

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

MEMORANDUM

March 18, 2008

TO: Phillip Fielder, P.E., Permits and Engineering Group Manager,
Air Quality Division

THROUGH: Matt Paque, Supervising Attorney, Air Quality Division

THROUGH: Kendal Stegmann, Senior Environmental Manager, Compliance
and Enforcement

THROUGH: Grover Campbell, P.E., Existing Source Permits Section

THROUGH: Phil Martin, P.E., Engineering Section

THROUGH: Peer Review

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

SUBJECT: Evaluation of Permit Application **No. 2004-226-C (M-1) (PSD)**
Nomaco Incorporated
Oklahoma Polyethylene Foam Extrusion Plant
Yukon, Canadian County, Oklahoma
Section 35 – T 12N – R 5W
524 N Sara Road , Yukon, OK
Latitude 35.468°N, Longitude 97.699°W

SECTION I. INTRODUCTION

Nomaco Incorporated (Nomaco) has submitted an application for a modified PSD construction permit for a new polyethylene foam extrusion plant (SIC 3086). The new facility is subject to Prevention of Significant Deterioration (PSD) standards. The facility began producing product on June 30, 2005.

This modified permit will authorize the following changes from the current permit:

- VOC emissions limitations for foam extrusion will be increased from 801.2 TPY to 1135.25 TPY;
- A hot gluing operation has been added which has negligible VOC emissions and is also an “insignificant activity.”

The facility is a PSD major source since the permitted and potential emissions of VOC are greater than the PSD major source threshold. Full PSD review was required for VOC. Full PSD review of emissions consisted of the following: a determination of best available control technology (BACT); an evaluation of existing air quality and determination of monitoring requirements; an evaluation of PSD increment consumption; an analysis of compliance with National Ambient Air Quality Standards (NAAQS); an evaluation of source-related impacts on growth, soils, vegetation, visibility; and a Class I area impact evaluation.

There were a total of five extrusion lines installed. The first two were installed initially upon construction, two more were added in early 2006, and the fifth line commenced operation on July 23, 2007. Construction was conducted in phases. In a “phased construction” situation, OAC 252:100-8-34(b)(3) requires that BACT be reviewed no less often than every 18 months. This permit will provide the BACT review for the latest phase as well as review BACT for the proposed emissions relaxations.

SECTION II. PROCESS DESCRIPTION

The process consists of expanding heated polyethylene resin using isobutane as a foaming agent. Pelleted resin is received pneumatically into four raw materials silos. Pellets are transferred to completely enclosed individual blending stations for mixing with other additives. The mix of pellets/additives are heated electrically to form a homogeneous melt. Isobutane is then injected into the melt, which is then moved by screw to a die to form the final product. The boiling point of isobutane is 11°F, so it changes from liquid-phase to gas-phase in the process. Isobutane, as a liquid at 3,200 psi, is injected into the melt, which is then moved by screw to a die to form the shape of the final product. The final products are then cooled using chilled air, printed with product specifications, then packaged and stored in a warehouse for shipment.

The plant is designed to have up to five forming machines, each with a capacity of 100-300 kg/hr resin. The facility includes two granulators for reclamation of scrap resin, one for “hard purge” resin and one for foamed resin. Both granulate scrap resin for reflux to the process or use as packaging material. The printing operation is expected to use a maximum of 230 gallons of ink per year containing up to a worst-case 10.0 lb/gal VOC, for a total of 1.15 TPY VOC from that operation. In addition to the primary facility production units, the facility includes gas-fired process heaters totaling 10.1 MMBTUH, resin storage silos, resin reclamation granulators, a NomatekTM (foam cutting) machine, and various pressurized isobutane and propane storage tanks. In 2007, the facility began using a glue on some products. The glue is heated and rolled onto products. Due to the glue’s chemical composition and the fact that it is not sprayed, it is an Insignificant Activity.

SECTION III. AIR EMISSIONS

Air emissions from the facility have been calculated using the following methods and factors:

- Emissions of VOC from the foaming operation are based on a mass balance: a total of 1,621.8 TPY isobutane added to the process minus the amount of isobutane typically retained in the products upon shipment. Nomaco internal testing has shown that approximately 30% of isobutane remains in the product after a minimum storage time of 7 days. Hourly emission rates of 260 lb/hr are predicated on 8,760 hours per year operation. The annual isobutane emission limit is based on the 5 extrusion lines running under maximum equipment rates for each line.
- Emissions of VOC from the printing operation have been based on mass balances: maximum annual ink and cleaning solvent usage of 230 gallons with 10 lb/gal VOC.
- Emissions from the emergency generator have been estimated using factors from AP-42 (10/96), Section 3.3.
- Emissions from the process heaters and boiler have been estimated using factors from AP-42 (7/98), Section 1.4.
- Emissions of particulate matter from the raw materials silos and scrap granulators have been estimated based on expected air flows and manufacturer guarantees of PM concentrations (gr/SCF).
- Emissions of particulate matter from the Nomatek™ machine were estimated based on information from other Nomaco facilities (62.5 TPY uncontrolled; the unit is equipped with a 99% efficient dust collector).
- Polyethylene crust burn-off emissions were estimated using 100 lbs/year PE and factors in AP-42 (1/95), Section 2.5.

Based on measurements at other Nomaco facilities, the company estimates that 25.6% of added VOC is emitted at the foam production step and 44.4% from all subsequent operations (curing, cooling, packaging, etc.).

A. VOC Evaporation Processes

Process	Process Rates		VOC Emissions	VOC Emissions	
	Hourly	Annual		lb/hr	TPY
Foam Extrusion	371 lbs	1,621.8 tons	70%	260.0	1135.25
Printing	1.00 lb	2,300 lbs ink and solvent	100%	1.0	1.15
TOTALS				261.00	1136.40

The VOC from foam extrusion is isobutane, which is not a toxic or hazardous material. The VOC from printing is primarily ethanol, which is also not a HAP.

B. Emergency Engine

Unit	Pollutant	Factor (lb/hp-hr)	Emissions lb/hr	Emission TPY
Emergency Generator (290-hp)	NO _x	0.031	8.99	2.25
	CO	0.00668	1.94	0.48
	SO ₂ *	0.00324	0.94	0.23
	VOC **	0.00251	0.73	0.18
	PM ₁₀	0.0022	0.64	0.16

* based on 0.4% by weight sulfur in fuel.

**sum of exhaust plus crankcase VOC.

C. Boiler and Process Heaters

Unit	Pollutant	Factor (lb/MMBTU)	Emissions lb/hr	Emission TPY
Process Heaters, 10.1 MMBTUH Total	NO _x	0.100	1.01	4.42
	CO	0.084	0.85	3.72
	SO ₂ *	0.0006	0.01	0.03
	VOC	0.0055	0.06	0.24
	PM ₁₀	0.0076	0.08	0.34
5 MMBTUH Boiler (not yet installed)	NO _x	0.100	0.50	2.19
	CO	0.084	0.42	1.84
	SO ₂ *	0.0006	0.01	0.01
	VOC	0.0055	0.03	0.12
	PM ₁₀	0.0076	0.04	0.17

* based on 0.4% by weight sulfur in fuel.

D. Silos and Scrap Granulators

Process	Process Rates	PM Emissions Factor, gr/SCF	PM Emissions	
			lb/hr	TPY
Receiving Silos	3,600 CFM	0.000136	0.01	0.02
Scrap Foam Granulator	6,000 CFM	0.000136	0.01	0.03
Hard Purge Granulator	1,500 CFM	0.000136	0.01	0.01
Nomatek TM Machine	--	--	0.20	0.63
TOTALS			0.23	0.69

E. Crust Burn-off

Unit	Pollutant	Factor (lb/ton)	Emissions lb/hr	Emission TPY
Crust burn-off	NO _x	4	0.01	0.01
	CO	125	0.01	0.01
	VOC	32	0.01	0.01
	PM ₁₀	100	0.01	0.01

TOTAL FACILITY EMISSIONS

Emission Unit	Point ID	PM ₁₀		SO ₂		NO _x		VOC		CO	
		lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
Foam Extrusion	EP-01	--	--	--	--	--	--	260.0	1135.25	--	--
Printing	--	--	--	--	--	--	--	1.00	1.15	--	--
Emergency Generator	EP-10	0.64	0.16	0.94	0.23	8.99	2.25	0.73	0.18	1.94	0.48
Process Heaters	EP-14	0.08	0.34	0.01	0.03	1.01	4.42	0.06	0.24	0.85	3.72
Boiler	EP-15	0.04	0.17	0.01	0.01	0.50	2.19	0.03	0.12	0.42	1.84
Receiving Silos	EP-06 EP-07 EP-08 EP-09	0.01	0.02	--	--	--	--	--	--	--	--
Scrap Foam Granulator	EPN-02 EPN-03	0.01	0.03	--	--	--	--	--	--	--	--
Hard Purge Granulator	EP-04 EP-05	0.01	0.01	--	--	--	--	--	--	--	--
Nomatek™ Machine	EP-12	0.20	0.63	--	--	--	--	--	--	--	--
Crust Burn-off	--	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
TOTAL EMISSIONS		1.0	1.37	0.97	0.28	10.51	8.87	261.83	1136.95	3.22	6.05
PSD Level of Significance			15		40		40		250		100
PSD Review Required?			No		No		No		Yes		No

SIGNIFICANT DISCHARGE POINTS

Stack ID	Process	Height feet	Temperature °F	Flow ACFM
EP-01	Start-up Vents	37	77	5,800
EP-02	Scrap Foam Granulator Filter	18	77	3,000
EP-03	Scrap Foam Granulator Filter	18	77	3,000
EP-04	Hard Purge Granulator Filter	15	77	750
EP-05	Hard Purge Granulator Filter	15	77	750
EP-06	Storage Silo #1	45	77	900
EP-07	Storage Silo #2	45	77	900
EP-08	Storage Silo #3	45	77	900
EP-09	Storage Silo #4 *	45	77	900
EP-12	Nomatek Dust Collector	18	77	9,500

* Not yet installed.

SECTION IV. PSD REVIEW

A. 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.).

There are three operations subject to BACT for VOC: foam extrusion, printing, and emergency engines. The majority of VOC emissions (99.9%) is anticipated from extrusion.

The process is very sensitive to pressure changes. Even a slight pressure swing would affect the size and shape of the end products while they are cooling. Any air pollution control which would have a significant impact on pressure during cooling would be infeasible because it would render the process incapable of functioning.

VOC emissions controls fall into two categories: process changes and discharge controls. The former category relies on reducing VOC content in raw materials and the most efficient usage of those raw materials. Outlet VOC control is accomplished by recovery or by combustion. Recovery methods include condensation and adsorption. Oxidation may be conducted in a unit designed only to provide combustion (incinerator, etc.), in process equipment (e.g., a boiler), or utilizing microorganisms to achieve the oxidation.

The application ranked the following emissions control technologies:

- Recuperative thermal oxidizer
- Regenerative thermal oxidizer
- Regenerative catalytic oxidizer
- flaring
- condensation
- carbon adsorption
- raw material substitution
- foaming (blowing) agent usage limits

Although biofiltration is potentially feasible, it is not a demonstrated technology for this type of process.

The BACT analysis is heavily dependent on predicted stack flows. High ventilation rates are often required by fire prevention codes and/or occupational safety regulations. The size of control equipment and the operating costs of that equipment are proportional to the air flow to be processed. An EPA reference was cited for the BACT analysis, "Survey of Control Technologies for Organic Vapor Gas Streams" (EPA-456, May, 1995).

RECENT BACT DETERMINATIONS FOR VOC FROM FOAM EXTRUSION

Source	Location	RBLC ID	Process	BACT
Dart Container of Kentucky	Kentucky	KY-0080	Foam extrusion lines	RTO
Fagardala Pac-Lite	Michigan	MI-0322	Polypropylene extrusion	TO
Nomaco	North Carolina	NC-0071	Polyethylene foam extrusion	restrict blowing agent usage

All other RBLC determinations were for bead production or polystyrene foam production. Since polystyrene is produced first by “puffing” beads into puffed beads, then fusing the beads, it is a different process which is not sensitive to pressure swings. The foam is not contained within a mold to preserve its shape during cooling, so pressure swings would change the size and shape of the products, resulting in off-spec products.

1. Foam Extrusion

The extrusion lines are predicted to have the highest VOC emissions. The highest expected VOC concentration is 4,500 ppm, or ¼ of the lower explosive limit (LEL) for isobutane.

Several of the above control technologies were rejected preemptively for technological reasons.

- Alternative raw materials are not practical. The only practical raw materials demonstrated to function are pentane, another VOC, or chlorofluorocarbons (CFCs), whose manufacture and usage are limited under 40 CFR Part 82.
- Condensation also is not practical given the high exhaust volume and low temperature needed to achieve any significant reduction. The boiling point of isobutane is 11°F, so the exhaust stream would have to be cooled well below this temperature to achieve any emissions reductions.
- Solid adsorption also depends on the boiling point of the VOC to be controlled. This process is intended for other VOC species whose boiling points are higher such as benzene (176°F) or toluene (232°F).
- Flaring is used for waste gases with an appreciable heating value, at least 200 BTU/SCF and preferably 300 BTU/SCF. Since the isobutane is so dilute, the maximum heating value expected is 9 BTU/SCF or less; the balance would have to be made up from auxiliary fuel. This option may be rejected as impractical.

There are three remaining types of oxidizers: recuperative thermal oxidizers, regenerative thermal oxidizers, and regenerative catalytic oxidizers. A catalytic oxidizer will have higher initial costs but lower operating costs, while the costs are reversed for RTOs. Initial and operating costs and other costs were estimated in accordance with the EPA publication, “OAQPS Cost Control Manual” (5th edition, February 1996, EPA-453/B-96-001).

Control Technology	Initial Capital Cost	Annualized Capital Cost (7% Interest)	Annual Operating Costs	VOC Emissions Controlled TPY	Control Costs, \$/ton
Recup TO	\$487,872	\$69,462	\$456,662	71.84	\$6,356
Regen TO	\$1,068,031.49	\$152,064	\$341,602*	71.84	\$4,755
RCO	\$435,393	\$52,830	\$324,466	69.64	\$4,659

* most of the annual operating cost is for natural gas fuel.

It is concurred that add-on control costs would be excessive.

BACT for extrusion is a limitation of blowing agent usage of 0.7 lb VOC per lb resin and an overall limit on the plant of 1,621.8 TPY blowing agent usage.

2. Printing

The printing operation is expected to emit only 0.1% of total VOC; therefore, its BACT analysis was abbreviated. Given the low emissions from this operation (1.15 TPY), costs of the various add-on controls were not analyzed. It is concurred that any control strategy would incur excessive costs for no environmental benefit.

VOC emissions from printing will be limited by limiting ink usage. Water-based inks are not demonstrated as usable for printing on the foam products.

3. Combustion Units (Engine/Boiler/Heaters)

The combustion units are expected to emit less than 0.1% of total VOC; therefore, the BACT analysis was abbreviated.

Combustion is a common control strategy for VOC emissions. All units in this category are already combustion units. A review of the RBLC indicates that emergency engines have not been required to install additional VOC controls because of intermittent operation. DEQ agrees that combustion unit design is acceptable as BACT.

BACT is acceptable as good combustion design for the engine, heaters, and boiler.

B. AIR QUALITY IMPACTS

For an area which is affected by emissions from a new major source, an analysis of the existing air quality is required for those pollutants which are emitted in significant quantities. The facility must demonstrate that the project does not cause or contribute to a violation of the National Ambient Air Quality Standards (NAAQS), nor violate the increments of PSD. In addition, state-only standards affect ambient impacts of toxic air pollutants and sulfur dioxide.

VOC is not limited directly by NAAQS. Rather, it is regulated as an ozone precursor. Ozone impacts were previously estimated from tables from "VOC/NOx Point Source Screening Tables" (Richard Scheffe, OAQPS, September, 1988). However, those tables listed only 1-hour averages; the current standard is an 8-hour average.

As modeled, the new future potential emissions of VOC from the facility will be approximately 1,137 TPY. The potential emissions of NOx are no more than 8.87 TPY and are disregarded in this evaluation. OAC 252:100-8-35 requires an air quality impact evaluation for each regulated pollutant for which a major modification would result in a significant net emissions increase. No de minimis air quality level is provided for ozone. However, any net increase of 100 tons per year or more of volatile organic compounds subject to PSD is required to perform an ambient impact analysis. Methods for evaluating single source impacts on ozone concentrations are not consistent, due to the lack of availability of data at a refined level, readily available tools and EPA guidance. DEQ has evaluated the impact of the proposed modification to the Nomaco facility emissions using an existing air quality database generated for a SIP evaluation and the CAMx photochemical modeling system.

Oklahoma entered into Early Action Compact (EAC) agreements with EPA for the Tulsa and Oklahoma City metropolitan areas. Photochemical modeling evaluations were prepared in support of the agreements. These evaluations were conducted in accordance with EPA guidance and underwent an extensive public comment process and EPA review. The modeling was based on a two week episode beginning in Mid-August of 1999 and extending through the first week of September 1999. This episode was chosen both by virtue of being a prolonged period of high ozone concentrations and a reflection of the most common meteorological conditions that spawn high concentrations for Tulsa and Oklahoma City.

Modeling for Nomaco was conducted using the EAC 2007 control case. Emissions to be modeled were calculated by adding the future potential emissions identified in the application to the 2007 grown inventory. VOC emissions were further speciated by Source Classification Code, SCC, using speciation tables generated by EPA and SCCs for Nomaco foam extrusion processes.

Maximum impacts from the proposed future potential emissions were negligible. A maximum 8-hour increase of 0.001 ppb was predicted in Canadian County. Maximum downwind impacts in Tulsa and Oklahoma City were less than 0.001 ppb. Emission increases up to the proposed limits will not result in measurable impacts on ozone concentrations in Oklahoma City.

The following tables show maximum impacts from the project compared to the ambient levels of significance for ozone. As shown, ambient impacts are below NAAQS; there is no increment standard for ozone. Thus, it has been demonstrated that the plant does not cause nor contribute to an air quality standards violation.

NAAQS COMPLIANCE

Pollutant	Modeled Impacts, ppm	Background Concentration, ppm *	Total Impacts, ug/m³	NAAQS, ppm
Ozone	0.000001	0.070	0.070	0.08

* from Yukon monitoring site for 2007, 4th-highest reading.

COMPARISON OF INCREMENT TO AMBIENT MONITORING LEVELS OF SIGNIFICANCE

Pollutant	VOC Emissions, TPY	Monitoring Levels of Significance, TPY	Ambient Monitoring Required?
Ozone (VOC)	1,135.25	100	yes

AQD operates an ozone monitor 5 miles from the location in Yukon, Oklahoma. Data from that site are sufficient for pre- and post-construction ozone monitoring.

C. OTHER PSD ANALYSES

1. Growth Impacts

No significant industrial or commercial secondary growth occurred as a result of the project. New jobs created at the new facility were filled by the local work force in the immediate area. No significant population growth occurred. Only a minimal air quality impact is expected as a result of associated secondary growth.

2. Soils, Vegetation, and Visibility

No effect on soils is anticipated from the facility. Literature searches did not locate any documented effects of ozone on soils. Since ozone is an oxidizer and soils already include significant concentrations of oxides (SiO₂, Fe₂O₃, etc.), no harmful effects on the soils themselves are anticipated.

Vegetation is sensitive to ozone concentrations, and elevated ozone concentrations can affect crops. Affects on vegetation are part of secondary air quality standards, which are standards set to protect public welfare and which are less stringent than primary standards that are set to protect public health. The expected concentrations of ozone downwind of the facility are below the primary air quality standards, indicating that no significant effect is expected.

There are two portions to a visibility analysis: impacts near the facility and impacts on Class I areas. There are no scenic vistas near the vicinity of the facility. There will be minimal impairment of visibility resulting from the facility's emissions since the ozone-forming reactions take an appreciable time to occur. The nearest Class I area is the Wichita Mountains Wildlife Refuge, 114 km (71 miles) away to the southwest. Given the distance to the Class I area and angle to the prevailing winds, it is highly unlikely that the source would cause any adverse visibility impairment in the nearest Class I area. Operation of the facility is not expected to produce any perceptible visibility impacts in the vicinity of the plant. Given the reasonable expectation that normal operation will result in 0% opacity, no local visibility impairment is anticipated.

3. Impact On Class I Areas

The nearest Class I area is the Wichita Mountains Wildlife Refuge, about 114 km (71 miles) from the facility at nearly a 70° angle to the prevailing winds. The two important tests for effects on a Class I area are visibility impairment and ambient air quality effect. A visibility analysis in the previous section indicated no impairment of visibility for this area. The extended transport distance to the nearest Class I area precludes any significant air quality impact from the facility.

SECTION V. INSIGNIFICANT ACTIVITIES

The insignificant activities identified in the application. Additionally, the plant may operate sources of trivial emissions that are not required to be listed in the permit or permit application. Appropriate recordkeeping of activities indicated below with an asterisk (“*”) 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 per year. The plant will operate one diesel-fired water pump, which is in this category.
2. Space heaters, boilers, process heaters, and emergency flares less than or equal to 5 MMBTUH heat input (commercial natural gas). The plant is authorized to operate one boiler rated at 5 MMBTUH. Other space heaters, boilers, or process heaters may be used in the future.
3. Cold degreasing operations utilizing solvents that are denser than air. There are currently parts washers located on-site using solvents that are denser than air, and others may be added in the future.
4. Welding and soldering operations utilizing less than 100 pounds of solder and 53 tons per year of electrode. These activities are conducted as a part of routine maintenance, which are considered trivial activities and records will not be required.
5. 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. None identified but may be used in the future.
6. Activities having the potential to emit no more than 5 TPY (actual) of any criteria pollutant. The materials receiving operations and scrap grinding operations are in this category.

SECTION VI. OKLAHOMA AIR POLLUTION CONTROL RULES

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

OAC 252:100-2 (Incorporation by Reference) [Applicable]
This subchapter incorporates by reference applicable provisions of Title 40 of the Code of Federal Regulations. These requirements are addressed in the “Federal Regulations” section.

OAC 252:100-3 (Air Quality Standards and Increments) [Applicable]
Primary Standards are in Appendix E and Secondary Standards are in Appendix F of the Air Pollution Control Rules. At this time, all of Oklahoma is in attainment of these standards.

OAC 252:100-5 (Registration, Emissions Inventory and Annual Operating Fees) [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. Required annual information (Turn-Around Document) shall be provided to Air Quality.

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 mean individual emission units that either are on the list in Appendix I (OAC 252:100) 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

Emission limits for the facility are based on information in the permit application.

OAC 252:100-9 (Excess Emission 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. In addition, if the owner or operator wishes to be considered for the exemption established in 252:100-9-3.3, a Demonstration of Cause must be submitted within 30 calendar days after the occurrence has ended.

OAC 252:100-13 (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) [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. All new fuel-burning equipment will have a rated heat input below 10 MMBTUH.

Point	Description	Heat Input (MMBTUH)	Expected PM Emissions (lb/MMBTU)	Allowable PM Emissions (lb/MMBTU)
EP-10	Emergency Generator	2.3	0.278	0.6
EP-14A	Process Heater	2.8	0.0076	0.6
EP-14B	Process Heater	3.9	0.0076	0.6
EP-14C	Process Heater	3.4	0.0076	0.6
EP-15	Boiler	5.0	0.0076	0.6

This subchapter also limits emissions of industrial processes based upon their process weight rates. The emission rate in pounds per hour (E) is not to exceed the rate calculated using the process weight rate in tons per hour (P), for process rates up to 60,000 lb/hr using the formula in Appendix G ($E = 4.10 * p^{(0.67)}$) and for process rates over 60,000 lb/hr ($E = 55 * P^{0.11} - 40$). The following table lists the process weight rates and the allowable emissions for each process.

Unit	Process Weight Rate (TPH)	Expected PM Emissions (lb/hr)	Allowable PM Emissions (lb/hr)
Receiving Silos (EP-6, 7, 8, & 9)	120	0.01	53.13
Scrap Foam Granulator (EP-2, 3)	0.28	0.01	1.75
Hard Purge Granulator (EP-4, 5)	0.28	0.01	1.75
Nomatek™ Machine(EP-12)	120	0.20	53.13

The facility maintains process and/or particulate control devices such that the PM emissions are well within the allowable for the process weight of materials.

OAC 252:100-25 (Visible Emissions and Particulates) [Applicable]
 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. Since isobutane is colorless, there is little possibility of violating this rule.

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 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. Solids handling operations are conducted in enclosed operations, with most discharges vented to baghouses or bin vent filters. Under normal operating conditions, this facility will not cause a problem in this area, therefore it is not necessary to require additional precautions to be taken.

OAC 252:100-31 (Sulfur Compounds) [Applicable]
Part 5 limits sulfur dioxide emissions from new fuel-burning equipment (constructed after July 1, 1972). For gaseous fuels the limit is 0.2 lb/MMBTU heat input averaged over 3 hours. For fuel gas having a gross calorific value of 1,000 BTU/SCF, this limit corresponds to fuel sulfur content of 1,203 ppmv. The permit requires the use of gaseous fuel with sulfur content less than 343 ppmv to ensure compliance with Subchapter 31 except for the emergency diesel engine. For that engine, the new equipment standard for emissions of oxides of sulfur measured as sulfur dioxide from oil-fired fuel-burning equipment is 0.8 pounds per MMBTU heat input, maximum three-hour average. AP-42 (10/96), Table 3.3-1, lists diesel fuel SO₂ emissions to be about 0.29 lb/MMBTU, which is in compliance.

OAC 252:100-33 (Nitrogen Oxides) [Not Applicable]
This subchapter limits NO_x emissions from new fuel-burning equipment with rated heat input greater than or equal to 50 MMBTUH. 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) [Applicable]
Part 3 affects new (constructed after December 28, 1974) storage tanks with a capacity between 400 and 40,000 gallons holding an organic liquid with a true vapor pressure greater than 1.5 psia (77.57 mmHg). When the vapor pressure is above 11 psia, the container shall be a pressure vessel capable of maintaining working pressures. The isobutane tank is designed as a pressure vessel in compliance with Part 3.
Part 5 limits the VOC content of paints and coatings. Organic materials used as foaming additives are not regulated by Subchapter 37.
Part 7 requires fuel-burning and refuse-burning equipment to be operated to minimize emissions of VOC. The equipment at this location is subject to this requirement.
Part 7 also affects effluent-water separators which receive more than 200 gallons per day of VOC which have a vapor pressure of 1.5 psia or greater. There are no effluent water separators planned for this facility.

OAC 252:100-39 (VOC Emissions in Former Non-attainment Areas) [Not Applicable]
The new facility is located in Canadian County, outside the areas affected by this rule.

OAC 252:100-42 (Toxic Air Contaminants (TAC)) [Applicable]
This subchapter regulates toxic air contaminants (TAC) that are emitted into the ambient air in areas of concern (AOC). Any work practice, material substitution, or control equipment required by the Department prior to June 11, 2004, to control a TAC, shall be retained, unless a modification is approved by the Director. Since no AOC has been designated there are no specific requirements for this facility at this time.

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 or project:

OAC 252:100-11	Alternative Emissions Reduction	not requested
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	Grain Elevators	not in source category
OAC 252:100-47	Municipal Solid Waste Landfills	not in source category

SECTION VII. FEDERAL REGULATIONS

PSD, 40 CFR Part 52 [Applicable]

Final total facility emissions are greater than the PSD major source threshold of 250 TPY for regulated pollutant VOC. Compliance with PSD requirements is described in Section IV.

NSPS, 40 CFR Part 60 [Not Applicable At This Time]

Subpart Dc, Small Industrial-Commercial-Institutional Steam Generating Units. This subpart affects steam generating units constructed after June 9, 1989, and with capacity between 10 and 100 MMBTUH. The new boiler and process heaters are smaller than the 10 MMBTUH threshold.

Subpart Kb, VOL Storage Vessels. This subpart regulates hydrocarbon storage tanks larger than 19,813 gallons capacity and built after July 23, 1984. Subpart Kb exempts pressure vessels capable of operating at 15 psig or higher, and the large storage tank is a pressure vessel.

Subpart DDD, Polymer Manufacturing. This subpart affects manufacture of polyethylene, but the facility receives polyethylene which has already been produced from chemical feedstocks.

Subpart IIII, Standards of Performance for Stationary Compression Ignition Internal Combustion Engines, affects stationary compression ignition (CI) internal combustion engines (ICE) based on power and displacement ratings, depending on date of construction, beginning with those constructed after July 11, 2005. For the purposes of this subpart, the date that construction commences is the date the engine is ordered by the owner or operator. Model year 2007 and later engines which are not fire pump engines which have a cylinder displacement less than 10 liters per cylinder and a rated capacity less than 3,000-hp are subject to the fuel sulfur limit of 60.4207, the emissions limits of Table 1 to Subpart IIII for engines between 175 and 300 hp, and to manufacturer certification requirements.

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 that 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

[Not Applicable]

Subpart ZZZZ, Reciprocating Internal Combustion Engines (RICE). This subpart previously affected only RICE with a site-rating greater than 500 brake horsepower that are located at a major source of HAP emissions. On January 18, 2008, the EPA published a final rule that promulgates standards for new and reconstructed engines (after June 12, 2006) with a site rating less than or equal to 500 HP located at major sources, and for new and reconstructed engines (after June 12, 2006) located at area sources. Owners and operators of new or reconstructed engines at area sources and of new or reconstructed engines with a site rating equal to or less than 500 HP located at a major source (except new or reconstructed 4-stroke lean-burn engines with a site rating greater than or equal to 250 HP and less than or equal to 500 HP located at a major source) must meet the requirements of Subpart ZZZZ by complying with either 40 CFR Part 60 Subpart IIII (for CI engines) or 40 CFR Part 60 Subpart JJJJ (for SI engines).

Subpart DDDDD, National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial and Institutional Boilers and Process Heaters. In March, 2007, the EPA filed a motion to vacate and remand this rule back to the agency. The rule was vacated by court order, subject to appeal, on June 8, 2007. No appeals were made and the rule was vacated on July 30, 2007. Existing and new small gaseous fuel boilers and process heaters (less than 10 MMBtu/hr heat rating) were not subject to any standards, recordkeeping, or notifications under Subpart DDDDD.

EPA is planning on issuing guidance (or a rule) on what actions applicants and permitting authorities should take regarding MACT determinations under either Section 112(g) or Section 112(j) for sources that were affected sources under Subpart DDDDD and other vacated MACTs. It is expected that the guidance (or rule) will establish a new timeline for submission of section 112(j) applications for vacated MACT standards. At this time, AQD has determined that a 112(j) determination is not needed for sources potentially subject to a vacated MACT, including Subpart DDDDD. This permit may be reopened to address Section 112(j) when necessary.

CAM, 40 CFR Part 64 [Not 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 greater than major source thresholds

There are no pollutant-specific emission units utilizing emissions control devices.

Chemical Accident Prevention Provisions, 40 CFR Part 68 [Applicable]
Flammable substances subject to this regulation will be stored on-site in quantities greater than the threshold quantities. The facility has submitted a Risk Management Plan and will comply with all applicable requirements. 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 VIII. COMPLIANCE

Tier Classification and Public Review

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

The applicant published the "Notice of Filing a Tier II Application" in *The Oklahoman*, a daily newspaper published in Oklahoma County, on September 12, 2007. The notice stated that the application was available for public review at the Yukon Public Library, 1200 Lake Shore Drive, Yukon OK 73099, or at the DEQ Air Quality Division's Main Office in Oklahoma City, 707 N Robinson, Oklahoma City, Oklahoma 73101. A draft of this permit was also made available for public review for a period of 30 days as stated in another published announcement in *The Oklahoman* on December 22, 2007. No comments were received from the public. The "proposed" permit was forwarded to EPA for a 45-day review period. No comments were received from Region VI.

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 has a current lease to accomplish the permitted purpose.

Information on all permit actions is available for review by the public in the Air Quality section of the DEQ Web Page: <http://www.deq.state.ok.us>.

Fees Paid

Part 70 source significant modification construction permit fee of \$1,500.

SECTION IX. SUMMARY

The operator has demonstrated the ability to achieve compliance with the requirements of the several air pollution control rules and regulations. Ambient air quality standards are not threatened at this site. There are no active Air Quality compliance or enforcement issues concerning this facility. Issuance of the construction permit is recommended.

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

**Nomaco Incorporated
Oklahoma City Polyethylene Foam Extrusion Facility**

Permit No. 2004-226-C (M-1) (PSD)

The permittee is authorized to construct in conformity with the specifications submitted to Air Quality on August 18, 2004, with additional information received on September 10, 2004; December 21, 2005; January 25, 2006; August 24 and September 12, 2007. The Evaluation Memorandum dated March 18, 2008, explains the derivation of applicable permit requirements and estimates of emissions; however, it does not contain operating limitations or permit requirements. Continuing construction or operations under this permit constitutes acceptance of, and consent to, the conditions contained herein.

1. Points of emissions, emissions limitations, and requirements for each point:

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

EUG 1: Foam Extrusion

Point	Equipment	VOC Emissions	
		lb/hr *	TPY
EP-01	Foam Extrusion and Associated Operations	260.0	1,135.25

* monthly average

- a. Isobutane blowing agent usage shall not exceed 1,621.8 TPY (12-month rolling totals).
- b. Isobutane usage shall not exceed 0.7 lb/lb resin. A monthly summary of resin and isobutane usage shall be prepared each calendar month showing compliance with this requirement.

EUG 2: Printing Operation

Point	Equipment	VOC Emissions	
		lb/hr *	TPY
--	Printing Operation	1.0	1.15

* monthly average

- a. Compliance with emissions limits shall be demonstrated by monthly calculations of ink usages, printer cleaning solvent usages, and VOC content of inks/solvents.

EUG 3: Combustion Equipment Emissions from the equipment listed below are estimated based on existing equipment items and are insignificant.

Point	Description	Capacity	Installed Date
EP-10	Emergency Generator	290-HP	Proposed
EP-14	Process Heaters	10.1 MMBTUH total	2005
EP-15	Boiler	5.0 MMBTUH	Proposed
--	Crust Burn-off	--	2006

- a. The emergency generator shall be operated no more than 500 hours per year (12-month rolling totals).
- b. The engine shall be fitted with a non-resettable hour-meter. [OAC 252:100-8-6(a)]
- c. Liquid fuel sulfur shall not exceed 0.4% by weight. [OAC 252:100-31]
- d. If an emergency engine is installed which was constructed after July 1, 2006, it shall comply with 40 CFR Part 60 Subpart III.

EUG 4: Solids Handling System Emissions from the equipment listed below are estimated based on existing equipment items and are insignificant.

Point	Equipment	Capacity	Installed Date
EP-06 EP-07 EP-08 EP-09	Receiving Silos	--	2005
EP-02 EP-03	Scrap Foam Granulator	--	2005
EP-04 EP-05	Hard Purge Granulator	--	2005
EP-12	Nomatek™ Dust Collector	--	2005

2. 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)]
3. The permittee shall maintain records as listed below. These records shall be maintained on-site for at least five years after the date of recording and shall be provided to regulatory personnel upon request. [OAC 252:100-43]
 - a. Operating hours for the emergency generator (monthly and 12-month rolling totals).
 - b. Sulfur content of liquid fuels used in each engine (each shipment).
 - c. Ink and printer cleaning solvent usage (monthly and 12-month rolling totals).
 - d. Ink and printer cleaning solvent VOC content.
 - e. Foam production (monthly)
 - f. Blowing agent usage (monthly).
4. No later than 30 days after each anniversary date of the issuance of the initial Title V operating permit (March 24, 2006), 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. [OAC 252:100-8-6 (c)(5)(A) & (D)]

5. 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. 40 CFR Part 61 NESHAP
- b. 40 CFR Part 63 NESHAP
- c. 40 CFR Part 64 Compliance Assurance Monitoring
- d. OAC 252:100-15 Motor Vehicle Pollution Control Devices
- e. OAC 252:100-23 Cotton Gins
- f. OAC 252:100-24 Grain, Feed, or Seed Operations

6. The permittee shall submit an application to update Permit No. 2004-226-TV (PSD) within 180 days following issuance of this permit.



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

Permit Number: 2004-226-C (M-1) (PSD)

Nomaco, Incorporated,

having complied with the requirements of the law, is hereby granted permission to construct a polyethylene foam extrusion plant in Sec. 35 – T12N – R5W, at 524 N. Sara Road, Yukon, Canadian County, Oklahoma subject to standard conditions dated January 24, 2008, and specific conditions, both attached.

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

Division Director, Air Quality Division

Date

Nomaco Incorporated
Attn: Mr. Jody Fletcher
524 Sara Road
Yukon, OK 73099

Re: Permit Application No. 2004-226-C (M-1) (PSD)
Polyethylene Foam Extrusion Plant
Section 35 – T12N – R5W
Canadian County, Oklahoma

Dear Mr. Young:

Enclosed is the permit authorizing construction of the referenced facility. 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 April 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)702-4100.

Sincerely,

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

**MAJOR SOURCE AIR QUALITY PERMIT
STANDARD CONDITIONS
(January 24, 2008)**

SECTION I. DUTY TO COMPLY

A. This is a permit to operate / construct this specific facility in accordance with the federal Clean Air Act (42 U.S.C. 7401, et al.) 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, permit termination, revocation and reissuance, or modification, or for denial of a permit renewal application. All terms and conditions are enforceable by the DEQ, by the Environmental Protection Agency (EPA), and by citizens under section 304 of the Federal Clean Air Act (excluding state-only requirements). This permit is valid for operations only at the specific location listed.

[40 C.F.R. §70.6(b), OAC 252:100-8-1.3 and OAC 252:100-8-6(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. However, nothing in this paragraph shall be construed as precluding consideration of a need to halt or reduce activity as a mitigating factor in assessing penalties for noncompliance if the health, safety, or environmental impacts of halting or reducing operations would be more serious than the impacts of continuing operations. [OAC 252:100-8-6(a)(7)(B)]

SECTION II. REPORTING OF DEVIATIONS FROM PERMIT TERMS

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

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. Every written report submitted under this section shall be certified as required by Section III (Monitoring, Testing, Recordkeeping & Reporting), Paragraph F. [OAC 252:100-8-6(a)(3)(C)(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), OAC 252:100-8-6(c)(1), and OAC 252:100-8-6(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 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. Submission of these periodic reports will satisfy any reporting requirement of Paragraph E below that is duplicative of the periodic reports, if so noted on the submitted 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 (Reporting Of Deviations From Permit Terms) 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.

[OAC 252:100-43]

F. Any document submitted in accordance with this permit shall be certified by a responsible official. This certification shall be signed by a responsible official, and shall contain the following language: "I certify, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete." However, an exceedance report that must be submitted within ten days of the exceedance under Section II (Reporting Of Deviations From Permit Terms) or Section XIV (Emergencies) may be submitted without a certification, if an appropriate certification is provided within ten days thereafter, together with any corrected or supplemental information required concerning the exceedance.

[OAC 252:100-8-5(f), OAC 252:100-8-6(a)(3)(C)(iv), OAC 252:100-8-6(c)(1) and OAC 252:100-9-3.1(c)]

G. Any owner or operator subject to the provisions of New Source Performance Standards (“NSPS”) under 40 CFR Part 60 or National Emission Standards for Hazardous Air Pollutants (“NESHAPs”) under 40 CFR Parts 61 and 63 shall maintain a file of all measurements and other information required by the applicable general provisions and subpart(s). These records shall be maintained in a permanent file suitable for inspection, shall be retained for a period of at least five years as required by Paragraph A of this Section, and shall include records of the occurrence and duration of any start-up, shutdown, or malfunction in the operation of an affected facility, any malfunction of the air pollution control equipment; and any periods during which a continuous monitoring system or monitoring device is inoperative.

[40 C.F.R. §§60.7 and 63.10, 40 CFR Parts 61, Subpart A, and OAC 252:100, Appendix Q]

I. 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 preventive or corrective measures adopted. [OAC 252:100-8-6(c)(4)]

J. All testing must be conducted under the direction of qualified personnel by methods approved by the Division Director. All tests shall be made and the results calculated in accordance with standard test procedures. The use of alternative test procedures must be approved by EPA. 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]

K. The reporting of total particulate matter emissions as required in Part 7 of OAC 252:100-8 (Permits for Part 70 Sources), OAC 252:100-19 (Control of Emission of Particulate Matter), and OAC 252:100-5 (Emission Inventory), shall be conducted in accordance with applicable testing or calculation procedures, modified to include back-half condensables, for the concentration of particulate matter less than 10 microns in diameter (PM₁₀). NSPS may allow reporting of only particulate matter emissions caught in the filter (obtained using Reference Method 5).

L. The permittee shall submit to the AQD a copy of all reports submitted to the EPA as required by 40 C.F.R. Part 60, 61, and 63, for all equipment constructed or operated under this permit subject to such standards. [OAC 252:100-8-6(c)(1) and OAC 252:100, Appendix Q]

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 compliance 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. The compliance certification shall contain a certification by a responsible official as to the results of the required monitoring. This certification shall be signed by a responsible official, and shall contain the following language: "I certify, based on information and belief formed after reasonable inquiry, the statements and information in the document 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 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, OAC 252:100-5-2.2, 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 thirty (30) days after such sale or transfer.

[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 and 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 prior to the expiration date in the following circumstances:

- (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 or the EPA 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.
- (4) DEQ determines that the permit should be amended under the discretionary reopening provisions of OAC 252:100-8-7.3(b).

[OAC 252:100-8-7.3 and OAC 252:100-8-7.4(a)(2)]

C. The permit may be reopened for cause by EPA, pursuant to the provisions of OAC 100-8-7.3(d).

[OAC 100-8-7.3(d)]

D. The permittee shall notify AQD before making changes other than those described in Section XVIII (Operational Flexibility), those qualifying for administrative permit amendments, or those defined as an Insignificant Activity (Section XVI) or Trivial Activity (Section XVII). The notification should include any changes which may alter the status of a "grandfathered source," as defined under AQD rules. Such changes may require a permit modification.

[OAC 252:100-8-7.2(b) and OAC 252:100-5-1.1]

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 exceedance resulting from an emergency shall be reported to AQD promptly but no later than 4:30 p.m. on the next working day after the permittee first becomes aware of the exceedance. 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.

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

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

C. 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. An emergency shall not include noncompliance to the extent caused by improperly designed equipment, lack of preventive maintenance, careless or improper operation, or operator error. [OAC 252:100-8-2]

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.

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

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)]

F. Every written report or document submitted under this section shall be certified as required by Section III (Monitoring, Testing, Recordkeeping & Reporting), Paragraph F.

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

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 to OAC Title 252, Chapter 100, 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.

- (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.

[OAC 252:100-8-2 and OAC 252:100, Appendix I]

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 and OAC 252:100, Appendix J]

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 seven (7) days, or twenty four (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 paragraph. [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) 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]
- (2) 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]
- (3) For all emissions units not subject to an opacity limit promulgated under 40 C.F.R., Part 60, NSPS, no discharge of greater than 20% opacity is allowed except for:
 - (a) 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;
 - (b) Smoke resulting from fires covered by the exceptions outlined in OAC 252:100-13-7;
 - (c) An emission, where the presence of uncombined water is the only reason for failure to meet the requirements of OAC 252:100-25-3(a); or
 - (d) Smoke generated due to a malfunction in a facility, when the source of the fuel producing the smoke is not under the direct and immediate control of the facility and the immediate constriction of the fuel flow at the facility would produce a hazard to life and/or property.

[OAC 252:100-25]

- (4) 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]
- (5) 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]
- (6) Volatile Organic Compound (VOC) storage tanks built after December 28, 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)]
- (7) 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]

SECTION XX. STRATOSPHERIC OZONE PROTECTION

A. The permittee shall comply with the following standards for production and consumption of ozone-depleting substances:

- (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; and
- (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.

[40 CFR 82, Subpart A]

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:

- (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; and
- (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.

[40 CFR 82, Subpart F]

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 Source's 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 OAC 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 C.F.R. § 70.7(h)(1). This public notice shall include notice to the public that this permit is subject to EPA review, EPA objection, and petition to EPA, as provided by 40 C.F.R. § 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 C.F.R. § 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 C.F.R. § 70.8(a) and (c).
- (5) The DEQ complies with 40 C.F.R. § 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 C.F.R. § 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 C.F.R. § 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]