/Model	NO _x		CO		VOC	
		lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
MC-1	White Superior 16 GTLE	9.70	42.49	9.70	42.49	6.06	26.55
MC-7	Waukesha L5788G with CC	5.57	24.39	5.57	24.39	1.86	8.13
MC-8	Waukesha L5788G with CC	5.57	24.39	5.57	24.39	1.86	8.13
MC-9	Waukesha L5790 with CC	5.57	24.39	5.57	24.39	1.86	8.13
TOTALS		26.41	115.66	26.41	115.66	11.64	50.94

NOx emissions from the replacement engine (MC-1) exceed the PSD level of significance of 40 TPY. That emission rate triggers PSD netting for NOx. Other emissions are below their respective levels of significance (100 TPY CO and 40 TPY VOC), therefore, no additional PSD analysis is triggered for CO and VOC. PSD netting for NOx is done on Page 8 of this Memorandum.

EUG-2:

EU	Make/Model	NO _x		CO		VOC	
		lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
MC-2	White Superior 16GLT	72.75	318.65	14.55	63.73	2.91	12.75
MC-3	White Superior 16GLT	72.75	318.65	14.55	63.73	2.91	12.75
MC-4	White Superior 6GT825	40.01	175.26	9.09	39.83	1.82	7.97
MC-5	White Superior 6GT825	40.01	175.26	9.09	39.83	1.82	7.97
MC-6	White Superior 8GT825	53.35	233.68	12.13	53.11	2.43	10.62
TOTALS		278.87	1221.50	59.41	260.23	11.89	52.06

EUG-3:

EU	Make/Model	NO _x		CO		VOC	
		lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
MH-4	Amine Reboiler	0.48	2.10	0.40	1.75	0.03	0.13
MH-3	Salt Bath Heater	0.39	1.71	0.32	1.40	0.02	0.09
MH-6	Mole Sieve Regenerator	0.51	2.23	0.43	1.88	0.03	0.13
MH-5	Condensate Heater Treater	0.08	0.35	0.06	0.26	0.01	0.02
MH-2	TEG Reboiler "A"	0.14	0.61	0.12	0.52	0.01	0.03
MH-1S	TEG Reboiler "B"	0.19	0.83	0.16	0.70	0.01	0.05
MGTS	Emergency Generator	7.53	1.88	7.60	1.90	0.53	0.13
TOTALS		9.32	9.71	9.09	8.41	0.64	0.58

EUG-4:

Equipment	Number of Items	Emission Factor, lb/hr/source	lb/hr	TPY
Light Liquid Valves	801	0.0055	4.41	19.30
Heavy Liquid Valves	417	0.00002	0.01	0.04
Gas Valves	1,186	0.0032	3.80	16.62
Light Liquid Flanges	409	0.00046	0.19	0.82
Heavy Liquid Flanges	138	0.00001	0.01	0.01
Gas/Vapor Flanges	691	0.00086	0.59	2.60
Relief Valves	135	0.0164	2.21	9.70
Compressor Seals	15	0.0063	0.09	0.41
Pump Seals	32	0.0164	0.52	2.30
TOTALS			11.84	51.80

EUG-5:

EU	Equipment	VOC, TPY
TNK-1	Condensate (pressure tank)	0.01
TNK-2	Methanol	0.10
TNK-3	Lube Oil	0.01
TNK-4	Antifreeze	0.01
TNK-5	Lube Oil	0.01
TNK-6	Monoethanolamine	0.80
TOTALS		0.94

EUG-6: Flare

EU	Make/Model	NO _x		CO		VOC	
		lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
MF-1	Flare (includes emissions from both dehydration units and amine unit)	0.10	0.44	0.54	2.37	0.20	0.90

Total Emissions

EU	Make/Model	NO _x		CO		VOC	
		lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
MC-1	White Superior 16 GTLE	9.70	42.49	9.70	42.49	6.06	26.55
MC-2	White Superior 16GLT	72.75	318.65	14.55	63.73	2.91	12.75
MC-3	White Superior 16GLT	72.75	318.65	14.55	63.73	2.91	12.75
MC-4	White Superior 6GT825	40.01	175.26	9.09	39.83	1.82	7.97
MC-5	White Superior 6GT825	40.01	175.26	9.09	39.83	1.82	7.97
MC-6	White Superior 8GT825	53.35	233.68	12.13	53.11	2.43	10.62
MC-7	Waukesha L5788G with CC	5.57	24.39	5.57	24.39	1.86	8.13
MC-8	Waukesha L5788G with CC	5.57	24.39	5.57	24.39	1.86	8.13
MC-9	Waukesha L5790 with CC	5.57	24.39	5.57	24.39	1.86	8.13
MH-1S	TEG Reboiler "B"	0.19	0.83	0.16	0.70	0.01	0.05
MH-2	TEG Reboiler "A"	0.14	0.61	0.12	0.52	0.01	0.03
MH-3	Salt Bath Heater	0.39	1.71	0.32	1.40	0.02	0.09
MH-4	Amine Reboiler	0.48	2.10	0.40	1.75	0.03	0.13
MH-5	Condensate Heater Treater	0.08	0.35	0.06	0.26	0.01	0.02
MH-6	Mole Sieve Regenerator	0.51	2.23	0.43	1.88	0.03	0.13
MGTS	Emergency Generator	7.53	1.88	7.60	1.90	0.53	0.13
FUG	Fugitive VOC Leakage	--	--	--	--	11.84	51.80
TNK-1	Condensate	--	--	--	--	--	0.01
TNK-2	Methanol	--	--	--	--	--	0.10
TNK-3	Lube Oil	--	--	--	--	--	0.01
TNK-4	Antifreeze	--	--	--	--	--	0.01
TNK-5	Lube Oil	--	--	--	--	--	0.01
TNK-6	Monoethanolamine	--	--	--	--	--	0.80
MF-1	Flare	0.76	3.31	4.11	18.02	7.64	33.48
TOTALS		315.36	1350.18	99.02	402.32	43.65	189.80

Net emissions changes are in the following "PSD Review" section.

Formaldehyde Emissions

EU	Description	Heat Input MMBTUH	Emission Factor, lb/MMBTU	Control Eff. %	Formaldehyde	
					lb/hr	TPY
MC-1	White Superior 16 GTLE	16.83	0.0528	0%	0.89	3.89
MC-2	White Superior 16GLT	16.21	0.0528	0%	0.86	3.75
MC-3	White Superior 16GLT	16.21	0.0528	0%	0.86	3.75
MC-4	White Superior 6GT825	6.39	0.0528	0%	0.34	1.48
MC-5	White Superior 6GT825	6.39	0.0528	0%	0.34	1.48
MC-6	White Superior 8GT825	8.25	0.0528	0%	0.44	1.91
MC-7	Waukesha L5788G with CC	7.07	0.0205	70%	0.04	0.19
MC-8	Waukesha L5788G with CC	7.07	0.0205	70%	0.04	0.19
MC-9	Waukesha L5790 with CC	7.07	0.0205	70%	0.04	0.19
TOTALS					3.84	16.82

Controlled BTEX Emissions

Pollutant	Toxicity Category	De Minimis Levels		Estimated Emissions	
		lb/hr	TPY	lb/hr	TPY
Benzene	A	0.57	0.60	0.047	0.204
Toluene	C	5.60	6.00	0.040	0.175
Ethylbenzene	C	5.60	6.00	0.001	0.001
Xylene	C	5.60	6.00	0.003	0.014
n-Hexane	C	5.60	6.00	0.016	0.072
Total				0.107	0.466

All BTEX emissions are below their respective de minimis levels.

SECTION V. PSD REVIEW

Full PSD review consists of the following elements:

- A. A determination of net emissions changes
- B. determination of best available control technology (BACT)
- C. evaluation of existing air quality and determination of monitoring requirements
- D. evaluation of PSD increment consumption
- E. analysis of compliance with National Ambient Air Quality Standards (NAAQS)
- F. ambient air monitoring
- G. evaluation of source-related impacts on growth, soils, vegetation, visibility
- H. evaluation of Class I area impacts

A. Netting

The net changes in emissions of any one project must first exceed PSD levels of significance. Emissions changes resulting from adding the new engine are:

EU	Make/Model	NO _x		CO		VOC	
		lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
MC-1	White Superior 16 GTLE	9.70	42.49	9.70	42.49	6.06	26.55

PSD Levels of Significance

Pollutant	Emissions Increase TPY	PSD Levels of Significance, TPY	PSD Review Required?
NO _x	42.49	40	yes
CO	42.49	100	no
VOC	26.55	40	no

NO_x emissions exceed PSD levels of significance, necessitating full PSD review.

Ordinarily, a facility could determine a net emissions change. The applicant did not claim any actual emissions from the replaced engine MC-1. Other emissions reductions (installation of catalytic converters on three existing engines) were outside the 3-year contemporaneous period.

B. Best Available Control Technology

BACT was analyzed using the "top-down" approach. In those cases where a control strategy was deemed technologically infeasible or sufficient justification was provided for rejection by energy or environmental impacts, economic costs were not calculated. Control economics were evaluated using equipment lifespan, contingency costs, indirect costs, a discount interest rate, an interest rate on capital, utilities, and labor costs (including benefits, overhead, etc.).

The application evaluated the following air emissions controls:

- Low emissions conversions (lean-burn retrofitting)
- Post-combustion controls: selective catalytic reduction (SCR) or non-selective catalytic reduction (catalytic converters)
- Air-to-fuel ratio controllers.

Catalytic converters and lean-burn conversion are approximately equivalent in NO_x emissions: 2.0 g/hp-hr. Air-to-fuel ratio controllers are the least effective method; given that they are less effective than the proposed control technology (lean-burn retrofitting), they will not be addressed further.

The application proposed retrofitting a lean-burn conversion kit onto the new engine. The Consent Order with the operator specified using lean-burn technology or an equivalent method. BACT as proposed is consistent with the enforcement action.

The remaining alternative for BACT is SCR, which uses ammonia to react with NO_x, forming nitrogen gas and water vapor. EPA’s report, “Stationary Reciprocating Internal Combustion Engines, Updated Information on NO_x Emissions and Control Techniques, Revised Final Report (2001) rejected SCR for stationary internal combustion engines given the inability of the system to follow “load swings” without excessive ammonia emissions. Since SCR was stated by EPA not to be feasible for this type of operation, the next best controls were evaluated.

Non-selective catalytic reduction and lean-burn conversion are equivalent. Lean-burn conversion was proposed and is acceptable as BACT for NO_x emissions.

C. Air Quality Impacts / NAAQS Compliance

A preliminary analysis was conducted to determine if NO₂ emissions from the facility would result in off-site ambient impacts at levels greater than the significant ambient impact levels (SAIL). Impacts of NO₂ (annual average) exceeded the SAIL, necessitating full impact analysis.

Maximum NO_x impacts were multiplied by 0.75 per EPA’s “Ambient Ratio Method” to determine NO₂ impacts. The maximum predicted impacts are summarized in the table following. All off-site ambient impacts are in compliance with the corresponding NAAQS and MAAC requirements.

Ambient Impacts of New Engine Only

Pollutant	Averaging Time	Impact (ug/m³)	PSD Ambient Impacts Level of Significance (ug/m³)	MAAC (ug/m³)
NO ₂	Annual	3.04	1.0	--
Formaldehyde	24-hours	10.11	--	12

NO_x impacts exceed 1.0 ug/m³, therefore, the ambient impacts analysis is required to include other emissions units at the facility and all nearby significant sources. The analysis requires the development of emission inventories of nearby sources. Nearby sources are defined as any point source expected to cause a significant concentration gradient within the significant impact area (SIA).

There are two steps required to determine which facilities qualify as “nearby facilities.” First, the region in which all sources must be initially classified as nearby sources must be defined. This region extends to 50 kilometers beyond the largest pollutant-specific SIA. A pollutant-specific SIA is the region within which the pollutant impacts are expected to exceed the SAIL. In this case, the NO_x SIA extends approximately 0.9 kilometers from the center of the facility (value determined from dispersion modeling). All facilities that emit the pollutant for which the full analysis is being performed and fall within a 50-kilometer radius of the pollutant-specific SIA are to be considered for inclusion in the modeling analysis. Therefore, for this analysis, all sources of NO_x within 50.9 kilometers of the facility are to be considered nearby sources unless they are otherwise disqualified.

The second step in determining nearby sources requires calculating a ratio of the total facility emissions to the distance from the proposed facility. Oklahoma DEQ-AQD has issued guidance stating that use of the “Louisiana 20-D Rule” is acceptable for eliminating nearby sources. According to the guidance document, “when a nearby source’s emissions (TPY) are less than 20 times the distance between the nearby source and the source in question (in kilometers), that source may be designated a background source and not modeled.” Of the sources provided by ODEQ as potential nearby sources, two sources of NO_x were modeled: the Western Farmers Electric Cooperative Mooreland Generating Station and Terra Nitrogen Woodward Complex.

Estimated background concentrations for those pollutants and averaging periods requiring a full impact analysis were provided in the application. Background pollutant concentrations are taken from the monitoring station in Ponca City for NO_x concentrations. This station is considered to provide conservative background concentrations for the facility.

The air quality modeling analyses employed the latest versions of USEPA's Industrial Source Complex Short-Term ISCST-Prime (Plume Rise Model Enhancements) dispersion model to determine ambient concentrations of NO_x at and beyond the facility fence line. The ISCST-Prime model was used to determine impacts at a discrete set of off-site receptors and to identify the worst-case (highest impact) load scenarios for the refined modeling. The model and associated input options are presented in the following paragraphs.

Receptors were modeled along the facility fence line and at off-site locations up to 50 kilometers beyond the facility. The receptors along the facility fence line and out to 900 meters from the fence are placed at 25-meter intervals. From 1,000 meters from the fence to a distance of 5 km, receptors were placed at 100-meter spacings. A third set of receptors (coarse grid) was placed at 1,000 meters spacing from 5 km to 50 km. Receptor elevations were obtained from the 7.5-minute USGS topographic maps and 7.5-minute USGS Digital Elevation Models (DEM) for the area. All maximum impacts either occurred at a fence line receptor or a receptor located within the 25-meter spaced grid.

Meteorological data representative of the site is required as input to the ISCST-Prime dispersion model to estimate ambient impacts. In lieu of an on-site data set, dispersion modeling with five years of meteorological data is required. The surface data collected at Oklahoma City [WBAN #13967] for the calendar years 1986-88, 1990-91; the upper air data collected at Oklahoma City [WBAN #13967] for the calendar years 1986-88; and the upper air data collected at Norman [WBAN #03948] for the calendar years 1990-91 are used to model sources located in Woodward County, OK, in accordance with ODEQ guidance. These data were processed using PCRAMMET into an ISC3-ready format and include wind speed and direction, stability, temperature, and mixing heights. The year 1989 was not used because a monitor was moved from Oklahoma City to Norman, causing a three-week gap in the data.

Modeled Emission Rates and Stack Parameters

Source	UTM Coordinates, Meters		Stack Height ft	Stack Diameter ft	Stack Flow ACFM	Stack Temp. °F	NO _x Emissions lb/hr	Form. Emissions lb/hr
	East	North						
MC-1	485834	4032509	70	1.7	12,137	788	9.70	0.89
MC-2	485828	4032509	70	1.7	10,818	909	72.75	0.86
MC-3	485822	4032509	70	1.7	10,818	909	72.75	0.86
MC-4	485813	4032518	70	1.2	5,542	930	40.01	0.34
MC-5	485807	4032518	70	1.2	5,542	930	40.01	0.34
MC-6	485801	4032518	70	1.2	7,300	930	53.35	0.44
MC-7	485792	4032520	60	0.8	4,572	1,056	5.57	0.14*
MC-8	485786	4032520	60	0.8	4,572	1,056	5.57	0.14*
MC-9	485781	4032520	60	0.8	4,572	1,056	5.57	0.14*
MH-1S	485696	4032619	35	1.0	616	500	0.05	--
MH-2	485696	4032624	25	1.5	454	500	0.03	--
MH-3	485694	4032630	23	1.5	1,247	500	0.09	--
MH-4	485698	4032634	38	1.5	1,555	500	0.13	--
MH-5	485742	4032662	18	1.0	243	500	0.02	--
MH-6	485735	4032649	18	1.5	1,666	500	0.13	--

* No control efficiency for the catalytic converters was modeled.

Total NO₂ Impacts

Pollutant	Averaging Time	Impacts: Whole Facility Plus Significant Background Sources (ug/m ³)	Background (ug/m ³)	Background + Impact (ug/m ³)	NAAQS (ug/m ³)	MAAC (ug/m ³)
NO ₂	Annual	85.61	13.16	98.77	100	--
Formaldehyde	24-hours	10.11	--	10.11	--	12

Compliance with the National Ambient Air Quality Standards has been demonstrated.

D. Ambient Monitoring Requirements

The ambient monitoring exemption level is 14 ug/m³ (annual average), based on the net emissions increase of the modification. The maximum NO₂ impact from the new engine was 3 ug/m³, which is below the monitoring exemption level.

E. Increment Consumption

The consumption of NO₂ increment is equal to the maximum impacts of the engine only. Increment consumption is below the limitation.

Increment Consumption

Pollutant	Averaging Time	Impact (ug/m³)	Allowed Class II Increment (ug/m³)
NO ₂	Annual	3.04	25

F. Class I Area Impacts

The nearest Class I area is the Wichita Mountains Wildlife Refuge, 180 kilometers (116 miles) to the south.

The radius of significant impact for NO₂ extends only 0.9 km from the facility; the Class II area is well beyond this radius. Given the extended transport distance, no impacts are expected on the Wichita Mountains Wildlife Refuge.

G. Other Impacts

Growth Impacts

No significant industrial or commercial secondary growth occurred as a result of the project. No new jobs will be created at the new facility. No significant local population growth occurred. Negligible air quality impact is expected as a result of associated secondary growth.

Soils, Vegetation, and Visibility

There are two portions to a visibility analysis: impacts near the facility and impacts on Class I areas. The nearest Class I area is more than 100 km distant and added NO₂ emissions are 42.49 TPY, therefore no appreciable effect on that Class I area is expected. Normal operation of the new engine will have 0% opacity. There are no scenic vistas near the vicinity of the project. There will be minimal impairment of visibility resulting from the facility's emissions.

Operation of the facility is not expected to produce any perceptible visibility impacts in the vicinity of the plant. Given the limitation of 20% opacity of discharges, and a reasonable expectation that normal operation will result in 0% opacity, no local visibility impairment is anticipated.

No effect on soils is anticipated from the modification. NO_x emissions are contributors to "acid rain," and become nutrients for microorganisms in soils surface waters. However, the facility is located in an area which is primarily agricultural and to which chemical fertilizers are routinely applied. The maximum concentration of NO₂ (3 ug/m³, annual average) will be negligible by comparison.

The primary NAAQS values were set to protect public health; secondary NAAQS values, set to protect welfare issues (including vegetation) would be higher. Air dispersion modeling has demonstrated that the facility will comply with the NAAQS values which would be more stringent than the levels at which a threat to vegetation would be expected.

SECTION VI: INSIGNIFICANT ACTIVITIES

The insignificant activities identified and justified in the application are duplicated below. Records are available to confirm the insignificance of the activities. Appropriate recordkeeping of activities indicated below with "*" is specified in the Specific Conditions.

1. * Stationary reciprocating engines burning natural gas, gasoline, aircraft fuels, or diesel fuel which are either used exclusively for emergency power generation or for peaking power service not exceeding 500 hours/year. The emergency generator (unit "MGTS") is in this category.
2. Space heaters, boilers, process heaters and emergency flares less than or equal to 5 MMBTU/hr heat input (commercial natural gas). Most of the heaters in EUG 3 are in this category.
3. * Emissions from fuel storage/dispensing equipment operated solely for facility owned vehicles if fuel throughput is not more than 2,175 gallons/day, averaged over a 30-day period. No fuel storage or dispensing equipment was identified but may be used in the future.
4. Storage tanks with less than or equal to 10,000 gallons capacity that store volatile organic liquids with a true vapor pressure less than or equal to 1.0 psia at maximum storage temperatures. Most of the tanks in EUG 5 are in this category.

5. Emissions from condensate storage tanks with a design capacity of 10,000 gallons or less in ozone attainment areas. Tnk-1 is in this category.
6. Welding and soldering operations utilizing less than 100 pounds of solder and 53 tons per year electrodes. These operations are conducted as part of plant maintenance, which is a listed “trivial activity.”
7. Sanitary sewage collection and treatment facilities other than incinerators and Publicly Owned Treatment Works (POTW). Stacks or vents for sanitary sewer plumbing traps are also included.
8. Hand wiping and spraying of solvents from containers with less than 1 liter capacity used for spot cleaning and/or degreasing in ozone attainment areas. These operations are conducted as part of plant maintenance, which is a listed “trivial activity,” therefore, no recordkeeping will be required.
9. * Activities that have the potential to emit no more than 5 TPY (actual) of any criteria pollutant. None identified but may be used in the future.

SECTION VII. OKLAHOMA AIR POLLUTION CONTROL RULES

OAC 252:100-1 (General Provisions) [Applicable]
Subchapter 1 includes definitions but there are no regulatory requirements.

OAC 252:100-3 (Air Quality Standards and Increments) [Applicable]
Subchapter 3 enumerates the primary and secondary ambient air quality standards and the significant deterioration increments. At this time, all of Oklahoma is in “attainment” of these standards. In addition, modeled emissions from the proposed facility demonstrate that the facility would not have a significant impact on air quality.

OAC 252:100-4 (New Source Performance Standards) [Not Applicable]
Federal regulations in 40 CFR Part 60 are incorporated by reference as they exist on July 1, 2002, except for the following: Subpart A (Sections 60.4, 60.9, 60.10, and 60.16), Subpart B, Subpart C, Subpart Ca, Subpart Cb, Subpart Cc, Subpart Cd, Subpart Ce, Subpart AAA, and Appendix G. These requirements are covered in the “Federal Regulations” section.

OAC 252:100-5 (Registration of Air Contaminant Sources) [Applicable]
Subchapter 5 requires sources of air contaminants to register with Air Quality, file emission inventories annually, and pay annual operating fees based upon total annual emissions of regulated pollutants. Emission inventories were submitted and fees paid for previous years as required.

OAC 252:100-8 (Permits for Part 70 Sources) [Applicable]
Part 5 includes the general administrative requirements for Part 70 permits. Any planned changes in the operation of the facility which result in emissions not authorized in the permit and which exceed the “Insignificant Activities” or “Trivial Activities” thresholds require prior notification to AQD and may require a permit modification. Insignificant activities refer to those individual emission units either listed in Appendix I or whose actual calendar year emissions do not exceed the following limits.

- 5 TPY of any one criteria pollutant
- 2 TPY of any one hazardous air pollutant (HAP) or 5 TPY of multiple HAPs or 20% of any threshold less than 10 TPY for a HAP that the EPA may establish by rule
- 0.6 TPY of any one Category A toxic substance
- 1.2 TPY of any one Category B toxic substance
- 6.0 TPY of any one Category C toxic substance

Emission limitations for all the sources are taken from the construction permit application.

OAC 252:100-9 (Excess Emissions Reporting Requirements) [Applicable]
 In the event of any release which results in excess emissions, the owner or operator of such facility shall notify the Air Quality Division as soon as the owner or operator of the facility has knowledge of such emissions, but no later than 4:30 p.m. the next working day. Within ten (10) working days after the immediate notice is given, the owner or operator shall submit a written report describing the extent of the excess emissions and response actions taken by the facility. Part 70/Title V sources must report any exceedance that poses an imminent and substantial danger to public health, safety, or the environment as soon as is practicable. Under no circumstances shall notification be more than 24 hours after the exceedance.

OAC 252:100-13 (Prohibition of Open Burning) [Applicable]
 Open burning of refuse and other combustible material is prohibited except as authorized in the specific examples and under the conditions listed in this subchapter.

OAC 252:100-19 (Particulate Matter (PM)) [Applicable]
 Section 19-4 regulates emissions of PM from new and existing fuel-burning equipment, with emission limits based on maximum design heat input rating. Appendix C specifies a PM emission limitation of 0.60 lb/MMBTU for all equipment at this facility with a heat input rating of 10 Million BTU per hour (MMBTUH) or less. Fuel-burning equipment is defined in OAC 252:100-1 as “combustion devices used to convert fuel or wastes to usable heat or power.” Thus, the equipment at this facility is subject to the requirements of this subchapter.

Equipment	Maximum Heat Input , (MMBTUH)	Appendix C Emission Limit, (lbs/MMBTU)	Potential Emission Rate, (lbs/MMBTU)
MC-1	16.83	0.53	0.0099
MC-2	16.21	0.54	0.0099
MC-3	16.21	0.54	0.0099
MC-4	6.39	0.60	0.0099
MC-5	6.39	0.60	0.0099
MC-6	8.25	0.60	0.0099
MC-7	7.07	0.60	0.0099
MC-8	7.07	0.60	0.0099
MC-9	7.07	0.60	0.0099
MH-1S	1.9	0.60	0.0076
MH-2	1.4	0.60	0.0076
MH-3	3.85	0.60	0.0076
MH-4	4.8	0.60	0.0076
MH-5	0.75	0.60	0.0076
MH-6	5.14	0.60	0.0076

OAC 252:100-25 (Visible Emissions and Particulates) [Applicable]
No discharge of greater than 20% opacity is allowed except for short-term occurrences that consist of not more than one six-minute period in any consecutive 60 minutes, not to exceed three such periods in any consecutive 24 hours. In no case shall the average of any six-minute period exceed 60% opacity. When burning natural gas there is very little possibility of exceeding these standards.

OAC 252:100-29 (Fugitive Dust) [Applicable]
No person shall cause or permit the discharge of any visible fugitive dust emissions beyond the property line on which the emissions originated in such a manner as to damage or to interfere with the use of adjacent properties, or cause air quality standards to be exceeded, or to interfere with the maintenance of air quality standards. Under normal operating conditions, this facility has negligible potential to violate this requirement; therefore it is not necessary to require specific precautions to be taken.

OAC 252:100-31 (Sulfur Compounds) [Applicable]
Part 2 limits emissions of sulfur dioxide from any one existing source or any one new petroleum and natural gas process source subject to OAC 252:100-31-26(a)(1). Ambient air concentration of sulfur dioxide at any given point shall not be greater than 1300 $\mu\text{g}/\text{m}^3$ in a 5-minute period of any hour, 1,200 $\mu\text{g}/\text{m}^3$ for a 1-hour average, 650 $\mu\text{g}/\text{m}^3$ for a 3-hour average, or 130 $\mu\text{g}/\text{m}^3$ for a 24-hour average. Part 2 also limits the ambient air impact of hydrogen sulfide emissions from any new or existing source to 0.2 ppm for a 24-hour average (equivalent to 280 $\mu\text{g}/\text{m}^3$). Negligible sulfur is expected in the inlet gas, resulting in negligible SO_2 and H_2S emissions. The permit will require periodic testing of inlet gas sulfur content to ensure compliance with these standards.

Part 5 limits sulfur dioxide emissions from new petroleum or natural gas process equipment (constructed after July 1, 1972). For gaseous fuels the limit is 0.2 lb/MMBTU heat input averaged over 3 hours. This is equivalent to approximately 0.2-weight percent sulfur in the fuel gas, which is equivalent to 2,000 ppm sulfur. Thus, a limitation of 159 ppm sulfur in a field gas supply will be in compliance. The permit requires the use of pipeline-grade natural gas or field gas with a maximum sulfur content of 159 ppm for all fuel-burning equipment to ensure compliance with Subchapter 31.

Part 5 also limits hydrogen sulfide emissions from new petroleum or natural gas process equipment (constructed after July 1, 1972). Removal of hydrogen sulfide in the exhaust stream, or oxidation to sulfur dioxide, is required unless hydrogen sulfide emissions would be less than 0.3 lb/hr for a two-hour average. Hydrogen sulfide emissions shall be reduced by a minimum of 95% of the hydrogen sulfide in the exhaust gas. Direct oxidation of hydrogen sulfide is allowed for units whose emissions would be less than 100 lb/hr of sulfur dioxide for a two-hour average. All emissions from the amine treater are vented to the plant flare for conversion of hydrogen sulfide to sulfur dioxide at an efficiency of 98%.

OAC 252:100-33 (Nitrogen Oxides) [Not Applicable]
This subchapter limits new gas-fired fuel-burning equipment with rated heat input greater than or equal to 50 MMBTUH to emissions of 0.20 lbs of NO_x per MMBTU, three-hour average. There are no equipment items that exceed the 50 MMBTUH threshold.

OAC 252:100-35 (Carbon Monoxide)

[Not Applicable]

None of the following affected processes are located at this facility: gray iron cupola, blast furnace, basic oxygen furnace, petroleum catalytic cracking unit, or petroleum catalytic reforming unit.

OAC 252:100-37 (Volatile Organic Compounds)

[Part 7 Applicable]

Part 3 requires storage tanks constructed after December 28, 1974, with a capacity of 400 gallons or more and storing a VOC with a vapor pressure greater than 1.5 psia to be equipped with a permanent submerged fill pipe or with an organic vapor recovery system. This affects condensate storage. The vapor pressure of diesel, lube oil, and monoethanolamine are less than 1.5 psia, therefore, Part 3 does not apply to those tanks.

Part 5 limits the VOC content of coating used in coating lines or operations. This facility will not normally conduct coating or painting operations except for routine maintenance of the facility and equipment, which is exempt.

Part 7 requires fuel-burning equipment to be operated and maintained so as to minimize VOC emissions. Temperature and available air must be sufficient to provide essentially complete combustion. The engines are designed to provide essentially complete combustion of organic materials.

Part 7 also regulates water separators that receive water containing more than 200 gallons per day of VOC. All access hatches and other openings are required to be closed and sealed. The heater-treater conducts water separation and is subject to this requirement.

OAC 252:100-41 (Hazardous Air Pollutants and Toxic Air Contaminants)

[Applicable]

Part 3 addresses hazardous air contaminants. NESHAP, as found in 40 CFR Part 61, are adopted by reference as they exist on July 1, 2003, with the exception of Subparts B, H, I, K, Q, R, T, W and Appendices D and E, all of which address radionuclides. In addition, General Provisions as found in 40 CFR Part 63, Subpart A, and the Maximum Achievable Control Technology (MACT) standards as found in 40 CFR Part 63, Subparts F, G, H, I, J, L, M, N, O, Q, R, S, T, U, W, X, Y, AA, BB, CC, DD, EE, GG, HH, II, JJ, KK, LL, MM, OO, PP, QQ, RR, SS, TT, UU, VV, WW, XX, YY, CCC, DDD, EEE, GGG, HHH, III, JJJ, LLL, MMM, NNN, OOO, PPP, QQQ, RRR, TTT, UUU, VVV, XXX, AAAA, CCCC, GGGG, HHHH, JJJJ, NNNN, OOOO, QQQQ, RRRR, SSSS, TTTT, UUUU, VVVV, WWWW, XXXX, BBBB, CCCC, FFFF, JJJJ, KKKK, LLLL, MMMM, NNNN, PPPP, QQQQ, and SSSS are hereby adopted by reference as they exist on July 1, 2003. These standards apply to both existing and new sources of HAPs. These requirements are covered in the "Federal Regulations" section.

Part 5 is a **state-only** requirement governing toxic air contaminants. New sources (constructed after March 9, 1987) emitting any category "A" pollutant above de minimis levels must perform a BACT analysis, and if necessary, install BACT. All sources are required to demonstrate that emissions of any toxic air contaminant that exceed the de minimis level do not cause or contribute to a violation of the maximum acceptable ambient concentration (MAAC). As demonstrated in the "Air Quality Impacts" Section above, formaldehyde emissions do not result in ground level concentrations that exceed the MAAC.

OAC 252:100-43 (Testing, Monitoring, and Recordkeeping) [Applicable]

This subchapter provides general requirements for testing, monitoring and recordkeeping and applies to any testing, monitoring or recordkeeping activity conducted at any stationary source. To determine compliance with emissions limitations or standards, the Air Quality Director may require the owner or operator of any source in the state of Oklahoma to install, maintain and operate monitoring equipment or to conduct tests, including stack tests, of the air contaminant source. All required testing must be conducted by methods approved by the Air Quality Director and under the direction of qualified personnel. A notice-of-intent to test and a testing protocol shall be submitted to Air Quality at least 30 days prior to any EPA Reference Method stack tests. Emissions and other data required to demonstrate compliance with any federal or state emission limit or standard, or any requirement set forth in a valid permit shall be recorded, maintained, and submitted as required by this subchapter, an applicable rule, or permit requirement. Data from any required testing or monitoring not conducted in accordance with the provisions of this subchapter shall be considered invalid. Nothing shall preclude the use, including the exclusive use, of any credible evidence or information relevant to whether a source would have been in compliance with applicable requirements if the appropriate performance or compliance test or procedure had been performed.

The following Oklahoma Air Pollution Control Rules are not applicable to this facility:

OAC 252:100-11	Alternative Reduction	not eligible
OAC 252:100-15	Mobile Sources	not in source category
OAC 252:100-17	Incinerators	not type of emission unit
OAC 252:100-23	Cotton Gins	not type of emission unit
OAC 252:100-24	Feed & Grain Facility	not in source category
OAC 252:100-39	Nonattainment Areas	not in a subject area
OAC 252:100-47	Landfills	not type of source category

SECTION VIII. FEDERAL REGULATIONS

PSD, 40 CFR Part 52 [Applicable]

The facility is a major source of air pollution. However, since net emissions changes are below PSD levels of significance, PSD review is limited to netting.

NSPS, 40 CFR Part 60 [Not Applicable]

Subpart Kb, VOL Storage Vessels. This subpart regulates hydrocarbon storage tanks larger than 19,813 gallons capacity and built after July 23, 1984. There are no tanks larger than the threshold of applicability.

Subpart GG, Stationary Gas Turbines. The compressors here are powered by reciprocating engines.

Subpart VV, Equipment Leaks of VOC in the Synthetic Organic Chemical Manufacturing Industry. The equipment is not in a SOCOMI plant.

Subpart KKK, Equipment Leaks of VOC from Onshore Natural Gas Processing Plants. Subpart KKK affects fugitive VOC leakage from gas processing equipment which commenced construction, reconstruction, or modification after January 20, 1984. The cryogenic plant was installed in 1976, prior to promulgation of Subpart KKK.

Subpart LLL, Onshore Natural Gas Processing: SO₂ Emissions. This subpart affects sweetening units and sweetening units followed by sulfur recovery units. Subpart LLL affects fugitive SO₂ leakage from gas sweetening equipment which commenced construction, reconstruction, or modification after January 20, 1984. The sweetening unit plant was installed in 1976, prior to promulgation of Subpart LLL.

NESHAP, 40 CFR Part 61

[Not Applicable]

There are no emissions of any of the regulated pollutants: arsenic, asbestos, benzene, beryllium, coke oven emissions, mercury, radionuclides, or vinyl chloride except for trace amounts of benzene. Subpart J, Equipment Leaks of Benzene, concerns only process streams which contain more than 10% benzene by weight. Analysis of Oklahoma natural gas indicates a maximum benzene content of less than 1%.

NESHAP, 40 CFR Part 63

[Subparts HH and ZZZZ Applicable]

Subpart HH, Oil and Natural Gas Production Facilities. This subpart applies to affected emission points that are located at facilities that are major sources of HAPs and either process, upgrade, or store hydrocarbons prior to the point of custody transfer or prior to which the natural gas enters the natural gas transmission and storage source category. The facility complies with Subpart HH by venting dehydration unit off-gases to a flare with 95% or better destruction efficiency. Subpart HH also regulates storage vessels “with potential for flash emissions.” Condensate storage is in pressure vessels.

Subpart EEEE - Organic Liquids Distribution (Non-Gasoline). This subpart was issued on June 15, 2004, and affects organic liquid distribution (OLD) operations only at major sources of HAPs with an organic liquid throughput greater than 7.29 million gallons per year (173,571 barrels/yr). Subpart EEEE excludes operations which are already subject to other MACTs under 40 CFR Part 63. Since storage vessels are affected under Subpart HH, they are not subject to Subpart EEEE.

Subpart ZZZZ, Reciprocating Internal Combustion Engines (RICE). This subpart was signed on February 26, 2004, and affects existing, new, and reconstructed spark ignition 4 stroke rich burn (4SRB) RICE; new or reconstructed spark ignition 2 stroke lean burn (2SLB); new or reconstructed 4 stroke lean burn (4SLB) RICE; and new or reconstructed compression ignition (CI) RICE with a site rating greater than 500 brake horsepower that are located at a major source of HAP emissions. Certain equipment is exempt from all standards of this subpart, except for notification. These items include new and reconstructed RICE that burn at least 10% landfill or digester gas, or are emergency use or limited use RICE, as various terms are defined in §63.6675. Existing equipment in these uses is exempt from all standards and from notification. For this MACT standard, "new" is defined as having commenced construction or reconstruction on or after December 19, 2002. The compliance date for new affected units is June 15, 2004, or start-up date, whichever is later. The compliance date for existing affected units is June 15, 2007. Applicability of this standard will follow EPA's policy of “once in, always in”; however, the standard will not apply to a facility that, prior to its compliance date, accepts enforceable restrictions on its PTE, such that it is no longer a major source for emissions of HAPs.

The subpart establishes emission and operating limitations for each affected source. Based on emission calculations, this facility is a major source of HAP emissions and is subject to this subpart.

Point	Make/Model	Engine Type	Control Required
MC-1	White Superior 16 GTLE	4SLB	93% CO removal or 14 ppm formaldehyde
MC-2	White Superior 16GLT	4SRB	75% formaldehyde control or 350 ppb
MC-3	White Superior 16GLT	4SRB	75% formaldehyde control or 350 ppb
MC-4	White Superior 6GT825	4SRB	75% formaldehyde control or 350 ppb
MC-5	White Superior 6GT825	4SRB	75% formaldehyde control or 350 ppb
MC-6	White Superior 8GT825	4SRB	75% formaldehyde control or 350 ppb
MC-7	Waukesha L5788G with CC	4SRB	75% formaldehyde control or 350 ppb
MC-8	Waukesha L5788G with CC	4SRB	75% formaldehyde control or 350 ppb
MC-9	Waukesha L5790 with CC	4SRB	75% formaldehyde control or 350 ppb

CAM, 40 CFR Part 64 [Applicable]
 Compliance Assurance Monitoring (CAM), as published in the Federal Register on October 22, 1997, applies to any pollutant specific emission unit at a major source, that is required to obtain a Title V permit, if it meets all of the following criteria:

- It is subject to an emission limit or standard for an applicable regulated air pollutant
- It uses a control device to achieve compliance with the applicable emission limit or standard
- It has potential emissions, prior to the control device, of the applicable regulated air pollutant of 100 TPY

CAM requirements for the catalytic converters would be required at renewal of the Title V operating permit. If the current schedule is followed, however, the engines will be subject to emissions limitations of a MACT, therefore exempted from CAM, by the renewal date.

Chemical Accident Prevention Provisions, 40 CFR Part 68 [Not Applicable]
 Until or unless combined cycle operations are initiated, this facility will not process or store more than the threshold quantity of any regulated substance (Section 112r of the Clean Air Act 1990 Amendments). The facility will be required to submit a Risk Management Plan on or before the date when ammonia stored on location exceeds the threshold quantity. More information on this federal program is available on the web page: www.epa.gov/ceppo.

Stratospheric Ozone Protection, 40 CFR Part 82 [Subpart A and F Applicable]
These standards require phase out of Class I & II substances, reductions of emissions of Class I & II substances to the lowest achievable level in all use sectors, and banning use of nonessential products containing ozone-depleting substances (Subparts A & C); control servicing of motor vehicle air conditioners (Subpart B); require Federal agencies to adopt procurement regulations which meet phase out requirements and which maximize the substitution of safe alternatives to Class I and Class II substances (Subpart D); require warning labels on products made with or containing Class I or II substances (Subpart E); maximize the use of recycling and recovery upon disposal (Subpart F); require producers to identify substitutes for ozone-depleting compounds under the Significant New Alternatives Program (Subpart G); and reduce the emissions of halons (Subpart H).

Subpart A identifies ozone-depleting substances and divides them into two classes. Class I controlled substances are divided into seven groups; the chemicals typically used by the manufacturing industry include carbon tetrachloride (Class I, Group IV) and methyl chloroform (Class I, Group V). A complete phase-out of production of Class I substances is required by January 1, 2000 (January 1, 2002, for methyl chloroform). Class II chemicals, which are hydrochlorofluorocarbons (HCFCs), are generally seen as interim substitutes for Class I CFCs. Class II substances consist of 33 HCFCs. A complete phase-out of Class II substances, scheduled in phases starting by 2002, is required by January 1, 2030.

This facility does not utilize any Class I & II substances.

SECTION IX. COMPLIANCE

Tier Classification And Public Review

This application has been determined to be **Tier II** based on the request for a construction permit for a significant modification to a major stationary source.

The permittee has submitted an affidavit that they are not seeking a permit for land use or for any operation upon land owned by others without their knowledge. The affidavit certifies that the applicant own the land.

The applicant published the "Notice of Filing a Tier II Application" in the *Woodward County News*, on July 15, 2004. The notice stated that the application was available for public review at the Woodward Public Library, 1500 Main Street, Woodward OK, and the DEQ Office at 707 North Robinson, in Oklahoma City. A draft of this permit was submitted to public review by another published notice in the *Woodward County News*, on October 14, 2004. The notice stated that the draft permit was available for public review at the Woodward Public Library, 1500 Main Street, Woodward OK. This site is within 50 miles of the Oklahoma border with the states of Texas and Kansas; those states were notified of the draft permit. No comments were received from the public or the adjacent states. The "proposed" permit was submitted to EPA for a 45-day review period; no comments were received from Region VI.

Information on all permit action is available on the DEQ web page: www.deq.state.ok.us.

Fees Paid

Major source construction permit fee of \$2,000.

SECTION X. SUMMARY

The applicant has demonstrated the ability to comply with the applicable Air Quality rules and regulations. Ambient air quality standards are not threatened at this site. This permit is partial resolution to an active Air Quality compliance / enforcement issue for this facility. Issuance of the permit is recommended.

**PERMIT TO CONSTRUCT
AIR POLLUTION CONTROL FACILITY
SPECIFIC CONDITIONS**

**Duke Energy Field Services LP
Mooreland Gas Plant**

Permit Number 2004-106-C PSD

The permittee is authorized to construct in conformity with the specifications submitted to Air Quality on March 24, 2004, and additional information supplied on July 19, August 19, and September 2, 2004. The Evaluation Memorandum dated January 17, 2005, explains the derivation of applicable permit requirements and estimates of emissions; however, it does not contain operating limitations or permit requirements. Commencing construction or operations under this permit constitutes acceptance of, and consent to, the conditions contained herein.

1. Points of emissions and emissions limitations for each point. [OAC 252:100-8-6(a)]

EUG-1: Engines Subject to Permitting Requirements

EU	Make/Model	NO _x		CO		VOC	
		lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
MC-1	White Superior 16 GTLE	9.70	42.49	9.70	42.49	6.06	26.55
MC-7	Waukesha L5788G with CC	5.57	24.39	5.57	24.39	1.86	8.13
MC-8	Waukesha L5788G with CC	5.57	24.39	5.57	24.39	1.86	8.13
MC-9	Waukesha L5790 with CC	5.57	24.39	5.57	24.39	1.86	8.13

- A. Catalytic converters shall be installed and operational on the units MC-7, MC-8, and MC-9 no later than January 3, 2005.

EUG 2: Grandfathered/Exempted Engines The following emissions units are “grandfathered” and are limited to the existing equipment as it is.

EU	Point	Make/Model	HP	Serial #	Installed Date
MC-2	MC-2	White Superior 16GLT	2,200	265959	1976
MC-3	MC-3	White Superior 16GLT	2,200	265969	1976
MC-4	MC-4	White Superior 6GT825	825	20247	1971
MC-5	MC-5	White Superior 6GT825	825	20246	1971
MC-6	MC-6	White Superior 8GT825	1,100	20245	1971

EUG 3. Other Fuel-Burning Equipment The following emissions units are “Insignificant Activities” since emissions are less than 5 TPY.

EU	Point	Equipment	MMBTUH	Installed Date
MH-4	MH-4	Amine Reboiler	4.8	1975
MH-3	MH-3	Salt Bath Heater	3.85	1971
MH-6	MH-6	Mole Sieve Regenerator	5.142	1975
MH-5	MH-5	Condensate Heater Treater	0.75	1977
MH-2	MH-2	TEG Reboiler “A”	1.4	1963
MH-1S	MH-1S	TEG Reboiler “B”	1.9	1970
MGTS	MGTS	Emergency Generator (300-hp Caterpillar G379)	2.4	--

EUG 4. Fugitive VOC Leakage The following equipment does not have specific emissions limitations.

EU	Point	Equipment	Number of Items	Installed Date
FUG	FUG	Fugitive VOC Leakage Sources	801 Light Liquid Valves	1976
			417 Heavy Liquid Valves	
			1186 Gas/Vapor Valves	
			409 Light Liquid Flanges	
			138 Heavy Liquid Flanges	
			691 Gas/Vapor Flanges	
			25 Liquid Relief Valves	
			110 Gas/Vapor Relief Valves	
			15 Compressor Seals	
32 Pump Seals				

EUG 5. Tanks The following emissions units are “Insignificant Activities” since emissions are less than 5 TPY.

EU	Point	Contents	Gallons	Installed Date
TNK-1	TNK-1	Condensate	5,880	NA
TNK-2	TNK-2	Methanol	4,200	NA
TNK-3	TNK-3	Lube Oil	4,200	NA
TNK-4	TNK-4	Antifreeze	4,200	NA
TNK-5	TNK-5	Lube Oil	4,200	NA
TNK-6	TNK-6	Monoethanolamine	8,400	NA

EUG 6. Other Process Equipment

EU	Point	Equipment	Capacity	Installed Date
MF-1	MF-1	Flare	--	1975

2. The fuel-burning equipment shall use pipeline-grade natural gas or field gas with a maximum sulfur content of 159 ppm. [OAC 252:100-31]
3. At least once per year, the facility shall conduct an analysis of the hydrogen sulfide content of the natural gas at the inlet of the plant. [OAC 252:100-43]
4. Uncondensed gases from the glycol dehydration units and amine unit shall be vented to the plant flare. [OAC 252:100-41 and OAC 252:100-31]
5. Upon issuance of an operating permit, the permittee shall be authorized to operate this facility continuously (24 hours per day, every day of the year). [OAC 252:100-8-6(a)]
6. Each engine at the facility shall have a permanent identification plate attached which shows the make, model number, and serial number. [OAC 252:100-43]
7. At least once per calendar quarter, the permittee shall conduct tests of NO_x and CO emissions in exhaust gases from the engines in EUG 1 and from each replacement engine/turbine when operating under representative conditions for that period. Testing is required for any engine/turbine that runs for more than 220 hours during that calendar quarter. Engines/turbines shall be tested no sooner than 20 calendar days after the last test. Testing shall be conducted using a portable analyzer in accordance with a protocol meeting the requirements of the "AQD Portable Analyzer Guidance" document or an equivalent method approved by Air Quality. When four consecutive quarterly tests show the engine/turbine to be in compliance with the emissions limitations shown in the permit, then the testing frequency may be reduced to semi-annual testing. Likewise, when the following two consecutive semi-annual tests show compliance, the testing frequency may be reduced to annual testing. Upon any showing of non-compliance with emissions limitations or testing that indicates that emissions are within 10% of the emission limitations, the testing frequency shall revert to quarterly. Any reduction in the testing frequency shall be noted in the next required compliance certification. Reduced testing frequency does not apply to engines with catalytic converters. [OAC 252:100-8-6 (a)(3)(A)]
8. The permittee shall maintain a record of make, model, serial number, and emission rates (lbs/hr and TPY), for any replacement engines. [OAC 252:100-8-6 (a)(3)(A)]
9. When periodic testing shows emissions in excess of the established emission limits in the Specific Conditions (in excess of lbs/hr), the owner or operator shall comply with the provisions for reporting excess emissions in Subchapter 9. [OAC 252:100-9]
10. Replacement (including temporary periods of 6 months or less for maintenance purposes), of the internal combustion engines with emissions specified in this permit with engines/turbines of lesser or equal emissions of each pollutant (in lbs/hr and TPY) are authorized under the following conditions.

- a. The permittee shall notify AQD in writing no later than 7 days in advance of the start-up of the replacement engine(s)/turbine(s). Said notice shall identify the equipment removed and shall include the new engine/turbine make, model, and horsepower; date of the change, and any change in emissions.
- b. Quarterly emissions tests for the replacement engine(s)/turbine(s) shall be conducted to confirm continued compliance with NO_x and CO emissions limitations. A copy of the first quarter testing shall be provided to AQD within 60 days of start-up of each replacement or additional engine/turbine. The test report shall include the engine/turbine fuel usage, stack flow (ACFM), stack temperature (°F), stack height (feet), stack diameter (inches), and pollutant emissions rates (g/hp-hr, lbs/hr, and TPY) at maximum rated horsepower for the altitude/location.
- c. Replacement equipment and emissions are limited to equipment and emissions that are not subject to NSPS, NESHAP, or PSD. Replacement engines/turbines for “Grandfathered” emission units become subject to emission limitations.

11. No later than 30 days after each anniversary date of the issuance of the initial Title V operating permit, the permittee shall submit to Air Quality Division of DEQ, with a copy to the US EPA, Region 6, a certification of compliance with the terms and conditions of this permit. The following specific information is required to be included:

[OAC 252:100-8-6 (c)(5)(A) & (D)]

- a. Testing results for each engine/turbine.
- b. Operating hours of engines which are operated less than 220 hours and are not tested in a quarter.
- c. Inlet gas sulfur concentrations (annual).
- d. Fugitive equipment counts.
- e. Inlet gas processing rate (daily).
- f. Gross caloric value of fuel gas (annually).
- g. Records as required by 40 CFR Part 63, Subpart HH.

12. The Permit Shield (Standard Conditions, Section VI) is extended to the following requirements that have been determined to be inapplicable to this facility.

[OAC 252:100-8-6(d)(2)]

- a. OAC 252:100-33: Nitrogen Oxides
- b. OAC 252:100-35: Carbon Monoxide
- c. 40 CFR Part 60, Subparts K, Ka, and Kb: Volatile Organic Liquids Storage Vessels
- d. 40 CFR Part 60, Subpart KKK: On-shore Natural Gas Processing Plants

13. The permittee shall maintain, and update annually, an inventory record of fugitive emission sources at the facility. The record shall include the following: [OAC 252:100-8-6 (a)(3)]

- a. type of service (gas, heavy oil, light oil, and water/light oil),
- b. component type and count, and
- c. VOC content of stream handled.

14. At least annually, or when the BTU value increases by 5% or more from the previous BTU test, the permittee shall conduct sampling of the fuel used for all fuel-burning equipment to determine the composition (C₁ to C₈, nitrogen, carbon dioxide, water, sulfur content) and Gross Caloric Value (BTU content based on the lower heating value) of the fuel as fired. Stain tubes may be used to determine the TRS and H₂S concentrations, provided they are of the highest sensitivity for the concentration expected. [OAC 252:100-8-6 (a)(3)]

15. The facility is subject to 40 CFR Part 63, Subpart HH, and shall comply with all applicable requirements. [40 CFR 63.760 – 779]

- a. 40 CFR 63.760: Applicability and designation of affected source
- b. 40 CFR 63.761: Definitions
- c. 40 CFR 63.762: Startup, shutdowns, and malfunctions
- d. 40 CFR 63.763: (reserved)
- e. 40 CFR 63.764: General standards
- f. 40 CFR 63.765: Glycol dehydration unit process vents standards
- g. 40 CFR 63.766: Storage vessel standards
- h. 40 CFR 63.767: (reserved)
- i. 40 CFR 63.768: (reserved)
- j. 40 CFR 63.769: Equipment leak standards
- k. 40 CFR 63.770: (reserved)
- l. 40 CFR 63.771: Control equipment requirements
- m. 40 CFR 63.772: Test methods, compliance procedures, and compliance demonstrations
- n. 40 CFR 63.773: Inspection and monitoring requirements
- o. 40 CFR 63.774: Recordkeeping requirements
- p. 40 CFR 63.775: Reporting requirements
- q. 40 CFR 63.776: Delegation of authority
- r. 40 CFR 63.777: Alternate means of emission limitation
- s. 40 CFR 63.778: (reserved)
- t. 40 CFR 63.779: (reserved)

16. The following records shall be maintained on-site to verify insignificant activities. No records are required for trivial activities. [OAC 252:100-43]

- a. Hours of operation of the emergency generator.

17. Within 90 days of issuance of this permit, engine exhaust stacks on engines MC-1, MC-2, MC-3, MC-4, MC-5, and MC-6 shall be extended to at least 70 feet above grade. The permittee shall notify AQD within 5 days upon completion of this item.

18. This facility is subject to 40 CFR Part 63, Subpart ZZZZ, and shall comply with all applicable standards no later than June 15, 2007.



PART 70 PERMIT

AIR QUALITY DIVISION
STATE OF OKLAHOMA
DEPARTMENT OF ENVIRONMENTAL QUALITY
707 N. ROBINSON STREET, SUITE 4100
P.O. BOX 1677
OKLAHOMA CITY, OKLAHOMA 73101-1677

Date _____

Permit No. 2004-106-C (PSD)

Duke Energy Field Services

having complied with the requirements of the law, is hereby granted permission to construct a 2,200-hp White Superior 16GTLE internal combustion engine in compression service, and to retrofit catalytic converters on three existing engines at the existing Mooreland Gas Plant located in Sec. 30 – T 23N – R 18W near Mooreland, Woodward County, Oklahoma,

subject to the following conditions, attached:

Standard Conditions Dated October 15, 2003

Specific Conditions

In the absence of construction commencement, this permit shall expire 18 months from the issuance date, except as authorized under Section VIII of the Standard Conditions.

Director, Air Quality Division

Duke Energy Field Services
Attn: Mr. Martin Smith
370 17th Street, Suite 2500
Denver, CO 80202

SUBJECT: Permit Application No. 2004-106-C (PSD)
Mooreland Gas Plant
Sec. 30 – T 23N – R18W
Mooreland, Woodward County, Oklahoma

Dear Mr. Smith:

Enclosed is the permit authorizing construction of the referenced operation. Please note that this permit is issued subject to standard and specific conditions, which are attached. These conditions must be carefully followed since they define the limits of the permit and will be confirmed by periodic inspections.

Also note that you are required to annually submit an emissions inventory for this facility. An emissions inventory must be completed on approved AQD forms and submitted (hardcopy or electronically) by March 1st of every year. Any questions concerning the form or submittal process should be referred to the Emissions Inventory Staff at 405-702-4100.

Thank you for your cooperation in this matter. If we may be of further service, please contact our office at (405)702-4198.

Sincerely,

David S. Schutz, P.E.
AIR QUALITY DIVISION
Enclosures

**TITLE V (PART 70) PERMIT TO OPERATE / CONSTRUCT
STANDARD CONDITIONS
(October 15, 2003)**

SECTION I. DUTY TO COMPLY

A. This is a permit to operate / construct this specific facility in accordance with Title V of the federal Clean Air Act (42 U.S.C. 7401, et seq.) and under the authority of the Oklahoma Clean Air Act and the rules promulgated there under. [Oklahoma Clean Air Act, 27A O.S. § 2-5-112]

B. The issuing Authority for the permit is the Air Quality Division (AQD) of the Oklahoma Department of Environmental Quality (DEQ). The permit does not relieve the holder of the obligation to comply with other applicable federal, state, or local statutes, regulations, rules, or ordinances. [Oklahoma Clean Air Act, 27A O.S. § 2-5-112]

C. The permittee shall comply with all conditions of this permit. Any permit noncompliance shall constitute a violation of the Oklahoma Clean Air Act and shall be grounds for enforcement action, for revocation of the approval to operate under the terms of this permit, or for denial of an application to renew this permit. All applicable requirements (excluding state-only requirements) are enforceable by the DEQ, by EPA, and by citizens under section 304 of the Clean Air Act. This permit is valid for operations only at the specific location listed. [OAC 252:100-8-1.3 and 8-6 (a)(7)(A) and (b)(1)]

D. 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 in order to maintain compliance with the conditions of the permit. [OAC 252:100-8-6 (a)(7)(B)]

SECTION II. REPORTING OF DEVIATIONS FROM PERMIT TERMS

A. Any exceedance resulting from emergency conditions and/or posing an imminent and substantial danger to public health, safety, or the environment shall be reported in accordance with Section XIV. [OAC 252:100-8-6 (a)(3)(C)(iii)]

B. Deviations that result in emissions exceeding those allowed in this permit shall be reported consistent with the requirements of OAC 252:100-9, Excess Emission Reporting Requirements. [OAC 252:100-8-6 (a)(3)(C)(iv)]

C. Oral notifications (fax is also acceptable) shall be made to the AQD central office as soon as the owner or operator of the facility has knowledge of such emissions but no later than 4:30 p.m. the next working day the permittee becomes aware of the exceedance. Within ten (10) working days after the immediate notice is given, the owner operator shall submit a written report describing the extent of the excess emissions and response actions taken by the facility. Every written report submitted under this section shall be certified by a responsible official. [OAC 252:100-8-6 (a)(3)(C)(iii)(I) and (iv)]

SECTION III. MONITORING, TESTING, RECORDKEEPING & REPORTING

A. The permittee shall keep records as specified in this permit. These records, including monitoring data and necessary support information, shall be retained on-site or at a nearby field office for a period of at least five years from the date of the monitoring sample, measurement, report, or application, and shall be made available for inspection by regulatory personnel upon request. Support information includes all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit. Where appropriate, the permit may specify that records may be maintained in computerized form.

[OAC 252:100-8-6 (a)(3)(B)(ii), 8-6 (c)(1), and 8-6 (c)(2)(B)]

B. Records of required monitoring shall include:

- (1) the date, place and time of sampling or measurement;
- (2) the date or dates analyses were performed;
- (3) the company or entity which performed the analyses;
- (4) the analytical techniques or methods used;
- (5) the results of such analyses; and
- (6) the operating conditions as existing at the time of sampling or measurement.

[OAC 252:100-8-6 (a)(3)(B)(i)]

C. No later than 30 days after each six (6) month period, after the date of the issuance of the original Part 70 operating permit, the permittee shall submit to AQD a report of the results of any required monitoring. All instances of deviations from permit requirements since the previous report shall be clearly identified in the report.

[OAC 252:100-8-6 (a)(3)(C)(i) and (ii)]

D. If any testing shows emissions in excess of limitations specified in this permit, the owner or operator shall comply with the provisions of Section II of these standard conditions.

[OAC 252:100-8-6 (a)(3)(C)(iii)]

E. In addition to any monitoring, recordkeeping or reporting requirement specified in this permit, monitoring and reporting may be required under the provisions of OAC 252:100-43, Testing, Monitoring, and Recordkeeping, or as required by any provision of the Federal Clean Air Act or Oklahoma Clean Air Act.

F. Submission of quarterly or semi-annual reports required by any applicable requirement that are duplicative of the reporting required in the previous paragraph will satisfy the reporting requirements of the previous paragraph if noted on the submitted report.

G. Every report submitted under this section shall be certified by a responsible official.

[OAC 252:100-8-6 (a)(3)(C)(iv)]

H. Any owner or operator subject to the provisions of NSPS shall maintain records of the occurrence and duration of any start-up, shutdown, or malfunction in the operation of an affected facility or any malfunction of the air pollution control equipment.

[40 CFR 60.7 (b)]

I. Any owner or operator subject to the provisions of NSPS shall maintain a file of all measurements and other information required by the subpart recorded in a permanent file suitable for inspection. This file shall be retained for at least two years following the date of such measurements, maintenance, and records. [40 CFR 60.7 (d)]

J. The permittee of a facility that is operating subject to a schedule of compliance shall submit to the DEQ a progress report at least semi-annually. The progress reports shall contain dates for achieving the activities, milestones or compliance required in the schedule of compliance and the dates when such activities, milestones or compliance was achieved. The progress reports shall also contain an explanation of why any dates in the schedule of compliance were not or will not be met, and any preventative or corrective measures adopted. [OAC 252:100-8-6 (c)(4)]

K. All testing must be conducted by methods approved by the Division Director under the direction of qualified personnel. All tests shall be made and the results calculated in accordance with standard test procedures. The permittee may request the use of alternative test methods or analysis procedures. The AQD shall approve or disapprove the request within 60 days. When a portable analyzer is used to measure emissions it shall be setup, calibrated, and operated in accordance with the manufacturer's instructions and in accordance with a protocol meeting the requirements of the "AQD Portable Analyzer Guidance" document or an equivalent method approved by Air Quality. [OAC 252:100-8-6 (a)(3)(A)(iv) and OAC 252:100-43]

L. The permittee shall submit to the AQD a copy of all reports submitted to the EPA as required by 40 CFR Part 60, 61, and 63, for all equipment constructed or operated under this permit subject to such standards. [OAC 252:100-4-5 and OAC 252:100-41-15]

SECTION IV. COMPLIANCE CERTIFICATIONS

A. No later than 30 days after each anniversary date of the issuance of the original Part 70 operating permit, the permittee shall submit to the AQD, with a copy to the US EPA, Region 6, a certification of compliance with the terms and conditions of this permit and of any other applicable requirements which have become effective since the issuance of this permit. The compliance certification shall also include such other facts as the permitting authority may require to determine the compliance status of the source.

[OAC 252:100-8-6 (c)(5)(A), (C)(v), and (D)]

B. The certification shall describe the operating permit term or condition that is the basis of the certification; the current compliance status; whether compliance was continuous or intermittent; the methods used for determining compliance, currently and over the reporting period; and a statement that the facility will continue to comply with all applicable requirements.

[OAC 252:100-8-6 (c)(5)(C)(i)-(iv)]

C. Any document required to be submitted in accordance with this permit shall be certified as being true, accurate, and complete by a responsible official. This certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the certification are true, accurate, and complete.

[OAC 252:100-8-5 (f) and OAC 252:100-8-6 (c)(1)]

D. Any facility reporting noncompliance shall submit a schedule of compliance for emissions units or stationary sources that are not in compliance with all applicable requirements. This schedule shall include a schedule of remedial measures, including an enforceable sequence of actions with milestones, leading to compliance with any applicable requirements for which the emissions unit or stationary source is in noncompliance. This compliance schedule shall resemble and be at least as stringent as that contained in any judicial consent decree or administrative order to which the emissions unit or stationary source is subject. Any such schedule of compliance shall be supplemental to, and shall not sanction noncompliance with, the applicable requirements on which it is based. Except that a compliance plan shall not be required for any noncompliance condition which is corrected within 24 hours of discovery.

[OAC 252:100-8-5 (e)(8)(B) and OAC 252:100-8-6 (c)(3)]

SECTION V. REQUIREMENTS THAT BECOME APPLICABLE DURING THE PERMIT TERM

The permittee shall comply with any additional requirements that become effective during the permit term and that are applicable to the facility. Compliance with all new requirements shall be certified in the next annual certification.

[OAC 252:100-8-6 (c)(6)]

SECTION VI. PERMIT SHIELD

A. Compliance with the terms and conditions of this permit (including terms and conditions established for alternate operating scenarios, emissions trading, and emissions averaging, but excluding terms and conditions for which the permit shield is expressly prohibited under OAC 252:100-8) shall be deemed compliance with the applicable requirements identified and included in this permit.

[OAC 252:100-8-6 (d)(1)]

B. Those requirements that are applicable are listed in the Standard Conditions and the Specific Conditions of this permit. Those requirements that the applicant requested be determined as not applicable are listed in the Evaluation Memorandum and are summarized in the Specific Conditions of this permit.

[OAC 252:100-8-6 (d)(2)]

SECTION VII. ANNUAL EMISSIONS INVENTORY & FEE PAYMENT

The permittee shall file with the AQD an annual emission inventory and shall pay annual fees based on emissions inventories. The methods used to calculate emissions for inventory purposes shall be based on the best available information accepted by AQD.

[OAC 252:100-5-2.1, -5-2.2, and OAC 252:100-8-6 (a)(8)]

SECTION VIII. TERM OF PERMIT

A. Unless specified otherwise, the term of an operating permit shall be five years from the date of issuance.

[OAC 252:100-8-6 (a)(2)(A)]

B. A source's right to operate shall terminate upon the expiration of its permit unless a timely and complete renewal application has been submitted at least 180 days before the date of expiration. [OAC 252:100-8-7.1 (d)(1)]

C. A duly issued construction permit or authorization to construct or modify will terminate and become null and void (unless extended as provided in OAC 252:100-8-1.4(b)) if the construction is not commenced within 18 months after the date the permit or authorization was issued, or if work is suspended for more than 18 months after it is commenced. [OAC 252:100-8-1.4(a)]

D. The recipient of a construction permit shall apply for a permit to operate (or modified operating permit) within 180 days following the first day of operation. [OAC 252:100-8-4(b)(5)]

SECTION IX. SEVERABILITY

The provisions of this permit are severable and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

[OAC 252:100-8-6 (a)(6)]

SECTION X. PROPERTY RIGHTS

A. This permit does not convey any property rights of any sort, or any exclusive privilege.

[OAC 252:100-8-6 (a)(7)(D)]

B. This permit shall not be considered in any manner affecting the title of the premises upon which the equipment is located and does not release the permittee from any liability for damage to persons or property caused by or resulting from the maintenance or operation of the equipment for which the permit is issued.

[OAC 252:100-8-6 (c)(6)]

SECTION XI. DUTY TO PROVIDE INFORMATION

A. The permittee shall furnish to the DEQ, upon receipt of a written request and within sixty (60) days of the request unless the DEQ specifies another time period, any information that the DEQ may request to determine whether cause exists for modifying, reopening, revoking, reissuing, terminating the permit or to determine compliance with the permit. Upon request, the permittee shall also furnish to the DEQ copies of records required to be kept by the permit.

[OAC 252:100-8-6 (a)(7)(E)]

B. The permittee may make a claim of confidentiality for any information or records submitted pursuant to 27A O.S. 2-5-105(18). Confidential information shall be clearly labeled as such and shall be separable from the main body of the document such as in an attachment.

[OAC 252:100-8-6 (a)(7)(E)]

C. Notification to the AQD of the sale or transfer of ownership of this facility is required and shall be made in writing within 10 days after such date.

[Oklahoma Clean Air Act, 27A O.S. § 2-5-112 (G)]

SECTION XII. REOPENING, MODIFICATION & REVOCATION

A. The permit may be modified, revoked, reopened and reissued, or terminated for cause. Except as provided for minor permit modifications, the filing of a request by the permittee for a permit modification, revocation, reissuance, termination, notification of planned changes, or anticipated noncompliance does not stay any permit condition.

[OAC 252:100-8-6 (a)(7)(C) and OAC 252:100-8-7.2 (b)]

B. The DEQ will reopen and revise or revoke this permit as necessary to remedy deficiencies in the following circumstances: [OAC 252:100-8-7.3 and OAC 252:100-8-7.4(a)(2)]

- (1) Additional requirements under the Clean Air Act become applicable to a major source category three or more years prior to the expiration date of this permit. No such reopening is required if the effective date of the requirement is later than the expiration date of this permit.
- (2) The DEQ or the EPA determines that this permit contains a material mistake or that the permit must be revised or revoked to assure compliance with the applicable requirements.
- (3) The DEQ determines that inaccurate information was used in establishing the emission standards, limitations, or other conditions of this permit. The DEQ may revoke and not reissue this permit if it determines that the permittee has submitted false or misleading information to the DEQ.

C. If “grandfathered” status is claimed and granted for any equipment covered by this permit, it shall only apply under the following circumstances: [OAC 252:100-5-1.1]

- (1) It only applies to that specific item by serial number or some other permanent identification.
- (2) Grandfathered status is lost if the item is significantly modified or if it is relocated outside the boundaries of the facility.

D. To make changes other than (1) those described in Section XVIII (Operational Flexibility), (2) administrative permit amendments, and (3) those not defined as an Insignificant Activity (Section XVI) or Trivial Activity (Section XVII), the permittee shall notify AQD. Such changes may require a permit modification. [OAC 252:100-8-7.2 (b)]

E. Activities that will result in air emissions that exceed the trivial/insignificant levels and that are not specifically approved by this permit are prohibited. [OAC 252:100-8-6 (c)(6)]

SECTION XIII. INSPECTION & ENTRY

A. Upon presentation of credentials and other documents as may be required by law, the permittee shall allow authorized regulatory officials to perform the following (subject to the permittee's right to seek confidential treatment pursuant to 27A O.S. Supp. 1998, § 2-5-105(18) for confidential information submitted to or obtained by the DEQ under this section):

- (1) enter upon the permittee's premises during reasonable/normal working hours where a source is located or emissions-related activity is conducted, or where records must be kept under the conditions of the permit;
- (2) have access to and copy, at reasonable times, any records that must be kept under the conditions of the permit;
- (3) inspect, at reasonable times and using reasonable safety practices, any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit; and
- (4) as authorized by the Oklahoma Clean Air Act, sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the permit.

[OAC 252:100-8-6 (c)(2)]

SECTION XIV. EMERGENCIES

A. Any emergency and/or exceedance that poses an imminent and substantial danger to public health, safety, or the environment shall be reported to AQD as soon as is practicable; but under no circumstance shall notification be more than 24 hours after the exceedance. [The degree of promptness in reporting shall be proportional to the degree of danger.]

[OAC 252:100-8-6 (a)(3)(C)(iii)(II)]

B. An "emergency" means any situation arising from sudden and reasonably unforeseeable events beyond the control of the source, including acts of God, which situation requires immediate corrective action to restore normal operation, and that causes the source to exceed a technology-based emission limitation under this permit, due to unavoidable increases in emissions attributable to the emergency.

[OAC 252:100-8-2]

C. An emergency shall constitute an affirmative defense to an action brought for noncompliance with such technology-based emission limitation if the conditions of paragraph D below are met.

[OAC 252:100-8-6 (e)(1)]

D. The affirmative defense of emergency shall be demonstrated through properly signed, contemporaneous operating logs or other relevant evidence that:

- (1) an emergency occurred and the permittee can identify the cause or causes of the emergency;
- (2) the permitted facility was at the time being properly operated;
- (3) during the period of the emergency the permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards or other requirements in this permit;
- (4) the permittee submitted notice of the emergency to AQD within 24 hours of the time when emission limitations were exceeded due to the emergency. This notice shall contain a description of the emergency, the probable cause of the exceedance, any steps taken to mitigate emissions, and corrective actions taken; and
- (5) the permittee submitted a follow up written report within 10 working days of first becoming aware of the exceedance.

[OAC 252:100-8-6 (e)(2), (a)(3)(C)(iii)(I) and (IV)]

E. In any enforcement proceeding, the permittee seeking to establish the occurrence of an emergency shall have the burden of proof. [OAC 252:100-8-6 (e)(3)]

SECTION XV. RISK MANAGEMENT PLAN

The permittee, if subject to the provision of Section 112(r) of the Clean Air Act, shall develop and register with the appropriate agency a risk management plan by June 20, 1999, or the applicable effective date. [OAC 252:100-8-6 (a)(4)]

SECTION XVI. INSIGNIFICANT ACTIVITIES

Except as otherwise prohibited or limited by this permit, the permittee is hereby authorized to operate individual emissions units that are either on the list in Appendix I, or whose actual calendar year emissions do not exceed any of the limits below. Any activity to which a State or federal applicable requirement applies is not insignificant even if it meets the criteria below or is included on the insignificant activities list. [OAC 252:100-8-2]

- (1) 5 tons per year of any one criteria pollutant.
- (2) 2 tons per year for any one hazardous air pollutant (HAP) or 5 tons per year for an aggregate of two or more HAP's, or 20 percent of any threshold less than 10 tons per year for single HAP that the EPA may establish by rule.
- (3) 0.6 tons per year for any one category A substance, 1.2 tons per year for any one category B substance or 6 tons per year for any one category C substance as defined in 252:100-41-40.

SECTION XVII. TRIVIAL ACTIVITIES

Except as otherwise prohibited or limited by this permit, the permittee is hereby authorized to operate any individual or combination of air emissions units that are considered inconsequential and are on the list in Appendix J. Any activity to which a State or federal applicable requirement applies is not trivial even if included on the trivial activities list. [OAC 252:100-8-2]

SECTION XVIII. OPERATIONAL FLEXIBILITY

A. A facility may implement any operating scenario allowed for in its Part 70 permit without the need for any permit revision or any notification to the DEQ (unless specified otherwise in the permit). When an operating scenario is changed, the permittee shall record in a log at the facility the scenario under which it is operating. [OAC 252:100-8-6 (a)(10) and (f)(1)]

B. The permittee may make changes within the facility that:

- (1) result in no net emissions increases,
- (2) are not modifications under any provision of Title I of the federal Clean Air Act, and
- (3) do not cause any hourly or annual permitted emission rate of any existing emissions unit to be exceeded;

provided that the facility provides the EPA and the DEQ with written notification as required below in advance of the proposed changes, which shall be a minimum of 7 days, or 24 hours for emergencies as defined in OAC 252:100-8-6 (e). The permittee, the DEQ, and the EPA shall attach each such notice to their copy of the permit. For each such change, the written notification required above shall include a brief description of the change within the permitted facility, the date on which the change will occur, any change in emissions, and any permit term or condition that is no longer applicable as a result of the change. The permit shield provided by this permit does not apply to any change made pursuant to this subsection. [OAC 252:100-8-6 (f)(2)]

SECTION XIX. OTHER APPLICABLE & STATE-ONLY REQUIREMENTS

A. The following applicable requirements and state-only requirements apply to the facility unless elsewhere covered by a more restrictive requirement:

- (1) No person shall cause or permit the discharge of emissions such that National Ambient Air Quality Standards (NAAQS) are exceeded on land outside the permitted facility. [OAC 252:100-3]
- (2) Open burning of refuse and other combustible material is prohibited except as authorized in the specific examples and under the conditions listed in the Open Burning Subchapter. [OAC 252:100-13]
- (3) No particulate emissions from any fuel-burning equipment with a rated heat input of 10 MMBTUH or less shall exceed 0.6 lb/MMBTU. [OAC 252:100-19]
- (4) For all emissions units not subject to an opacity limit promulgated under 40 CFR, Part 60, NSPS, no discharge of greater than 20% opacity is allowed except for short-term occurrences which consist of not more than one six-minute period in any consecutive 60 minutes, not to exceed three such periods in any consecutive 24 hours. In no case shall the average of any six-minute period exceed 60% opacity. [OAC 252:100-25]
- (5) No visible fugitive dust emissions shall be discharged beyond the property line on which the emissions originate in such a manner as to damage or to interfere with the use of adjacent properties, or cause air quality standards to be exceeded, or interfere with the maintenance of air quality standards. [OAC 252:100-29]
- (6) No sulfur oxide emissions from new gas-fired fuel-burning equipment shall exceed 0.2 lb/MMBTU. No existing source shall exceed the listed ambient air standards for sulfur dioxide. [OAC 252:100-31]
- (7) Volatile Organic Compound (VOC) storage tanks built after December 24, 1974, and with a capacity of 400 gallons or more storing a liquid with a vapor pressure of 1.5 psia or greater under actual conditions shall be equipped with a permanent submerged fill pipe or with a vapor-recovery system. [OAC 252:100-37-15(b)]
- (8) All fuel-burning equipment shall at all times be properly operated and maintained in a manner that will minimize emissions of VOCs. [OAC 252:100-37-36]
- (9) Except as otherwise provided, no person shall cause or permit the emissions of any toxic air contaminant in such concentration as to cause or to contribute to a violation of the MAAC. **(State only)** [OAC 252:100-41]

SECTION XX. STRATOSPHERIC OZONE PROTECTION

A. The permittee shall comply with the following standards for production and consumption of ozone-depleting substances. [40 CFR 82, Subpart A]

- (1) Persons producing, importing, or placing an order for production or importation of certain class I and class II substances, HCFC-22, or HCFC-141b shall be subject to the requirements of §82.4.
- (2) Producers, importers, exporters, purchasers, and persons who transform or destroy certain class I and class II substances, HCFC-22, or HCFC-141b are subject to the recordkeeping requirements at §82.13.
- (3) Class I substances (listed at Appendix A to Subpart A) include certain CFCs, Halons, HBFCs, carbon tetrachloride, trichloroethane (methyl chloroform), and bromomethane (Methyl Bromide). Class II substances (listed at Appendix B to Subpart A) include HCFCs.

B. If the permittee performs a service on motor (fleet) vehicles when this service involves an ozone-depleting substance refrigerant (or regulated substitute substance) in the motor vehicle air conditioner (MVAC), the permittee is subject to all applicable requirements. Note: 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. [40 CFR 82, Subpart B]

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

- (1) Persons opening appliances for maintenance, service, repair, or disposal must comply with the required practices pursuant to § 82.156.
- (2) 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.
- (3) Persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program pursuant to § 82.161.
- (4) Persons disposing of small appliances, MVACs, and MVAC-like appliances must comply with record-keeping requirements pursuant to § 82.166.
- (5) Persons owning commercial or industrial process refrigeration equipment must comply with leak repair requirements pursuant to § 82.158.
- (6) 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.

SECTION XXI. TITLE V APPROVAL LANGUAGE

A. DEQ wishes to reduce the time and work associated with permit review and, wherever it is not inconsistent with Federal requirements, to provide for incorporation of requirements established through construction permitting into the Sources' Title V permit without causing redundant review. Requirements from construction permits may be incorporated into the Title V permit through the administrative amendment process set forth in Oklahoma Administrative Code 252:100-8-7.2(a) only if the following procedures are followed:

- (1) The construction permit goes out for a 30-day public notice and comment using the procedures set forth in 40 Code of Federal Regulations (CFR) § 70.7 (h)(1). This public notice shall include notice to the public that this permit is subject to Environmental Protection Agency (EPA) review, EPA objection, and petition to EPA, as provided by 40 CFR § 70.8; that the requirements of the construction permit will be incorporated into the Title V permit through the administrative amendment process; that the public will not receive another opportunity to provide comments when the requirements are incorporated into the Title V permit; and that EPA review, EPA objection, and petitions to EPA will not be available to the public when requirements from the construction permit are incorporated into the Title V permit.
 - (2) A copy of the construction permit application is sent to EPA, as provided by 40 CFR § 70.8(a)(1).
 - (3) A copy of the draft construction permit is sent to any affected State, as provided by 40 CFR § 70.8(b).
 - (4) A copy of the proposed construction permit is sent to EPA for a 45-day review period as provided by 40 CFR § 70.8(a) and (c).
 - (5) The DEQ complies with 40 CFR § 70.8 (c) upon the written receipt within the 45-day comment period of any EPA objection to the construction permit. The DEQ shall not issue the permit until EPA's objections are resolved to the satisfaction of EPA.
 - (6) The DEQ complies with 40 CFR § 70.8 (d).
 - (7) A copy of the final construction permit is sent to EPA as provided by 40 CFR § 70.8 (a).
 - (8) The DEQ shall not issue the proposed construction permit until any affected State and EPA have had an opportunity to review the proposed permit, as provided by these permit conditions.
 - (9) Any requirements of the construction permit may be reopened for cause after incorporation into the Title V permit by the administrative amendment process, by DEQ as provided in OAC 252:100-8-7.3 (a), (b), and (c), and by EPA as provided in 40 CFR § 70.7 (f) and (g).
 - (10) The DEQ shall not issue the administrative permit amendment if performance tests fail to demonstrate that the source is operating in substantial compliance with all permit requirements.
- B. To the extent that these conditions are not followed, the Title V permit must go through the Title V review process.

SECTION XXII. CREDIBLE EVIDENCE

For the purpose of submitting compliance certifications or establishing whether or not a person has violated or is in violation of any provision of the Oklahoma implementation plan, nothing shall preclude the use, including the exclusive use, of any credible evidence or information, relevant to whether a source would have been in compliance with applicable requirements if the appropriate performance or compliance test or procedure had been performed.

[OAC 252:100-43-6]