DEPARTMENT OF ENVIRONMENTAL CONSERVATION

AIR QUALITY OPERATING PERMIT

Permit No. AQ0083TVP01
Revision 1: October 21, 2005
Revision 2: August 21, 2007

Issue Date: November 10, 2003
Expiration Date: December 31, 2008

The Department of Environmental Conservation, under the authority of AS 46.14 and 18 AAC 50, issues an operating permit to the Permittee, **Agrium U.S. Inc.**, for the operation of the **Kenai Nitrogen Operations Plant**.

This permit satisfies the obligation of the owner and operator to obtain an operating permit as set out in AS 46.14.130(a) and (b).

As set out in AS 46.14.120(c), the Permittee shall comply with the terms and conditions of this operating permit.

Upon issuance of Revision 2 of this permit, the Permittee is no longer required to comply with terms and conditions of Air Quality Control (AQC) Permit-to-Operate No. 9423-AA011, as amended through January 16, 1997. All facility-specific terms and conditions of Minor Permit AQ0083MSS01 and AQ0083MSS02 have been incorporated into this Operating Permit.

This Operating Permit becomes effective January 1, 2004.

John F. Kuterbach, Manager

Air Permits Program

Table of Contents

List of Abbreviations Used in this Permit

AAC	Alaska Administrative Code
ADEC	Alaska Department of Environmental Conservation
AS	Alaska Statutes
ASTM	American Society for Testing and Materials
BACT	Best Available Control Technology
BHp	Boiler Horsepower
C.F.R.	Code of Federal Regulations
CO	Carbon Monoxide
dscf	Dry standard cubic foot
EPA	US Environmental Protection Agency
gr./dscf	grain per dry standard cubic foot (1 pound = 7000 grains)
GPH	gallons per hour
HAPs or HACs	Hazardous Air Pollutants or Hazardous Air Contaminants [*HAPs* or *HACs* as defined in AS 46.14.990(14)]
H_2S	Hydrogen Sulfide
ID	Source Identification Number
kPa	kiloPascals
LAER	Lowest Achievable Emission Rate
MACT	Maximum Achievable Control Technology as defined in 40 C.F.R. 63.
MR&R	Monitoring, Recordkeeping, and Reporting
NESHAPs	Federal National Emission Standards for Hazardous Air Pollutants [*NESHAPS* as contained in 40 C.F.R. 61 and 63]
NO_X	Nitrogen Oxides
NSPS	Federal New Source Performance Standards [*NSPS* as contained in 40 C.F.R. 60]
O & M	Operation and Maintenance
O_2	Oxygen
PM-10	Particulate Matter less than or equal to a nominal ten microns in diameter
ppm	Parts per million
ppmv, ppmvd	Parts per million by volume on a dry basis
psia	Pounds per Square Inch (absolute)
PSD	Prevention of Significant Deterioration
PTE	Potential to Emit
SEP	Supplemental Environmental Project
SIC.	Standard Industrial Classification
SO_2	Sulfur dioxide
TPH	Tons per hour
TPY	Tons per year
VOC	volatile organic compound [*VOC* as defined in 18 AAC 50.990(103)]
VOL	volatile organic liquid [*VOL* as defined in 40 C.F.R. 60.111b, Subpart Kb]
vol%	volume percent
wt%	weight percent

Section 1. Identification

Names and Addresses

Permittee:	**Agrium U.S. Inc.** P.O. Box 575 Kenai, Alaska 99611
Facility Name:	**Kenai Nitrogen Operations Plant**
Location:	60° 40' 28" Latitude, 151° 22' 45" Longitude
Physical Address:	Mile 21 Kenai Spur Highway Kenai 99611
Owner:	Agrium U.S. Inc. 4582 South Ulster Street, Suite 1400 Denver, CO 80237
Operator:	Same as Permittee
Permittee's Responsible Official	Chris Sonnichsen, Plant Manager
Designated Agent:	CT Corporation Systems 801 W. 10th Street, Suite 300 Juneau, AK 99801
Facility and Building Contact:	Kristy McCullough P.O. Box 575 Kenai, Alaska 99611-0575 (907) 776-3155 kmccullo@agrium.com
Fee Contact:	Kristy McCullough Alaska Kenai Nitrogen Operations P.O. Box 575 Kenai, AK 99611-0575

Facility Process Description

SIC Code of the Facility: 2873

[18 AAC 50.350(b)(1), 1/18/97]

Section 2. General Emission Information

[18 AAC 50.350(b)(1), 1/18/97]

Emissions of Regulated Air Contaminants:

Nitrogen Oxides, Carbon Monoxide, Sulfur Dioxide, Particulate Matter (PM-10), Volatile Organic Compounds, Lead, and various hazardous air pollutants

Facility Classifications:

(1) 18 AAC 50.300(b)(1)(A) [containing a source that must have an air contaminant control unit… and is an industrial process with a total rated capacity > 5 tons/hr]

(2) 18 AAC 50.300(b)(2) [containing a fuel-burning equipment with a rated capacity of ≥100MMBtu/hr]

(3) 18 AAC 50.300(c)(1) [PSD – emits or has the PTE ≥ 250 TPY of a regulated air contaminant in an attainment or unclassifiable area for that contaminant per 18AAC50.015]

(4) 18 AAC 50.300(f) [hazardous air contaminant major facility]

Operating Permit Classifications:

(1) 18 AAC 50.325(b)(1) [≥ 100TPY of a regulated air contaminant]

(2) 18 AAC 50.325(b)(3) [source subject to NSPS standards (40 CFR 60)]

(3) 18 AAC 50.325(c) [facility described in 18AAC50.300(b)-(e) within AS 46.14.130(b)(4)]

(4) 18 AAC 50.325(b)(2) [hazardous air contaminant major facility]

Section 3. Source Inventory and Description

[18 AAC 50.350(d)(2), 1/18/97]

Sources listed in Table 1 have specific monitoring, recordkeeping, or reporting conditions in this permit. Source descriptions and ratings are given for identification purposes only.

Table 1 - Source Inventory

Source ID	Tag Number	Source Description	Fuel Type[1]	Rating/size	Installation Date
Ammonia Plant #1					
1	D-107	CO_2 Vent	N/A	Varies	1968
2	B-101	Primary Reformer	NG and Process Gas	1450 MMBtu/hr or 75 tons/hr of product	1968
3	B-110	Startup Heater	NG	63.6 MMBtu/hr	1968
4	V-106	Organic Sulfur Removal Unit Vent	N/A	N/A	1968
5	F-113	Amine Plant Fat Flasher Vent	N/A	N/A	1968
6	F-105	Deaerator	N/A	N/A	1968
7	F-130	Wet Reformed Gas Vent	N/A	N/A	1968
8	F-168	Ammonia Drain Tank Vent	N/A	N/A	1968
9	B-402	Plants 1 and 2 Small Flare	NG& NH_3	10,000 lb/hr NH_3	1997
10	B-403	Plants 1 and 2 Emergency Flare	NG& NH_3	300,00 lb/hr NH_3	1997
11	B-609	Ammonia Tank Storage System Flare	NG& NH_3	10,000 lb/hr NH_3	1993
Ammonia Plant #4					
12	B-201	Primary Reformer	NG and Process Gas	1350 MMBtu/hr or 75 tons/hr of product	1976
13	B-200	Startup Heater	NG	84.2 MMBtu/hr	1976
14	D-207	CO_2 Vent	N/A	N/A	1976
15	H-205	Organic Sulfur Removal Unit Vent	N/A	N/A	1976
16	H-269	Amine Fat Flasher Vent	N/A	N/A	1976
17	F-263	PC Stripper Surge Tank Vent	N/A	N/A	1976
18	F-205	Dearator	N/A	N/A	1976
19	C-200	H_2 Vent Stack (dry gas vent)	N/A	N/A	1976
20	H-260	PC Stripper Steam KO Drum	N/A	N/A	1976
21	F-287	Ammonia Drain Tank Vent	N/A	N/A	1976
22	B-502	Plants 4 and 5 Small Flare	NG& NH_3	20,000 lb/hr NH_3	1994
23	B-501	Plants 4 and 5 Emergency Flare	NG& NH_3	400,000 lb/hr NH_3	1994
Urea Plant #2					
24	GC-401A	CO_2 Compressor	NG	5.2 MMBtu/hr	1968
25	GC-401B	CO_2 Compressor	NG	5.2 MMBtu/hr	1968
26	GC-401C	CO_2 Compressor	NG	5.2 MMBtu/hr	1981
27	P-405	Urea Prill Tower	N/A	65 tons/hr of product	1968
28	D-405	Atmospheric Absorber Vent	N/A	N/A	1968
29	D-406	Tank Vent Scrubber	N/A	N/A	1968
30	F-410	Crystalizer Hotwell Vent	N/A	N/A	1968
31	F-409	Urea Surge Tank Vent	N/A	N/A	1968
32	D-407	Vent Scrubber	N/A	N/A	1968
33	D-408	Inerts Vent Scrubber	N/A	N/A	1968
34	E-611	Cooling Tower	N/A	N/A	1968

Source ID	Tag Number	Source Description	Fuel Type[1]	Rating/size	Installation Date
Urea Plant #5					
35	C-560A	Granulator A/B Scrubber Exhaust Vent Stack	N/A	N/A	1976
36	C-560B	Granulator C/D Scrubber Exhaust Vent Stack	N/A	N/A	1976
37	D- 515	Atmospheric Absorber Final Scrubber	N/A	N/A	1976
38	D-511	Inerts Vent Scrubber	N/A	N/A	1976
39	E-535	After Condenser Exchanger	N/A	N/A	1976
40	E-711	Cooling tower	N/A	N/A	1976
41	D-514	Tank Scrubber	N/A	N/A	1976
Utility Plant #3					
42	B-600A	Package Boiler	NG&UO	156 MMBtu/hr	1968
43	B-600B	Package Boiler	NG	156 MMBtu/hr	1968
44	B-600C	Package Boiler	NG	183 MMBtu/hr	1973
45	F-1700	Used Oil Tank Vent	N/A	N/A	1968
46	F-1715	Oil/Water Separator Tank	N/A	N/A	1968
47		Urea Loading Wharf	N/A	Fugitive Dust Source	1968
Utility Plant #6					
48	B-700A	Package Boiler	NG	230 MMBtu/hr	1976
49	B-700B	Package Boiler	NG	230 MMBtu/hr	1976
50	B-705A	Waste Heat Boiler	NG	50 MMBtu/hr	1986
51	B-705B	Waste Heat Boiler	NG	50 MMBtu/hr	1986
52	B-705C	Waste Heat Boiler	NG	50 MMBtu/hr	1986
53	B-705D	Waste Heat Boiler	NG	50 MMBtu/hr	1986
54	B-705E	Waste Heat Boiler	NG	50 MMBtu/hr	1986
55	GGT-744A	Solar Turbine/Generator Set	NG	37.5 MMBtu/hr	1976
56	GGT-744B	Solar Turbine/Generator Set	NG	37.5 MMBtu/hr	1976
57	GGT-744C	Solar Turbine/Generator Set	NG	37.5 MMBtu/hr	1976
58	GGT-744D	Solar Turbine/Generator Set	NG	37.5 MMBtu/hr	1976
59	GGT-744E	Solar Turbine/Generator Set	NG	37.5 MMBtu/hr	1976
60	F-791	Deaerator Vent	N/A	N/A	1976
61	F-711	Degasifier Vent	N/A	N/A	1976
Co-Generation Plant					
62	GGT-1746	GE Frame 6B (MS6001B) Turbine	NG	437.1 MMBtu/hr	2000
63	GSE-1746	Detroit Diesel Startup Engine	Diesel	650 hp	2000
64	B-707	Heat Recovery Steam Generator (Duct Firing)	NG	471 MMBtu/hr	2000

Table Notes: 1-NG is natural gas. NH_3 is ammonia. N/A is not applicable. UO is used oil. Diesel is self-explanatory.
2-The Term "gas" as used in this permit includes natural gas, ammonia, and process gas.

Section 4. Emission Fees

1. Assessable Emissions. The Permittee shall pay to the Department an annual emission fee based on the facility's assessable emissions as determined by the Department under 18 AAC 50.410. The assessable emission fee rate is set out in 18 AAC 50.410(b). The Department will assess fees per ton of each air contaminant that the facility emits or has the potential to emit in quantities greater than 10 tons per year. The quantity for which fees will be assessed is the lesser of

1.1 the facility's assessable potential to emit of 8,273 TPY; or

1.2 the facility's projected annual rate of emissions that will occur from July 1 to the following June 30, based upon actual annual emissions emitted during the most recent calendar year or another 12 month period approved in writing by the Department, when demonstrated by

a. an enforceable test method described in 18 AAC 50.220;

b. material balance calculations;

c. emission factors from EPA's publication AP-42, Vol. I, adopted by reference in 18 AAC 50.035; or

d. other methods and calculations approved by the Department**.**

[18 AAC 50.346(a)(1), 5/3/02 and 18 AAC 50.350(c) & 50.400 – 50.420, 1/18/97]

2. Assessable Emission Estimates. Emission fees will be assessed as follows:

2.1 no later than March 31 of each year, the Permittee may submit an estimate of the facility's assessable emissions to ADEC, Air Permits Program, ATTN: Assessable Emissions Estimate, 410 Willoughby Ave., Juneau, AK 99801-1795**;** the submittal must include all of the assumptions and calculations used to estimate the assessable emissions in sufficient detail so the Department can verify the estimates; or

2.2 If no estimate is received on or before March 31 of each year, emission fees for the next fiscal year will be based on the potential to emit set forth in condition 1.1.

[18 AAC 50.346(a)(1), 5/3/02 and 18 AAC 50.350(c) & 50.400 – 50.420, 1/18/97]

Section 5. Source-Specific Requirements

Industrial Processes, Fuel-Burning Equipment, and Prill Towers

3. Visible Emissions. The Permittee shall not cause or allow visible emissions, excluding condensed water vapor, emitted from Source ID(s) 1 – 7, 9 – 20, 22 - 26, 28 – 33, 35 – 39, 41 - 44, and 48 - 64 listed in Table 1 to reduce visibility through the exhaust effluent by any of the following:

a. more than 20 percent for a total of more than three minutes in any one hour[1];

[18 AAC 50.055(a)(1), 1/18/97]

b. more than 20 percent averaged over any six consecutive minutes.

[18 AAC 50.055(a)(1), 5/3/02]

The Permittee shall not cause or allow visible emissions, excluding condensed water vapor, emitted from Source ID 27 listed in Table 1 to reduce visibility through the exhaust effluent by any of the following:

c. more than 55 percent for a total of more than three minutes in any one hour[1];

[18 AAC 50.055(a)(3), 1/18/97]

d. more than 55 percent averaged over any six consecutive minutes.

[18 AAC 50.055(a)(3), 5/3/02]

e. more than 40 percent, based on a daily 24 hour average of five second measurements by continuous monitoring instrumentation approved by the department and that conforms to Performance Specification Number 1 in 40 CFR Part 60, Appendix B, adopted by reference in 18 AAC 50.040.

[18 AAC 50.055(a)(3), 1/18/97]

3.1 Monitor, record, and report visible emissions as provided in Section 6.

[18 AAC 50.350(g) - (i), 5/3/02]

4. Particulate Matter. The Permittee shall not cause or allow particulate matter emitted from Source ID(s) 2, 3, 9 – 20, 22 - 26, 35 – 39, 41 – 44, and 48 - 64 listed in Table 1 to exceed 0.05 grains per cubic foot of exhaust gas corrected to standard conditions and averaged over three hours.

[18 AAC 50.055(b)(1), 1/18/97]

The Permittee shall not cause or allow particulate matter emitted from Source ID(s) 1, 4 – 7, and 28 - 33 listed in Table 1 to exceed 0.10 grains per cubic foot of exhaust gas corrected to standard conditions and averaged over three hours.

[18 AAC 50.055(b)(3), 1/18/97]

[1] For purposes of this permit, the "more than three minutes in any one hour" criterion in this condition and condition 37.1 will no longer be effective when the Air Quality Control (18 AAC 50) regulation package effective 5/3/02 is adopted by the U.S. EPA. The six-minute average standard is enforceable only by the state until 18 AAC 50.055(a)(1), dated May 3, 2002, is approved by EPA into the SIP at which time this standard becomes federally enforceable.

The Permittee shall not cause or allow particulate matter emitted from Source ID 27 listed in Table 1 to exceed 0.04 grains per cubic foot of exhaust gas corrected to standard conditions and averaged over three hours.

[18 AAC 50.055(b)(6), 1/18/97]

4.1 Monitor, record, and report compliance with the particulate emissions limits in condition 4 as provided in Section 6.

[18 AAC 50.350(g) – (i), 5/3/02]

5. Sulfur Compound Emissions. In accordance with 18 AAC 50.055(c), the Permittee shall not cause or allow sulfur compound emissions, expressed as SO_2, from Source IDs 1 – 7, 9 – 20, 22 - 33, 35 – 39, 41 - 44, and 48 - 64 to exceed 500 ppm averaged over three hours.

[18 AAC 50.055(c), 1/18/97; and 18 AAC 50.350(d)(1)(C), 6/21/98]

For diesel fuel, Source ID 63

5.1 The Permittee shall comply with this condition by complying with condition 10.

[18 AAC 50.346(c) & 350(g) - (i), 5/3/02]

For gas-fired sources, Source ID(s) 2, 3, 12, 13, 24 – 26, 42 - 44, 48 - 59, 62, and 64

5.2 The monitoring, recordkeeping, and reporting required by condition 8, 21.1a, 21.3, and 21.4 is sufficient to demonstrate compliance with the standard in condition 5.

5.3 Report as excess emissions, in accordance with condition 65, whenever H_2S content of fuel combusted exceeds 4,000 ppmv.

[18 AAC 50.350(g) - (i), 5/3/02]

For process vents and ammonia flares, Source ID(s) 1, 4 – 7, 9 – 11, 14 – 20, 22, 23, 27 – 33, 35 – 39, 41, and 60 – 61

5.4 Monitoring shall consist of an annual compliance certification with the sulfur compound emission standard in condition 5.

[18 AAC 50.350(g) - (i), 5/3/02]

NO_X PSD Avoidance, Source ID(s) 9 – 11, 22, and 23

6. The Permittee shall limit total emissions of NO_X from the Ammonia (NH_3) Flare System (Source ID(s) 9 – 11, 22, and 23) to less than 102 tons per year.

[Minor Permit No. AQ0083MSS02, condition 4 5/29/07]

6.1 The Permittee shall analyze process gas for NH_3 and methane from continuous sources sent to the Ammonia Flare System monthly. Flow will be measured at the same frequency using either pitot tubes or tracer gas injection. Estimate methane and NH_3 emissions during non-routine flaring events using engineered design composition and/or open source valve duration.

[Minor Permit No. AQ0083MSS02, condition 4.1, 5/29/07]

6.2 Calculate the monthly and the twelve-month consecutive summation of NH_3 and methane burned in the Ammonia Flare System. Use the gas composition and flow data determined in condition 6.1 to calculate the monthly burn rates.

[Minor Permit No. AQ0083MSS02, condition 4.2, 5/29/07]

6.3 Use the factors in Section 15 to calculate and record monthly NO_X emissions. Use a 99 percent NH_3 to nitrogen conversion efficiency (the estimated molar volume of NO_X, including thermal NO_X, is one percent of the molar volume of ammonia flared) in the Ammonia Flare System.

[Minor Permit No. AQ0083MSS02, condition 4.3, 5/29/07]

6.4 Record the monthly and the consecutive twelve-month period summation of tons of NH_3 and methane burned and NO_X emitted.

[18 AAC 50.350 (g) – (i), 5/3/02]

6.5 Report the monthly and the consecutive twelve-month period summation of tons of NH_3 and methane burned, and NO_X emitted, for each month of the reporting period, with each operating report required by condition 67.

[Minor Permit No. AQ0083MSS02, condition 4.4, 5/29/07]
[18 AAC 50.350 (g) – (i), 5/3/02]

6.6 Notify the Department per condition 65 should NO_X emissions in any consecutive twelve-month period exceed the limit in condition 6.

[18 AAC 50.350 (g) – (i), 5/3/02]

7. The Permittee shall ensure that the Purge and Vent Recovery System in Ammonia Plant 4 is operated for more than 90 percent of the total hourly operational time for Ammonia Plant 4.

[Minor Permit No. AQ0083MSS02, condition 5, 5/29/07]

7.1 Record all down time hours for the Purge and Vent Recovery System and for Ammonia Plant 4.

7.2 Report in the facility operating report required by condition 67 for the second half of each calendar year the ratio (expressed as a percentage) of Purge and Vent Recovery System operating hours to Ammonia Plant 4 operating hours.

7.3 Notify the Department per condition 65 by January 31 of each year should the preceding calendar year hours of operation for the Purge and Vent Recovery System equal less than 90 percent of the preceding calendar year hours of operation for Ammonia Plant 4.

[18 AAC 50.350 (g) – (i), 5/3/02]

CO-Gen Project – SO_2 PSD Modification Avoidance and SO_2 Ambient Air Quality Protection Requirements

8. The Permittee shall use natural gas, in Source IDs 62 and 64, with a hydrogen sulfide (H_2S) concentration of no more than 40 ppmv.

[Minor Permit No. AQ0083MSS02, condition 6, 5/29/07]

8.1 Monitoring – The Permittee shall **either**

[Minor Permit No. AQ0083MSS02, condition 6.1, 5/29/07]

a. obtain a semiannual statement from the fuel supplier of the fuel gas H_2S concentration in ppm; **or**

b. analyze a representative sample of the fuel semiannually to determine the sulfur content using the length of stain detector tube protocol covered by ASTM Method D 4810-88, or Method D-5504-01.

8.2 Recordkeeping - Keep records of the semiannual statement from the fuel supplier or the sulfur content analysis required under conditions 8.1a or 8.1b.

[Minor Permit No. AQ0083MSS02, condition 6.2, 5/29/07]

8.3 Reporting –

[Minor Permit No. AQ0083MSS02, condition 6.3, 5/29/07]

a. Notify the Department under condition 65 if the H_2S concentration exceeds the limit in this condition.

b. Except as indicated in condition 8.3c, include copies of the records required by this condition with the stationary source operating report required by condition 67.

c. Until the first time the fuel gas H_2S content monitored semiannually under condition 8.1 exceeds 32 ppmv, the Permittee may submit an annual compliance certification under condition 68 in lieu of the reporting requirements in condition 8.3b , stating whether the fuel gas H_2S is below 40 ppmv.

[18 AAC 50.040(j), 12/3/05 and 18 AAC 50.326(j)(4), 10/1/04]
[40 C.F.R. 71.6(a)(3) & (c)(6), 7/1/04]

9. The Permittee shall burn no more than 2,000 gallons of fuel oil per 12-month period in Source ID 63.

[Minor Permit No. AQ0083MSS02, condition 7, 5/29/07]

9.1 Measure and record the total fuel oil (gallons) consumed each month in Source ID 63.

[Minor Permit No. AQ0083MSS02, condition 7.1, 5/29/07]

9.2 Report using the facility operating report under condition 67 the monthly fuel oil consumption and 12-month rolling average consumption.

[Minor Permit No. AQ0083MSS02, condition 7.2, 5/29/07]

9.3 Notify the Department under condition 65 if the fuel consumption exceeds the limit in this condition.

[18 AAC 50.350(g) - (i), 5/3/02]

10. The Permittee shall use No. 1 or No. 2 diesel fuel oil in Source ID 63.

[Minor Permit No. AQ0083MSS02, condition 8, 5/29/07]

10.1 Keep receipts that specify the fuel grade for all liquid fuel received at the facility during the reporting period.

[Minor Permit No. AQ0083MSS02, condition 8.1, 5/29/07]

10.2 Submit an annual compliance certification under condition 68, stating whether the Permittee used only No. 1 or No. 2 diesel fuel oil in Source ID 63.

[Minor Permit No. AQ0083MSS02, condition 8.2, 5/29/07]

11. The Permittee shall burn no greater than 3,250 mmscf of natural gas per 12-month period in Source ID(s) 42 – 44, 48, and 49 combined.

[Minor Permit No. AQ0083MSS02, condition 9, 5/29/07]

11.1 Monitor and record the monthly and rolling 12-month summation of fuel consumption (mmscf) for Source ID(s) 42 – 44, 48, and 49 combined.

[Minor Permit No. AQ0083MSS02, condition 9.1, 5/29/07]

11.2 Report using the facility operating report under condition 67 the rolling 12-month summation of fuel consumption for Source ID(s) 42 – 44, 48, and 49 combined for each month of the reporting period.

[Minor Permit No. AQ0083MSS02, condition 9.2, 5/29/07]

11.3 Notify the Department under condition 65 if the rolling 12-month summation of fuel consumption for Source ID(s) 42 – 44, 48, and 49 combined exceeds the limit in this condition.

[18 AAC 50.350(g) - (i), 5/3/02]

Sources Subject to Federal New Source Performance Standards (NSPS), Subpart A

12. NSPS Subpart A Startup, Shutdown, & Malfunction Requirements. The Permittee shall maintain records of the occurrence and duration of any start-up, shutdown, or malfunction in the operation of Source ID(s) 12, 62, and 64, any malfunctions of associated air pollution control equipment, or any periods during which the continuous monitoring system or monitoring device for Source ID 62 is inoperative.

[18 AAC 50.350(h), 5/3/02 & 18 AAC 50.040(a)(1), 8/15/02]
[40 C.F.R. 60.7(b), Subpart A, 7/1/01]

13. NSPS Subpart A Good Air Pollution Control Practice. At all times, including periods of startup, shutdown, and malfunction, the Permittee shall, to the extent practicable, maintain and operate Source ID(s) 12, 62, and 64 including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. The Department will determine whether acceptable operating and maintenance procedures are being used based on information available to the Department which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance records, and inspections of Source ID(s) 12, 62, and 64.

[18 AAC 50.040(a)(1), 8/15/02]
[40 C.F.R. 60.11(d), Subpart A, 7/1/01]

14. NSPS Subpart A Credible Evidence. For the purpose of submitting compliance certifications or establishing whether or not the Permittee has violated or is in violation of the standards set forth in conditions 16 - 21, nothing in 40 CFR Part 60 shall preclude the use, including the exclusive use, of any credible evidence or information, relevant to whether Source ID(s) 12, 62, and 64 would have been in compliance with applicable requirements of 40 CFR Part 60 if the appropriate performance or compliance test or procedure had been performed.

[18 AAC 50.040(a)(1); 8/15/02]
[40 C.F.R. 60.11(g), Subpart A, 7/1/01]

15. NSPS Subpart A Concealment of Emissions. The Permittee shall not build, erect, install, or use any article, machine, equipment or process, the use of which conceals an emission which would otherwise constitute a violation of a standard set forth in conditions 16 - 21. Such concealment includes, but is not limited to, the use of gaseous diluents to achieve compliance with an opacity standard or with a standard that is based on the concentration of a pollutant in the gases discharged to the atmosphere.

[18 AAC 50.040(a)(1), 8/15/02]
[40 C.F.R. 60.12, Subpart A, 7/1/01]

Steam Generator Subject to NSPS Subpart D, Source ID 12

16. NSPS Subpart D Standard for Particulate Matter: Except during startup, shutdown and malfunction periods, the Permittee shall not allow any gases discharged into the atmosphere from Source ID 12 which:

a. contain particulate matter in excess of 0.10 lb/MMBtu.

b. exhibit greater than 20% opacity except for one six-minute period per hour of not more than 27%.

[40 C.F.R. 60.42(a)(1 & 2), Subpart D, 7/1/01]
[40 CFR 60.8(c), 2/12/99]

16.1 Monitor, record and report compliance with the opacity and particulate limits as provided in conditions 23 and 24.

[18 AAC 50.350(g) - (i), 5/3/02]
[40 CFR 60.46(b) and (d), 10/17/00]

17. NSPS Subpart D Standard for Nitrogen Oxides: Except during startup, shutdown and malfunction periods the Permittee shall not allow any gases discharged into the atmosphere from Source ID 12 which contain nitrogen oxides, expressed as NO_2, in excess of 0.20 lb/MMBtu.

[40 C.F.R. 60.44a(1), Subpart D, 7/1/01]
[40 CFR 60.8(c), 2/12/99]

17.1 The Permittee shall perform a NO_X source test, in accordance with Section 10, during the first three years of the permit term to demonstrate compliance with the standard in condition 17. Compliance shall be determined using the procedures contained in 40 CFR 60.46(b) & (d).

[18 AAC 50.350(g) - (i), 5/3/02]
[40 CFR 60.46(b) and (d)], 10/17/00]

17.2 Notify the Department per condition 65 should any source test reveal an exceedance of the NO_X emissions limit in condition 17.

[18 AAC 50.350(g) - (i), 5/3/02]

Steam Generator Subject to NSPS Subpart Db, Source ID 64

18. NSPS Subpart Db Standard for Nitrogen Oxides: The Permittee shall not allow any gases discharged from Source ID 64 into the atmosphere which contains nitrogen oxides, expressed as NO_2, in excess of 0.20 lb/MMBtu. This standard applies at all times including startup, shutdown, and malfunction.

[40 C.F.R. 60.44b(a)(4)(i) & 60.44b(h), Subpart Db, 7/1/01]

18.1 Conduct periodic NO_X source tests, in accordance with Section 10, of Source ID 64 whenever Source ID 62 is required to test according to condition 20.

[Minor Permit No. AQ0083MSS01, 8/8/05]

18.2 Determine compliance with the NO_X emission standard based on performance testing for duct burners, using Method 20 upstream (at the outlet of the turbine exhaust) and downstream (outlet) of steam-generating unit (Source ID 64). Calculate the emission rate by subtracting the emission rate at the outlet of the turbine (Source ID 62) exhaust from that measured at the outlet of the steam generating unit (Source ID 64) using the procedures in 40 CFR 60.46b(f)(1).

[40 C.F.R. 60.44b(f), Subpart Db, 7/1/01]

18.3 The Permittee shall record and maintain records of the amount of natural gas fuel combusted during each day in Source ID 64.

[40 C.F.R. 60.49b(d), Subpart Db, 7/1/01]

18.4 Notify the Department per condition 65 should a NO_X source test under condition 18.1 reveal an exceedance of the limit in condition 18.

[18 AAC 50.350(g) - (i), 1/18/97]

Turbine Subject to NSPS Subpart GG, Source ID 62

19. NSPS Subpart GG NO_X Standard. Except during startup, shutdown, and malfunction periods the Permittee shall not allow the exhaust gas concentration of NO_X from Source ID 62 to exceed 91 ppmv at 15 percent O_2 dry exhaust basis.

[18 AAC 50.040(a)(2)(V), 8/15/02]
[40 C.F.R. 60.332(a)(1), Subpart GG, 7/1/01]

19.1 **Monitoring Waivers:** The Permittee shall provide to the Department a written copy of any U.S. EPA granted waiver of the federal emission standards, recordkeeping, monitoring, performance testing, or reporting requirements, or approved custom monitoring schedules upon request by the Department. The Permittee shall keep a copy of each U.S. EPA issued monitoring waiver or custom monitoring schedule with the permit.

19.2 **Continuous Monitoring**. The Permittee shall install and operate a continuous monitoring system to monitor and record the fuel consumption and the ratio of water to fuel being fired in the turbine. The system shall be accurate to within ± 5.0 percent.

[40 CFR 60.334(a), 10/17/00]
[18 AAC 50.040(a)(1), 7/2/00]

19.3 **Excess emissions and continuous monitoring system performance report.** The Permittee shall submit to the Department and to EPA a semi-annual Excess Emissions and Continuous Monitoring System Report containing the information described in 40 CFR 60.7(c) for the CMS described in condition 19.2. If the total duration of excess emissions for the reporting period is less than 1 percent of the total operating time for the reporting period and CMS downtime for the reporting period is less than 5 percent of the total operating time for the reporting period, the Permittee may submit only a Summary Report containing the information described in 40 CFR 60.7(d). All reports shall be postmarked by the 30th day following the end of each six month period.

[40 CFR 60.7(c) and (d), 2/12/99]
[18 AAC 50.040(a)(1), 7/2/00]

19.4 **Excess emissions reporting.** For purposes of the reports required by condition 19.3 periods of excess emissions that shall be reported are defined as any one hour period during which the average water-to-fuel ratio, as measured by the CMS, falls below the water-to-fuel ratio determined to demonstrate compliance with condition 19 by an NSPS performance test. Each report shall include the average water-to-fuel ratio, average fuel consumption and ambient conditions during the period of excess emissions.

[40 CFR 60.334(c), 10/17/00]
[18 AAC 50.040(a)(1), 7/2/00]

Stack Test Monitoring for Subpart GG Turbine

20. Periodic Stack Testing.

20.1 **Initial Periodic Testing.** For each turbine subject to condition 19 that operates for 400 hours or more in any 12-month period during the life of this permit, the Permittee shall satisfy either condition 20.1a or 20.1b and conduct tests as required in 40 CFR 60.335(b) and (c) or alternative methods in accordance with 40 CFR 60.335(f).

a. For existing turbines not represented by emission data described in condition 20.1b, the Permittee shall conduct a NO_x and O_2 source test under 40 C.F.R. 60, Appendix A-7, Method 20 within three years after issuance of this permit

(i) for each turbine, or

(ii) on one turbine to represent a group of turbines, if allowed to do so under condition 20.3.

b. If a test following 40 C.F.R. 60, Appendix A-7, Method 20 or following another protocol approved by the Department has been conducted on a turbine within two years before the issuance date of this permit, and the test shows that emissions at maximum load are less than 90 percent of the emission limit in condition 19, then

(i) the Permittee may use those test results to represent emissions from that turbine or for a group of turbines if allowed under condition 20.3 until the testing of condition 20.1b(ii) is performed; and

(ii) the Permittee shall conduct a Method 20 test on each turbine, or on one of a group of turbines as allowed under condition 20.3, within the 5 years of the permit term.

20.2 **Higher Tier Testing.** For each turbine with test results under condition 20.1 that are 90 percent or more of the emission limit of condition 19, or for which emissions will equal or exceed 90 percent of the emission limit at maximum load, as shown through condition 20.4, the Permittee shall conduct an additional Method 20 test for the turbine within one year of the test under condition 20.1. The Permittee shall conduct at least one additional test per year until at least two consecutive tests show that emissions for the turbine are less than 90 percent of the limit at loads up to maximum load.

20.3 **Substituting Test Data.** The Permittee may use a Method 20 test under conditions 20.1 or 20.2 performed on only one of a group of turbines to satisfy the requirements of those conditions for the other turbines in the group if

a. the Permittee demonstrates that test results are less than 90 percent of the emission limit of condition 19, and are projected under condition 20.4 to be less than 90 percent of the limit at maximum load;

b. for any source test done after the issuance date of this permit, the Permittee identifies in a source test plan under condition 57

(i) the turbine to be tested;

(ii) the other turbines in the group that are to be represented by the test; and

(iii) why the turbine to be tested is representative, including that each turbine in the group

(A) is located at a facility operated and maintained by the Permittee;

(B) is the same make and model and has identical injectors and combustor;

(C) uses the same fuel type; and

c. for any source test done before the issuance date of this permit and used under condition 20.1b, the Permittee

(i) demonstrates why the test results are representative of emissions from the entire group of turbines, including that each turbine in the group

(A) is located at a facility operated and maintained by the Permittee;

(B) is the same make and model and has identical injectors and combustor;

(C) uses the same fuel type; and

(ii) submits all results of source testing that has been performed on each turbine in the group, regardless of the date of the test, and certifies that the submittal is complete, consistent with 18 AAC 50.205.

20.4 **Load**.

a. The Permittee shall conduct all tests under condition 20 in accordance with 40 C.F.R. 60.335(c)(3), except as otherwise approved in writing by the Department, or by EPA if the circumstances at the time of the EPA approval are still valid. For the highest load condition, if it is not possible to operate the turbine during the test at maximum load, the Permittee will test the turbine when operating at the highest load achievable by the turbine under the ambient and facility operating conditions in effect at the time of the test.

b. The Permittee shall demonstrate in the source test plan for any test performed after the issue date of this permit whether the test is scheduled when maximum NO_X emissions are expected.

c. If the highest operating rate tested is less than the maximum load of the tested turbine or another turbine represented by the test data,

(i) for each such turbine the Permittee shall provide to the Department as an attachment to the source test report

(A) additional test information from the manufacturer or from previous testing of units in the group of turbines; if using previous testing of the group of turbines, the information must include all available test data for the turbines in the group, and

(B) a demonstration based on the additional test information that projects the test results from condition 20 to predict the highest load at which emissions will comply with the limit in condition 19;

(ii) the Permittee shall not operate any turbine represented by the test data at loads for which the Permittee's demonstration predicts that emissions will exceed the limit of condition 19;

(iii) the Permittee shall comply with a written finding prepared by the Department that

(A) the information is inadequate for the Department to reasonably conclude that compliance is assured at any load greater than the test load, and that the Permittee must not exceed the test load;

(B) the highest load at which the information is adequate for the Department to reasonably conclude that compliance assured is less than maximum load, and the Permittee must not exceed the highest load at which compliance is predicted, or

(C) the Permittee must retest during a period of greater expected demand on the turbine; and

(iv) the Permittee may revise a load limit by submitting results of a more recent Method 20 test done at a higher load, and, if necessary, the accompanying information and demonstration described in condition 20.4c(i); the new limit is subject to any new Department finding under condition 20.4c(iii)and

d. In order to perform a Method 20 emission test, the Permittee may operate a turbine at a higher load than that prescribed by condition 20.4c.

e. For the purposes of conditions 20.1 through 20.6, maximum load means the hourly average load that is the smallest of

(i) 100 percent of manufacturer's design capacity of the gas turbine at ISO standard day conditions;

(ii) the highest load allowed by an enforceable condition that applies to the turbine; or

(iii) the highest load possible considering permanent physical restraints on the turbine or the equipment which it powers.

20.5 **Recordkeeping**.

a. The Permittee shall comply with the following for each turbine for which a demonstration under condition 20.4c does not show compliance with the limit of condition 19 at maximum load.

(i) The Permittee shall keep records of

(A) load; or

(B) as approved by the Department, surrogate measurements for load and the method for calculating load from those measurements.

(ii) Records in condition 20.5a shall be hourly or otherwise as approved by the Department.

(iii) Within one month after submitting a demonstration under condition 20.4c(i)(B) that predicts that the highest load at which emissions will comply is less than maximum load, or within one month of a Department finding under condition 20.4c(iii), whichever is earlier, the Permittee shall propose to the Department how they will measure load or load surrogates, and shall propose and comply with a schedule for installing any necessary equipment and beginning monitoring. The Permittee shall comply with any subsequent Department direction on the load monitoring methods, equipment, or schedule.

b. For any turbine subject to condition 19 that will operate less than 400 hours in any 12 consecutive months, keep monthly records of the hours of operation. If a turbine that normally operates less than 400 hours exceeds that total during any 12-month period,

(i) test according to condition 20; or

(ii) if it is no longer possible to meet that schedule, test within one year of exceeding 400 hours in 12 consecutive months.

20.6 **Reporting**.

a. In each facility operating report under condition 67 the Permittee shall list for each turbine tested or represented by testing at less than maximum load and for which the Permittee must limit load under condition 20.4c

(i) the load limit;

(ii) the turbine identification; and

(iii) the highest load recorded under condition 20.5a during the period covered by the operating report.

b. In each facility operating report under condition 67 for each turbine for which condition 20 has not been satisfied because the turbine normally operates less than 400 hours in any 12 consecutive months, the Permittee shall identify

(i) the turbine;

(ii) the highest number of operating hours for any 12 consecutive months ending during the period covered by the report; and

(iii) any turbine that operated for 400 or more hours.

c. The Permittee shall report under condition 65 if

(i) a test result exceeds the emission standard;

(ii) Method 20 testing is required under condition 20 or 20.5b but not performed, or

(iii) the turbine was operated at a load exceeding that allowed by conditions 20.4c(ii) and 20.4c(iii); exceeding a load limit is deemed a single violation rather than a multiple violation of both monitoring and the underlying emission limit.

[Minor Permit No. AQ0083MSS01, 8/8/05]
[40 C.F.R. 60.8(b), Subpart A, 7/01/01]

21. NSPS Subpart GG Sulfur Standard. The Permittee shall not allow the sulfur content for the fuel burned in Source ID 62 to exceed 0.8 percent by weight.

[18 AAC 50.040(a)(2)(V), 7/2/00]
[40 C.F.R. 60.333(b), Subpart GG, 7/1/99]

21.1 EPA Approved Custom Monitoring Schedule:

a. Monitor the sulfur content of the natural gas semi-annually using the length-of-stain detector tube protocol covered by ASTM Method D 4810-88, or an alternative method approved by EPA. This semi-annual monitoring shall be conducted during the first regular business day of the first and third calendar quarters.

b. Should any fuel sulfur monitoring indicate noncompliance with the standard in condition 21, the Permittee shall notify EPA and the Department within 15 days of the occurrence. Fuel sulfur monitoring shall be conducted weekly during the interim period while the custom schedule is being re-examined by EPA.

21.2 Sulfur Content Monitoring Exemption

[40 C.F.R. 60.334(h)(3), Subpart GG, 2/24/06]

a. The Permittee may elect not to monitor the sulfur content of gaseous fuel combusted in the turbine, if the gaseous fuel is demonstrated to meet the definition of natural gas in 40 C.F.R. 60.331(u), regardless of whether an existing custom schedule approved by EPA for Subpart GG requires such monitoring. The Permittee shall use one of the following sources of information to make the required demonstration:

(i) The gas quality characteristics in a current, valid purchase contract, tariff sheet or transportation contract for the gaseous fuel, specifying the maximum total sulfur content of the fuel is 20.0 grains/100 scf or less; or

(ii) Representative fuel sampling data, which show that the sulfur content of the gaseous fuel does not exceed 20 grains/100 scf. At a minimum, the amount of fuel sampling data specified in 40 C.F.R. 75 Appendix D Section 2.3.1.4, of 2.3.2.4 must be obtained.

21.3 Maintain records of the following:

a. All fuel sulfur monitoring data.

b. A record documenting a constant supplier or source of fuel. A substantial change in fuel quality shall be considered as a change in fuel supply.

c. A record of all turbine operations on fuels other than pipeline quality gas.

21.4 The Permittee shall file the following reports with EPA Region 10 and with the Department:

a. Annually report results of all sulfur monitoring;

b. Report the use of any fuel other than 100% pipeline-quality natural gas within 60 days of such use;

c. Report any change in supplier or source of fuel within 60 days of such change. A substantial change in fuel quality shall be considered a change in fuel supply.

21.5 Report per condition 65 when the emission limit in condition 21 is exceeded.

[18 AAC 50.350(g) - (i), 5/3/02]
[40 C.F.R. 60.334(b)(2), Subpart GG, 7/1/99]
[EPA Alternative Monitoring Schedule issued 1/14/98]

Section 6. Visible Emissions and PM Monitoring, Recordkeeping and Reporting

Visible Emission and Particulate Matter Monitoring for Process Vents - Source ID(s) 1, 4 – 7, 14 – 20, 28 – 33, 37 – 39 and 41

22. For Source ID(s) 1, 4 – 7, 14 – 20, 28 – 33, 37 – 39 and 41, monitoring shall consist of an annual compliance certification under condition 68 with conditions 3 and 4.

[18 AAC 50.350(g) - (i), 5/3/02]

Visible Emission and Particulate Matter Monitoring for Gas Fired Sources - Source ID(s) 2, 3, 9 - 13, 22 - 26, 43, 44, 48 – 59, 62, and 64

23. Visible Emissions: Monitoring, Recordkeeping, and Reporting.

23.1 The Permittee shall use only gas as fuel in Source ID(s) 2, 3, 9 - 13, 22 - 26, 43, 44, 48 – 59, 62, and 64. The Permittee shall certify in each operating report required under condition 67 that the source burned only gas.

23.2 The Permittee shall report under condition 65 if any fuel is burned other than gas in Source ID(s) 2, 3, 9 - 13, 22 - 26, 43, 44, 48 – 59, 62, and 64.

[18 AAC 50.350(g) – (i) & 18 AAC 50.346(c), 5/3/02]

24. Particulate Matter Emissions: Monitoring, Recordkeeping, and Reporting. The Permittee shall comply with condition 23.

[18 AAC 50.350(g) – (i) & 18 AAC 50.346(c), 5/3/02]

Visible Emission and Particulate Matter Monitoring for Liquid Fuel and Dual Fuel Sources and Scrubber Exhaust Vents - Source IDs 35, 36, and 42

25. Visible Emissions Monitoring and Reporting. The Permittee shall perform the following visible emission monitoring and reporting for Source ID(s) 35, 36, and 42:

25.1 **Source ID(s) 35 and 36.** The Permittee shall perform an annual Method 9 visible emissions observation on Source ID(s) 35 and 36. Perform the observations between 10 and 14 months after the preceding observation on that source. The observation shall be conducted for 18 minutes to obtain 72 individual readings at 15-second intervals. If 18 consecutive minutes of Method 9 observations result in an 18-minute average opacity greater than 20 percent, the Permittee shall perform corrective action under condition 26.

25.2 **Source ID 42.** For Source ID 42, the Permittee shall monitor and record monthly operating hours on liquid fuel. The Permittee shall notify the Department and begin monitoring as provided in condition 25.1 no later than during the first boiler operating period on liquid fuel that commences at least 15 days after the end of a calendar month in which the cumulative hours of operation on liquid fuel for the calendar year exceed 400 hours. If 18 consecutive minutes of Method 9 observations result in an 18-minute average opacity greater than 20 percent, the Permittee shall perform corrective action under condition 26.

25.3 Visible Emissions Reporting – the Permittee shall include in the facility operating report required under condition 67 a summary of the results of all Method 9 readings performed during the reporting period under conditions 25.1 and 25.2.

[18 AAC 50.350(f)(4), 1/18/97 & 50.350(g) – (i), 5/3/02]

26. Corrective Actions Based on Visible Emissions Observations. If required under conditions 25.1 or 25.2, perform corrective action within 14 days and conduct a follow-up Method 9 observation under conditions 25.1 or 25.2 within 30 days of completing the corrective action. If the follow-up Method 9 observation shows an 18 minute average opacity greater than 20 percent, conduct a particulate matter source test as described in condition 27.

26.1 Recordkeeping – if applicable, keep a written record of the starting date, the completion date, and a description of any actions taken under condition 26 to reduce visible emissions.

26.2 Reporting – submit with the facility operating report required under condition 67 copies of any records required under condition 26.1.

[18 AAC 50. 350(f)(4), 1/18/97 & 50.350(g) – (i), 5/3/02]

27. Particulate Matter Monitoring. If required under condition 26 the Permittee shall conduct source tests on Source ID(s) 35, 36 or 42 to determine the concentration of particulate matter (PM) in the exhaust of a source. The source test shall be conducted within six months of a follow-up Method 9 observation showing an 18 minute average opacity greater than 20 percent. Upon request the department may approve a different schedule for conducting the PM source test. The PM source test shall be conducted according to the requirements set out in Section 10.

27.1 During each one-hour PM source test run, observe the exhaust for 18 minutes in accordance with Method 9 and calculate the average opacity that was measured during each one-hour test run. Submit a copy of these observations with the source test report.

27.2 The PM source test requirement in condition 27 is waived for an emissions unit if a PM source test on that unit has shown compliance with the PM standard during this permit term.

[18 AAC 50.350(f)(4), 1/18/97 and 50.350(g) - (i), 5/3/02]

28. Particulate Matter Reporting. The Permittee shall report as excess emissions under condition 65 any time the results of a source test for particulate matter (PM) exceeds the PM emission limit stated in condition 4.

[18 AAC 50.350(g) – (i), 5/3/02]

Visible Emission and PM Monitoring for Urea Prill Tower - Source ID 27

29. Visible Emissions: Monitoring, Recordkeeping and Reporting

29.1 Monitor visible emissions using the four transmissometers installed on the Urea Prilling Tower. Calibrations shall be performed in accordance with the Agrium Transmissometer Quality Assurance Plan (March 2001), or a Department approved updated version. Compliance for any time interval shall be based on the average of the data recorded by all transmissometers displaying normal operational status. Except for system breakdowns, repairs, preventive maintenance, calibration checks and zero and span adjustments, the four transmissometers shall operate at all times that Source ID 27 is in operation.

[Minor Permit No. AQ00083MSS02, condition 10, 5/29/07]
[18 AAC 50.055(a)(3), 5/3/02
[18 AAC 50.350(g) - (i) 5/3/02]

29.2 Report under condition 65 each monitored exceedance of any of the visible emissions limits in condition 3.

[18 AAC 50.350(g) - (i), 5/3/02]

30. Particulate Matter Emissions: Monitoring, Recordkeeping and Reporting

30.1 Monitoring demonstrating compliance with the 40 percent, 24 hour visible emissions limit in condition 3.e is sufficient to demonstrate compliance with the standard in condition 4.

30.2 Report under condition 65 each monitored exceedance of the prill tower particulate matter limit in condition 4.

[18 AAC 50.350(g) - (i), 5/3/02]

Section 7. Facility-Wide Requirements

Federal NESHAPs Requirements

31. National Emission Standards for Miscellaneous Organic Chemical Manufacturing. The Permittee shall comply on a timely basis with any applicable requirements of the Miscellaneous Organic Chemical Manufacturing NESHAP, 40 CFR Part 63, Subpart FFFF, promulgated on August 25, 2003.

[40 C.F.R. Part 63, Subpart FFFF, 8/25/03]

32. Section 112(j) Industrial Boiler Phase II MACT Application. On or before April 28, 2004 the Permittee shall file a Part 2 application for a MACT determination, if by that date EPA has not promulgated a generally applicable federal MACT standard for the industrial boiler source category. The application need only cover those emission points and hazardous air pollutants that would be subject to control under the MACT standard proposed for comment at 68 Fed. Reg. 1660 (January 13, 2003).

[40 CFR 63.50(c) and 63.53(b)(2) and 40 C.F.R. Part 63, Subpart B, Table 1, all as amended on 5/30/03]

33. NESHAPs Applicability Determinations. If the Permittee determines that the facility is in a source category regulated by a MACT standard established under Clean Air Act section 112(d) or 112(f), but that the facility is not subject to the relevant standard because of limitations on the facility's potential to emit or an exclusion, the Permittee must keep a record of the applicability determination on site at the facility for a period of five years after the determination, or until the facility changes its operations to become an affected source, whichever comes first. The record of the applicability determination must be signed by the person making the determination and include an analysis (or other information) that demonstrates why the Permittee believes the facility is unaffected. That analysis (or other information) must be sufficiently detailed to allow EPA to make a finding about the facility's applicability status with regard to the relevant standard or requirement.

[40 C.F.R. 63.1(b)(3), 63.6(c)(1) & 63.10(b)(3), 4/5/02]
[18 AAC 50.350(h), 5/3/02; 18 AAC 50.040(c)(1)(A) & (E), 6/1/02]

NH_3 Ambient Air Quality Protection Requirements

34. The Permittee shall perform continuous ambient air quality monitoring for NH_3 to demonstrate compliance with the ambient air quality standard set out in 18 AAC 50.010(8) following Method 4.10 and provisions set forth in the Alaska Quality Assurance Manual for Ambient Air Quality Monitoring, dated August 1996 and as amended below. Monitoring shall be conducted at the monitoring station site located northeast of the KNO Plant, at Mile 21.5 Spur Highway. Exemptions from the Alaska Quality Assurance Manual may be granted in writing by the Department's Air Monitoring Group. In the event that the Air Monitoring Group approves the Agrium KNO Quality Assurance Plan, this document will supersede the Alaska Quality Assurance Manual. The Permittee shall provide access to the monitoring sites promptly, at any reasonable time, to the Department's representative, and any other person authorized or contracted by the Department, in order to conduct routine audits and other quality assurance activities to determine compliance with this permit, State regulations, and State environmental laws.

[Minor Permit No. AQ00083MSS02, condition 11, 5/29/07]

34.1 The Permittee shall report NH_3 monitoring results based on 100 percent NO_2 converter efficiency, in lieu of performing NO_2 converter efficiency validations set out in the Alaska Quality Assurance Manual for Ambient Air Quality Monitoring, Method 4.10, dated August 1996.

[Minor Permit No. AQ0083MSS02, condition 11.1, 5/29/07]

34.2 The Permittee shall provide quarterly independent (i.e. prepared by an individual independent of the individual performing routine maintenance) performance audits performed by a qualified individual or firm that is not responsible for the routine maintenance of the station of each monitor in the ammonia monitoring network.

[Minor Permit No. AQ00083MSS02, condition 11.2, 5/29/07]

34.3 The Permittee shall contract for oversight systems and performance audits of the monitoring network operations once per year by a firm completely independent from the firm responsible for conducting monitoring operations.

[Minor Permit No. AQ0083MSS02, condition 11.3, 5/29/07]
[18 AAC 50.350(g) - (i), 5/3/02]

34.4 The Permittee shall provide complete documentation of all systems and performance audits to the Department within 60 days of completion of the audit, unless the Permittee elects to report using the Quarterly Data Summary and Annual Data Report format available on the Department's website at http://www.dec.state.ak.us/air/am/PSD_Met_qrtly.pdf and http://www.dec.state.ak.us/air/am/PSD_Met_annual_1-1.pdf respectively.

[Minor Permit No. AQ0083MSS02, condition 11.4, 5/29/07]

34.5 The Permittee shall provide the following quality assurance documentation with the operating report required under condition 67, unless the Permittee elects to report using the Quarterly Data Summary and Annual Data Report format available on the Department's website at http://www.dec.state.ak.us/air/am/PSD_Met_qrtly.pdf and http://www.dec.state.ak.us/air/am/PSD_Met_annual_1-1.pdf respectively.:

a. All valid or flagged one-hour and eight-hour averages for all channels used to calculate ammonia analyzer output;

b. Minimum and maximum one and eight-hour averages and other summary statistics for all reported parameters (e.g., NH_3, NT, NO_x, etc.);

c. Data, which has exceeded the full-scale range of the ammonia analyzer, shall be flagged and manually verified against strip chart or continuous recorder outputs. A copy of the chart recorder outputs during periods in which the analyzer exceeds full-scale range will be provided with the report;

d. Reasons for each hour of missing/invalid/flagged data shall be identified and explained;

e. Details of all maintenance activities and any changes to instrumentation and standard operating procedures;

f. Wind direction, wind speed, sigma theta and ambient temperature data;

g. Results of all pre-calibration checks and unadjusted zero/span checks (from all channels used to report data);

h. Results of all precision and zero/span checks (from all channels used to report data);

i. Results of all analyzer calibrations (from all channels used to report data);

j. Results of all NH_3 and NO_2 converter efficiency checks (from all channels used to report data);

k. Certifications of standards and equipment used for calibrations, calibration checks and audits;

l. Results of flow checks for calibration equipment; and,

m. All final analyzer offset settings for all calibrations and zero/span checks (from all channels used to report data).

[Minor Permit No. AQ0083MSS02, condition11.5, and 11.5a – 11.5m, 5/29/07]]

Fire Training Exercises

35. The Permittee may burn up to 250 gallons per day, not to exceed a total of 600 gallons per year, of uncontaminated fuel for fire training, in accordance with the requirements of this condition.

[Minor Permit No. AQ00083MSS02, condition 9, 5/29/07]
[18 AAC 50.065(i), 1/18/97]

35.1 The Permittee shall provide notice to the public of open burning through local news media. The public notice must state the name of the person conducting the burn, a list of materials to be burned, a telephone number to contact the person conducting the burn before and during the burn, for a surprise fire drill, the address or location of the training and the beginning and ending dates of the period (not to exceed 30 days) during which a surprise fire drill may be conducted, and for open burning other than a surprise fire drill the expected time, date, and location of the open burning.

[Minor Permit No. AQ0083MSS02, condition 9.1, 5/29/07]

35.2 The Permittee shall make a reasonable effort to respond to complaints about the burn, and keep, for at least 30 days, a record of all complaints received about the burn, including the name, address and telephone number of the complainant, a short summary of each complaint and a description of any action taken to respond to the complaint. Upon request the Permittee shall provide the department with a copy of the records kept under this subsection.

[Minor Permit No. AQ0083MSS02, condition 9.2, 5/29/07]
[18 AAC 50.065(j) - (k), 1/18/97]

Section 8. Insignificant Sources

This section contains the requirements that the Permittee identified under 18 AAC 50.335(q)(2) as applicable to insignificant sources at the facility. This section also specifies the testing, monitoring, recordkeeping, and reporting for insignificant sources that the Department finds necessary to ensure compliance with the applicable requirements. Insignificant sources are not exempted from any air quality control requirement or federally enforceable requirement.

As set out in 18 AAC 50.350(m), the shield of AS 46.14.290 does not apply to these sources.

36. For sources at the facility that are insignificant as defined in 18 AAC 50.335(q)-(v) that are not listed in this permit, the following apply:

36.1 The Permittee shall submit the compliance certifications of condition 68 based on reasonable inquiry;

36.2 The Permittee shall comply with the requirements of condition 46;

36.3 The Permittee shall report in the operating report required by condition 67 if a source is insignificant because of actual emissions less than the thresholds of 18 AAC 50.335(r) and actual emissions become greater than any of those thresholds;

36.4 No other monitoring, recordkeeping or reporting is required.

[18 AAC 50.346(b)(1), 5/3/02]

37. The Permittee shall not cause or allow visible emissions, excluding condensed water vapor, emitted from an industrial process, fuel-burning equipment, or an incinerator to reduce visibility through the exhaust effluent by any of the following:

37.1 more than 20 percent for a total of more than three minutes in any one hour[2];

[18 AAC 50.050(a)(2) & 50.055(a)(1), 1/18/97]
[40 C.F.R. 52.70, 7/01/01]

37.2 more than 20 percent averaged over any six consecutive minutes.

[18 AAC 50.050(a) & 50.055(a)(1), 5/3/02]

38. The Permittee shall not cause or allow particulate matter emitted from an industrial process or fuel-burning equipment to exceed 0.05 grains per cubic foot of exhaust gas corrected to standard conditions and averaged over three hours.

[18 AAC 50.055(b)(1), 1/18/97]

39. The Permittee shall not cause or allow sulfur compound emissions, expressed as SO_2, from an industrial process or fuel-burning equipment, to exceed 500 ppm averaged over three hours.

[18 AAC 50.055(c), 1/18/97]

[2] See Footnote 1.

Section 9. Generally Applicable Requirements

40. Asbestos NESHAP. The Permittee shall comply with the requirements set forth in 40 C.F.R. 61.145, 61.150, and 61.152 of Subpart M, and the applicable sections set forth in 40 C.F.R. 61, Subpart A and Appendix A.

[18 AAC 50.040(b)(3), 8/15/02 & 50.350(d)(1)(A), 1/18/97]
[40 C.F.R. 61, Subparts A & M, and Appendix A, 7/1/01]

41. Refrigerant Recycling and Disposal. The Permittee shall comply with the standards for recycling and emission reduction of refrigerants set forth in 40 C.F.R. 82, Subpart F.

[18 AAC 50.040(d), 8/15/02 & 50.350(d)(1)(A), 1/18/97]
[40 C.F.R. 82, Subpart F, 7/1/01]

42. Good Air Pollution Control Practice.[3] The Permittee shall do the following for Source ID(s) 2, 3, 9 - 11, 13, 23 – 27, 35, 36, 42 – 46, 48 – 59, and 63:

a. Perform regular maintenance considering the manufacturer's or the operator's maintenance procedures;

b. Keep records of any maintenance that would have a significant effect on emissions; the records may be kept in electronic format;

c. Keep a copy of either the manufacturer's or the operator's maintenance procedures.

[50.346(b)(2), 5/3/02 & 18 AAC 50.350(f)(2) & (3), 1/18/97]

43. Dilution. The Permittee shall not dilute emissions with air to comply with this permit.

[18 AAC 50.045(a), 1/18/97]

44. Reasonable Precautions to Prevent Fugitive Dust. A person who causes or permits bulk materials to be handled, transported, or stored, or who engages in an industrial activity or construction project shall take reasonable precautions to prevent particulate matter from being emitted into the ambient air.

[18 AAC 50.346(c), 5/3/02; 18 AAC 50.045(d) & 50.350(g), 1/18/97 & 18 AAC 50.040(e), 8/15/02]

44.1 The Permittee shall keep records of

a. complaints received by the Permittee and complaints received by the Department and conveyed to the Permittee; and

b. any additional precautions that are taken

(i) to address complaints described in condition 44.1 or to address the results of Department inspections that found potential problems; and

(ii) to prevent future dust problems.

[3] Condition 42 is enforceable only by the State until the new regulations, dated May 3, 2002, are approved by EPA into the SIP, at which time this standard becomes federally enforceable.

[18 AAC 50.350(h), 5/3/02]

44.2 The Permittee shall report according to condition 46.

[18 AAC 50.350(i), 5/3/02]

45. Stack Injection. The Permittee shall not release materials other than process emissions, products of combustion, or materials introduced to control pollutant emissions from a stack at a source constructed or modified after November 1, 1982, unless approved in writing by the Department.

[18 AAC 50.055(g), 1/18/97]

46. Air Pollution Prohibited. No person may permit any emission which is injurious to human health or welfare, animal or plant life, or property, or which would unreasonably interfere with the enjoyment of life or property.

[18 AAC 50.346(a)(2), 5/3/02; 18 AAC 50.110, 5/26/72; 18 AAC 50.040(e), 8/15/02]

46.1 If emissions present a potential threat to human health or safety, the Permittee shall report any such emissions according to condition 65.

46.2 As soon as practicable after becoming aware of a complaint that is attributable to emissions from the facility, the Permittee shall investigate the complaint to identify emissions that the Permittee believes have caused or are causing a violation of condition 46.

46.3 The Permittee shall initiate and complete corrective action necessary to eliminate any violation identified by a complaint or investigation as soon as practicable if

a. after an investigation because of a complaint or other reason, the Permittee believes that emissions from the facility have caused or are causing a violation of condition 46; or

b. the Department notifies the Permittee that it has found a violation of condition 46.

46.4 The Permittee shall keep records of

a. the date, time, and nature of all emissions complaints received;

b. the name of the person or persons that complained, if known;

c. a summary of any investigation, including reasons the Permittee does or does not believe the emissions have caused a violation of condition 46; and

d. any corrective actions taken or planned for complaints attributable to emissions from the facility.

46.5 With each facility operating report under condition 67, the Permittee shall include a brief summary report which must include

a. the number of complaints received;

b. the number of times the Permittee or the Department found corrective action necessary;

c. the number of times action was taken on a complaint within 24 hours; and

d. the status of corrective actions the Permittee or Department found necessary that were not taken within 24 hours.

46.6 The Permittee shall notify the Department of a complaint that is attributable to emissions from the facility within 24 hours after receiving the complaint, unless the Permittee has initiated corrective action within 24 hours of receiving the complaint.

[18 AAC 50.346(a)(2) & 50.350(g) - (i), 5/3/02]

47. Technology-Based Emission Standard. If an unavoidable emergency, malfunction, or non-routine repair, as defined in 18 AAC 50.235, causes emissions in excess of a technology-based emission standard[4], the Permittee shall take all reasonable steps to minimize levels of emissions that exceed the standard. Excess emissions reporting under condition 65 requires information on the steps taken to minimize emissions. Monitoring of compliance for this condition consists of the report required under condition 65.

[18 AAC 50.235(a) & 50.350(f)(3), 1/18/97]

48. HAP Reconstruction. Before replacing components of either a "major source" as that term is defined in 40 C.F.R. 63.2 or a source that would become a "major source" as a result of replacement, where the cost of replacement exceeds 50 percent of the fixed capital cost that would be required to construct a comparable new source, but does not exceed 50 percent of the fixed capital cost that would be required to construct the entire facility, the Permittee shall obtain written approval from the Department:

48.1 under 40 C.F.R. 63.5(b)(3), (d), and (e), if the source is subject to an emission standard of 40 C.F.R. 63, adopted by reference in 18 AAC 50.040(c)(1)(C), or

48.2 in a Notice of MACT Approval under 40 C.F.R. 63.43(f) – (h), if the source is subject to 40 C.F.R. 63.43(a), each adopted in reference by 18 AAC 50.040(c).

[18 AAC 50.346(d), 5/3/02]

49. Chemical Accident Prevention. The Permittee shall comply with all applicable chemical accident prevention requirements set forth in 40 C.F.R. Part 68.

[40 C.F.R. Part 68, 7/1/02]

50. Permit Renewal. To renew this permit, the Permittee shall submit an application under 18 AAC 50.335 no sooner than **June 30, 2007** and no later than **June 30, 2008.**

[18 AAC 50.335(a), 1/18/97]

[4] *Technology-based emission standard* means a best available control technology standard (BACT); a lowest achievable emission rate standard (LAER); a maximum achievable control technology standard established under 40 C.F.R. 63, Subpart B, adopted by reference in 18 AAC 50.040(c); a standard adopted by reference in 18 AAC 50.040(a) or (c); and any other similar standard for which the stringency of the standard is based on determinations of what is technologically feasible, considering relevant factors.

Section 10. General Source Testing and Monitoring Requirements

51. Requested Source Tests. In addition to any source testing explicitly required by the permit, the Permittee shall conduct source testing as requested by the Department to determine compliance with applicable permit requirements.

[18 AAC 50.220(a), 1/18/97 & 18 AAC 50.345(a) & (k), 5/3/02]

52. Operating Conditions. Unless otherwise specified by an applicable requirement or test method, the Permittee shall conduct source testing

[18 AAC 50.220(b) & 50.350(g), 1/18/97]

52.1 at a point or points that characterize the actual discharge into the ambient air; and

52.2 at the maximum rated burning or operating capacity of the source or another rate determined by the Department to characterize the actual discharge into the ambient air. This requirement does not apply to visible emission tests conducted pursuant to Section 6.

53. Reference Test Methods. Except as approved by the Department, the Permittee shall use the following as reference test methods when conducting source testing for compliance with this permit:

53.1 Source testing for compliance with requirements adopted by reference in 18 AAC 50.040(a) must be conducted in accordance with the methods and procedures specified in 40 C.F.R. 60.

[18 AAC 50.220(c)(1)(A) & 50.350(g), 1/18/97 & 18 AAC 50.040(a), 8/15/02]
[40 C.F.R. 60, 7/1/01]

53.2 Source testing for compliance with requirements adopted by reference in 18 AAC 50.040(b) must be conducted in accordance with the methods and procedures specified in 40 C.F.R. 61.

[18 AAC 50.040(b), 8/15/02; 50.220(c)(1)(B) & 50.350(g), 1/18/97]
[40 C.F.R. 61, 7/1/01]

53.3 Source testing for compliance with requirements adopted by reference in 18 AAC 50.040(c) must be conducted in accordance with the source test methods and procedures specified in 40 C.F.R. 63.

[18 AAC 50.040(c), 6/1/02; 18 AAC 50.220(c)(1)(C) & 50.350(g), 1/18/97]
[40 C.F.R. 63, 4/5/02]

53.4 Source testing for the reduction in visibility through the exhaust effluent must be conducted in accordance with the procedures set out in Reference Method 9 and may use the form in Section 14 to record data.

[18 AAC 50.030, 5/3/02, 18 AAC 50.220(c)(1)(D) & 50.350(g), 1/18/97]

53.5 Source testing for emissions of total particulate matter, sulfur compounds, nitrogen compounds, carbon monoxide, lead, volatile organic compounds, fluorides, sulfuric acid mist, municipal waste combustor organics, metals, and acid gases must be conducted in accordance with the methods and procedures specified in 40 C.F.R. 60, Appendix A. Source testing for emissions of total particulate matter from Source ID 27 shall be conducted in accordance with EPA Method 17 and proposed Method 28.

[18 AAC 50.040(a)(4), 8/15/02 & 18 AAC 50.220(c)(1)(E) & 50.350(g), 1/18/97]
[40 C.F.R. 60, Appendix A, 7/1/01]

53.6 Source testing for emissions of PM-10 must be conducted in accordance with the procedures specified in 40 C.F.R. 51, Appendix M, Methods 201 or 201A and 202.

[`18 AAC 50.035(b)(2), 7/2/00; 18 AAC 50.220(c)(1)(F) & 50.350(g), 1/18/97]
[40 C.F.R. 51, Appendix M, 7/1/99]

53.7 Source testing for emissions of any contaminant may be determined using an alternative method approved by the Department in accordance with 40 C.F.R. 63 Appendix A, Method 301.

[18 AAC 50.040(c)(19), 6/1/02 & 18 AAC 50.220(c)(2) & 50.350(g), 1/18/97]
[40 C.F.R. 63, Appendix A, Method 301, 4/5/02]

54. Excess Air Requirements. To determine compliance with this permit, standard exhaust gas volumes must only include the volume of gases formed from the theoretical combustion of fuel, plus the excess air volume normal for the specific source type, corrected to standard conditions (dry gas at 68° F and an absolute pressure of 760 millimeters of mercury).

[18 AAC 50.220(c)(3), 18 AAC 50.350(g), 1/18/97 & 18 AAC 50.990(88), 5/3/02]

55. Test Exemption. The Permittee is not required to comply with conditions 57, 58 and 59 when the exhaust is observed for visible emissions by Method 9.

[18 AAC 50.345(a), 5/3/02]

56. Test Deadline Extension. The Permittee may request an extension to a source test deadline established by the Department. The Permittee may delay a source test beyond the original deadline only if the extension is approved in writing by the Department's appropriate division director or designee.

[18 AAC 50.345(a) & (l), 5/3/02]

57. Test Plans. Except as provided in condition 55, before conducting any source tests, the Permittee shall submit a plan to the Department. The plan must include the methods and procedures to be used for sampling, testing, and quality assurance and must specify how the source will operate during the test and how the Permittee will document that operation. The Permittee shall submit a complete plan within 60 days after receiving a request under condition 51 and at least 30 days before the scheduled date of any test unless the Department agrees in writing to some other time period. Retesting may be done without resubmitting the plan.

[18 AAC 50.345(a) & (m), 5/3/02]

58. Test Notification. Except as provided in condition 55, at least 10 days before conducting a source test, the Permittee shall give the Department written notice of the date and the time the source test will begin.

[18 AAC 50.345(a) & (n), 5/3/02]

59. Test Reports. Except as provided in condition 55, within 60 days after completing a source test, the Permittee shall submit two copies of the results in the format set out in the *Source Test Report Outline*, adopted by reference in 18 AAC 50.030. The Permittee shall certify the results in the manner set out in condition 61. If requested in writing by the Department, the Permittee must provide preliminary results in a shorter period of time specified by the Department.

[18 AAC 50.345(a) & (o), 5/3/02]

60. Particulate Matter Calculations. In source testing for compliance with the particulate matter standards in conditions 4 and 38, the three-hour average is determined using the average of three one-hour test runs.

[18 AAC 50.335(a), 1/18/97]

Section 11. General Recordkeeping, Reporting, and Compliance Certification Requirements

61. Certification. The Permittee shall certify all reports, compliance certifications, or other documents submitted to the Department and required under the permit by including the signature of a responsible official for the permitted facility following the statement: "Based on information and belief formed after reasonable inquiry, I certify that the statements and information in and attached to this document are true, accurate, and complete." Excess emission reports must be certified either upon submittal or with an operating report required for the same reporting period. All other reports and other documents must be certified upon submittal. When certifying a compliance certification, the official's signature must be notarized.

[18 AAC 50.205 and 50.350(b)(3) & (j), 1/18/97; and 18 AAC 50.345(a) & (j), 5/3/02]

62. Submittals. Unless otherwise directed by the Department or this permit, the Permittee shall send two copies of reports, compliance certifications, and other submittals required by this permit to ADEC, Air Permits Program, 610 University Ave., Fairbanks, AK 99709-3643, ATTN: Compliance Technician. The Permittee may, upon consultation with the Compliance Technician regarding software compatibility, provide electronic copies of data reports, emission source test reports, or other records under a cover letter certified in accordance with condition 61.

[18 AAC 50.350(i), 1/18/97]

63. Information Requests. The Permittee shall furnish to the Department, within a reasonable time, any information the Department requests in writing to determine whether cause exists to modify, revoke and reissue, or terminate the permit or to determine compliance with the permit. Upon request, the Permittee shall furnish to the Department copies of records required to be kept by the permit. The Department may require the Permittee to furnish copies of those records directly to the federal administrator.

[18 AAC 50.200 & 50.350(b)(3), 1/18/97; and 18 AAC 50.345(a) & (i) & 50.350(g) – (i), 5/3/02]

64. Recordkeeping Requirements. The Permittee shall keep all records required by this permit for at least five years after the date of collection, including:

64.1 copies of all reports and certifications submitted pursuant to this section of the permit; and

64.2 records of all monitoring required by this permit, and information about the monitoring including:

a. calibration and maintenance records, original strip chart or computer-based recordings for continuous monitoring instrumentation;

b. sampling dates and times of sampling or measurements;

c. the operating conditions that existed at the time of sampling or measurement;

d. the date analyses were performed;

e. the location where samples were taken;

f. the company or entity that performed the sampling and analyses;

g. the analytical techniques or methods used in the analyses; and

h. the results of the analyses.

[18 ACC 50.350(h), 5/3/02]

65. Excess Emissions and Permit Deviation Reports.

65.1 Except as provided in condition 46, the Permittee shall report all emissions or operations that exceed or deviate from the requirements of this permit as follows:

a. in accordance with 18 AAC 50.240(c), as soon as possible after the event commenced or is discovered, report

(i) emissions that present a potential threat to human health or safety; and

(ii) excess emissions that the Permittee believes to be unavoidable;

b. in accordance with 18 AAC 50.235(a), within two working days after the event commenced or was discovered, report an unavoidable emergency, malfunction, or nonroutine repair that causes emissions in excess of a technology based emission standard;

c. report all other excess emissions and permit deviations

(i) within 30 days of the end of the month in which the emissions or deviation occurs or is discovered, except as provided in conditions 65.1c(ii) and 65.1c(iii);

(ii) if a continuous or recurring excess emissions is not corrected within 48 hours of discovery, within 72 hours of discovery unless the Department provides written permission to report under condition 65.1c(i); and

(iii) for failure to monitor, as required in other applicable conditions of this permit.

65.2 When reporting excess emissions, the Permittee must report using either the Department's on-line form, which can be found at http://www.state.ak.us/dec/dawq/aqm/eeform.pdf, or if the Permittee prefers, the form contained in Section 16 of this permit. The Permittee must provide all information called for by the form that is used.

65.3 When reporting a permit deviation, the Permittee must report using either the Department's on-line form, which can be found at http://www.state.ak.us/dec/dawq/aqm/eeform.pdf, or if the Permittee prefers, the form contained in Section 16 of this permit. The Permittee must provide all information called for by the form.

65.4 If requested by the Department, the Permittee shall provide a more detailed written report as requested to follow up an excess emissions report.

[18 AAC 50.235(a)(2), 50.240(c), & 50.350(i), 1/18/97; and 18 AAC 50.346(a)(3), 5/3/02

66. NSPS and NESHAP Reports. The Permittee shall:

66.1 attach to the facility operating report required by condition 67, copies of any NSPS and NESHAPs reports submitted to the U.S. Environmental Protection Agency (EPA) Region 10, unless copies have already been provided to the Department at the time submitted to EPA, and

66.2 upon request by the Department, notify and provide a written copy of any EPA-granted waiver of the federal emission standards, recordkeeping, monitoring, performance testing, or reporting requirements, or approved custom monitoring schedules.

[18 AAC 50.040, 8/15/02 & 18 AAC 350(i)(2), 1/18/97]
[40 C.F.R. 60 &. 61, 7/1/01]

67. Operating Reports. During the life of this permit, the Permittee shall submit to the Department one original and one copy of an operating report by August 1 for the period January 1 to June 30 of the current year and by February 1 for the period July 1 to December 31 of the previous year.

67.1 The operating report must include all information required to be in operating reports by other conditions of this permit.

67.2 If excess emissions or permit deviations that occurred during the reporting period are not reported under condition 67.1, either

a. The Permittee shall identify

(i) the date of the deviation;

(ii) the equipment involved;

(iii) the permit condition affected;

(iv) a description of the excess emissions or permit deviation; and

(v) any corrective action or preventive measures taken and the date of such actions; or

b. When excess emissions or permit deviations have already been reported under condition 65 the Permittee may cite the date or dates of those reports.

67.3 The operating report must include a listing of emissions monitored under condition 25 which trigger additional testing or monitoring, whether or not the emissions monitored exceed an emission standard. The Permittee shall include in the report

a. the date of the emissions;

b. the equipment involved;

c. the permit condition affected; and

d. the monitoring result which triggered the additional monitoring.

[18 AAC 50.346(b)(3), 5/3/02; 18 AAC 50.350(d)(4), 6/21/98 and 18 AAC 50.350(f)(3) & (i), 1/18/97]

68. Annual Compliance Certification. Each year by March 31, the Permittee shall compile and submit to the Department one original and one copy of an annual compliance certification report as follows:

[18 AAC 50.350(j), 1/18/97]

68.1 For each permit term and condition set forth in Section 4 through Section 11, including terms and conditions for monitoring, reporting, and recordkeeping:

[18 AAC 50.350(d)(4), 6/21/98]

a. certify the compliance status over the preceding calendar year consistent with the monitoring required by this permit;

b. state whether compliance is intermittent or continuous;

c. briefly describe each method used to determine the compliance status; and

d. notarize the responsible official's signature.

[18 AAC 50.205, 1/18/97 & 50.345(a) & (j), 5/3/02]

68.2 In addition, submit a copy of the report directly to the EPA-Region 10, Office of Air Quality, M/S OAQ-107, 1200 Sixth Avenue, Seattle, WA 98101.

[18 AAC 50.350(j), 1/18/97]

Section 12. Standard Conditions Not Otherwise Included in the Permit

69. The Permittee must comply with each permit term and condition. Noncompliance with a permit term or condition constitutes a violation of AS 46.14, 18 AAC 50, and, except for those terms or conditions designated in the permit as not federally enforceable, the Clean Air Act, and is grounds for

69.1 an enforcement action;

69.2 permit termination, revocation and reissuance, or modification in accordance with AS 46.14.280; or

69.3 denial of an operating-permit renewal application.

[18 AAC 50.350(b)(3), 1/18/97 & 18 AAC 50.345(a) & (c), 5/3/02]

70. It is not a defense in an enforcement action to claim that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with a permit term or condition.

[18 AAC 50.350(b)(3), 1/18/97 & 18 AAC 50.345(a) & (d), 5/3/02]

71. Each permit term and condition is independent of the permit as a whole and remains valid regardless of a challenge to any other part of the permit.

[18 AAC 50.350(b)(3), 1/18/97 & 18 AAC 50.345(a) & (e), 5/3/02]

72. Compliance with permit terms and conditions is considered to be compliance with those requirements that are

72.1 included and specifically identified in the permit; or

72.2 determined in writing in the permit to be inapplicable.

[18 AAC 50.350(b)(3), 1/18/97 & 18 AAC 50.345(a) & (b), 5/3/02]

73. The permit may be modified, reopened, revoked and reissued, or terminated for cause. A request by the Permittee for modification, revocation and reissuance, or termination or a notification of planned changes or anticipated noncompliance does not stay any permit condition.

[18 AAC 50.350(b)(3), 1/18/97 & 18 AAC 50.345(a) & (f), 5/3/02]

74. The permit does not convey any property rights of any sort, nor any exclusive privilege.

[18 AAC 50.350(b)(3), 1/18/97 & 18 AAC 50.345(a) & (g), 5/3/02]

75. The Permittee shall allow the Department or an inspector authorized by the Department, upon presentation of credentials and at reasonable times with the consent of the owner or operator to

75.1 enter upon the premises where a source subject to the permit is located or where records required by the permit are kept;

75.2 have access to and copy any records required by the permit;

75.3 inspect any facility, equipment, practices, or operations regulated by or referenced in the permit; and

75.4 sample or monitor substances or parameters to assure compliance with the permit or other applicable requirements.

[18 AAC 50.350(b)(3), 1/18/97 & 18 AAC 50.345(a) & (h), 5/3/02]

Section 13. Permit As Shield from Inapplicable Requirements

In accordance with AS 46.14.290, and based on information supplied in the facility application, this section of the permit contains the requirements determined by the Department not to be applicable to the Kenai **Nitrogen Operations Plant**.

76. Table 2 identifies the sources that are not subject to the specified requirements at the time of permit issuance. If any of the requirements listed in Table 2 becomes applicable during the permit term, the Permittee shall comply with such requirements on a timely basis including, but not limited to, providing appropriate notification to EPA, obtaining a construction permit and/or an operating permit revision.

Table 2 - Permit Shields Granted.

Inapplicable Requirements	Reason for Non-Applicability
FACILITY WIDE	
18 AAC 50.025 as amended through 1/18/97	Facility is not in a special protection area
18 AAC 50.050 as amended through 1/18/97	No incinerators at this facility
18 AAC 50.055(a)(2) and (a)(4) through (a)(9) as amended through 1/18/97	No sources at the facility within the listed source categories
18 AAC 50.055(b)(2) as amended through 1/18/97	No steam generating plants fired by coal or municipal waste at the facility
18 AAC 50.055(b)(4) - (b)(5) as amended through 1/18/97	No fuel burning equipment fired on wood waste or asphalt plants at the facility
18 AAC 50.055(d) - (f) as amended through 1/18/97	No petroleum refineries, coal preparation facilities or portland cement plants at the facility
18 AAC 50.065(a) – (h) as amended through 1/18/97	All open burning conducted at the facility is conducted under (i) of this section, and is exempt from general requirements per 18 AAC 50.065(a).
18 AAC 50.075 as amended through 1/18/97	No wood fired heating sources at the facility.
18 AAC 50.700-735 as amended through 1/18/97	Not this source category
40 CFR 60, Subparts AA, AAa, AAA, B, BB, BBB, C, Cc, Cb, CC, Cd, Da, DD, DDD, E, Ea, Eb, EE, F, FFF, G, GGG, H, HH, HHH, I, III, J, JJJ, KK, KKK, L, LL, LLL, M, MM, N, Na, NN, NNN, O, OOO, P, PP, PPP, Q, QQ, QQQ, R, RR, RRR, S, SS, SSS, T, TT, TTT, U, UU, UUU, V, VV, VVV,	No “affected facilities” at the facility.

Inapplicable Requirements	Reason for Non-Applicability
W, WW, WWW, X, XX, Y, Z	
40 CFR 61.142, 61.144, 61.146, 61.147, 61.149, 61.151, 61.153, 61.154, 61.155	No operations at the facility regulated by these sections of the asbestos NESHAP.
40 CFR Parts 72, 73, 75, 77	Sources in Alaska are not subject to Title IV requirements.
40 CFR 82, Subparts A through E	Pollutants are not used, handled, or emitted in a manner described in the regulations.
Air Quality Control Permit No.9423-AA011, as amended through 1/16/97	Superseded and rescinded upon issuance of this permit, per 18 AAC 50.340(i).
Source ID 27	
18 AAC 50.055(b)(3) as amended through 1/18/97	Specifically inapplicable. (b)(6) applies to this source.
Source IDs 1, 4 - 7, 28 – 33	
18 AAC 50.055(b)(1) as amended through 1/18/97	Sources were in operation before 7/1/72. 18 AAC 50.055(b)(3) applies to these sources.
Source IDs 1 – 8, 12 – 21, 24 – 46, 48, 49, and 55 - 61	
18 AAC 50.055(g) as amended through 1/18/97	Sources were built prior to 11/1/82.
Source ID 2	
40 CFR 60, Subpart D	Unit commenced construction prior to 8/17/71
Source IDs 42 – 44 and 48 – 54	
40 CFR 60, Subpart D	Units are too small.
Source IDs 2, 12, 42 – 44, 48, and 49	
40 CFR 60, Subpart Db	Units commenced construction prior to 6/19/84.
Source IDs 50 – 54	
40 CFR 60, Subpart Db	Units are too small.
Source IDs 2, 12, 42 – 44, 48, and 49	
40 CFR 60, Subpart Dc	Units have heat input rate greater than 100 MMBtu/hr.
Source IDs 50 – 54	
40 CFR 60, Subpart Dc	Units commenced construction prior to 6/9/89.
Source IDs 55 - 59	
40 CFR 60, Subpart GG	Units commenced construction prior to 10/3/77.
Waste Oil Storage Plants 3 and 6, Oil Separator Tank Plants 3 and 6, UF-85 Plant 5 Storage Tanks, Gasoline Storage Tank Plants 3 and 6, Ammonia Plant 1 Storage Tanks, Diesel Storage Tank Plants 3 and 6, and Triton Gas Storage Tank	
40 CFR 60, Subparts K and Ka	Tanks are too small.
18 AAC 50.055(a)-(c) as amended through 5/3/02	Tanks are not industrial process or fuel burning equipment

Inapplicable Requirements	Reason for Non-Applicability
Source IDs 8, 21, 34, 40, 45 - 47	
18 AAC 50.055(a) - (c) as amended through 5/3/02	Sources are not industrial process or fuel burning equipment
UF-85 Plant 2 Storage Tanks and Ammonia Plant 4 Storage Tanks	
40 CFR 60, Subpart K	Tanks do not contain petroleum liquids.
UF-85 Plant 2 Storage Tanks and Ammonia Plant 4 Storage Tanks	
40 CFR 60, Subpart Ka	Tanks were not installed between May 18, 1978 and July 23, 1984.
Waste Oil Storage Plants 3 and 6, Oil Separator Tank Plants 3 and 6, and Gasoline Storage Tank Plants 3 and 6	
40 CFR 60, Subpart Kb VOC Standard	Tanks are too small.
UF-85 Plants 2 and 5 Storage Tanks, Ammonia Plants 1 and 4 Storage Tanks, Diesel Storage Tank Plants 3 and 6, and Triton Gas Storage Tank	
40 CFR 60, Subpart Kb VOC Standard	Tanks were not installed after July 23, 1984.
Source ID 12	
40 CFR 60, Subpart A, §60.43	SO_2 standard does not apply because source burns only natural gas.
40 CFR 60.45(a)	CEMs not required for opacity and sulfur dioxide, per 40 CFR 60.45(b)(1), because the source burns only natural gas. CEM not required for NOx, per 40 CFR 60.45(b)(3), because a 1996 performance test showed emissions less than 70 percent of the applicable NOx limit. CEM not required for oxygen or carbon dioxide, per § 60.45(b)(4), because no CEM is required for SO2 or NOx.
40 CFR 60.45(c) - (g)	CEM performance evaluations, calibration checks and excess emission reports not required because no CEM is required
Source ID 62	
40 CFR 60.334(b)	Daily sulfur and nitrogen fuel monitoring waived, per EPA alternative monitoring schedule issued 1/14/98
Source ID 64	
40 CFR 60.42b	SO_2 standard does not apply because unit burns only natural gas
40 CFR 60.43b	Particulate and opacity standards do not apply because unit burns only natural gas
40 CFR 60.48b(a)	Opacity CEM not required because unit is not subject to the opacity standard under § 60.43b
40 CFR 60.48b(b)	NO_X CEM not required, per Letter of May 10, 1999 from Gil Haselberger to Denise Newbould
40 CFR 60.49b(c)	Permittee has not elected to monitor compliance with

Inapplicable Requirements	Reason for Non-Applicability
	NO_X limits through the monitoring of steam generating unit operating conditions
40 CFR 60.49b(e)	Residual oil nitrogen content records not required because Source ID 64 burns only natural gas
40 CFR 60.49b(f) and (h)(1)	Opacity records and reporting not required because Source ID 64 is not subject to the opacity standard under § 60.43b
40 CFR 60.49b(g), (h)(2) and (h)(4)	NO_X emissions records and excess emissions reporting not required for duct burners, per NSPS Applicability Determination PS15
40 CFR 60.49b(i)	NO_X excess emissions reporting not required because duct burners are not subject to NO_X continuous monitoring requirements, per Letter of May 10, 1999 from Gil Haselberger to Denise Newbould
40 CFR 60.49b(j) – (n)	SO_2 reporting requirements do not apply because Source ID 64 is not subject to the Subpart Db SO_2 standard, per § 60.42b
40 CFR 60.49b(p) and (q)	Recordkeeping requirements do not apply because Source ID 64 is not an affected facility described in § 60.44b(j) or (k)
40 CFR 60.49b(r)	Recordkeeping requirements do not apply because Source ID 64 does not burn very low sulfur oil
Source IDs 12 and 64	
40 CFR 60.7(c) and (d) 40 CFR 60.13	No CEM performance requirements apply, and no excess emissions and monitoring system performance reports are required, per § 60.7(c), because relevant NSPS subparts do not require CEMs for the listed units
Source IDs 24 -- 26	
40 CFR 63.52, 5/30/03	Part 2 MACT application for Reciprocating Internal Combustion Engines not required because proposed rule published at 67 Fed.Reg. 77829 (Dec. 19, 2002) does not regulate any source at this facility
Source IDs 55 – 59 and 62	
40 CFR Part 63, Subparts A and YYY (Stationary Combustion Turbine MACT)	Subpart YYY, 40 CFR 63.6090(b)(4) exempts existing turbines from all Subpart YYY requirements, including notification requirements

[18 AAC 50.350(l), 1/18/97]

Section 14. Visible Emissions Forms

Visible Emissions Field Data Sheet

Certified Observer: _____

Company & Facility: _____

Location: _____

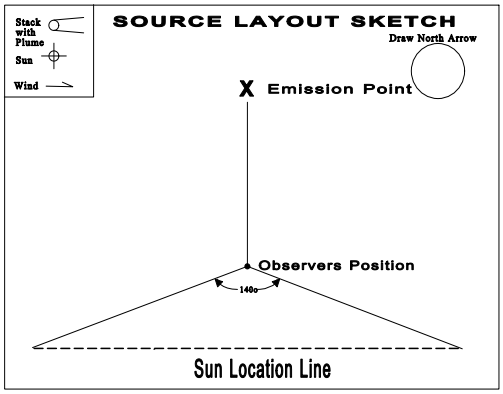
Test No.: _____ Date: _____

Source: _____

Operating Rate: _____

_____

Hrs. of observation: _____



Clock Time	Initial				Final
Observer location Distance to discharge					
Direction from discharge					
Height of observer point					
Background description					
Weather conditions Wind Direction					
Wind speed					
Ambient Temperature					
Relative humidity					
Sky conditions: (clear, overcast, % clouds, etc.)					
Plume description: Color					
Distance visible					
Water droplet plume? (Attached or detached?)					
Other information					

Visible Emissions Observation Record

Page ___ of ___

Company & Facility _____ Certified Observer_____

Test Number _____ Clock time_____

Date:		Visibility reduction every 15 Seconds (Opacity)				Steam Plume (check if applicable)		Comments
Hr	Min	0	15	30	45	Attached	Detached	

Additional information:

_____ _____
Observer Signature and Date Certified By and Date

Data Reduction:
Duration of Observation Period (minutes) _____ Duration Required by Permit (minutes)_____
Number of Observations _____ Highest Six –Minute Average Opacity (%)_____
Number of Observations exceeding 20 % _____
In compliance with three-minute aggregate opacity limit? (Yes or No) _____
In compliance with six-minute opacity limit? (Yes or No) _____

Average Opacity Summary

Set Number	Time Start—End	Opacity	
		Sum	Average

Section 15. Emission Factors

Use the emission factors in Table 3 to calculate the emission rates for condition 6.3.

Table 3 - Emission Factors

Equipment	NO_X
Flares **Source ID(s) 10 – 12, 24, and 25**	For ammonia flared use a 1% conversion factor per condition 6.3. For methane flared use 0.068 lb/MMBtu per AP-42 (Table 13.5-1, 7/91) or other factor approved by the Department.

Section 16. ADEC Notification Form

Fax this form to: (907) 269-7508 Telephone: (907) 269-8888

Agrium U.S. Inc.
Company Name

Kenai Nitrogen Operations Plant
Facility Name

Reason for notification:

❑ **Excess Emissions**
If you checked this box
Fill out section 1

❑ **Other Deviation from Permit Condition**
If you checked this box
fill out section 2

When did you discover the Excess Emissions or Other Deviation:
Date:__/__/__ Time:__:__

Section 1. Excess Emissions

(a) Event Information (Use 24-hour clock)**:**

	START Time**:** (hr:min):	**END** Time:	**Duration**
Date: _____	_____:_____	_____:_____	_____:_____
Date: _____	_____:_____	_____:_____	_____:_____
		Total:	_____:_____

(b) Cause of Event (Check all that apply)**:**

❑ START UP ❑ UPSET CONDITION ❑ CONTROL EQUIPMENT
❑ SHUT DOWN ❑ SCHEDULED MAINTENANCE ❑ OTHER _____

Attach a detailed description of what happened, including the parameters or operating conditions exceeded.

(c) Sources Involved:

Identify each emission source involved in the event, using the same identification number and name as in the permit. List any control device or monitoring system affected by the event. Attach additional sheets as necessary.

Source ID No.	Source Name	Description	Control Device
_____	_____	_____	_____
_____	_____	_____	_____

(d) Emission Limit Potentially Exceeded

Identify each emission standard potentially exceeded during the event. Attach a list of ALL known or suspected injuries or health impacts. Identify what observation or data prompted this report. Attach additional sheets as necessary.

Permit Condition	Limit	Emissions Observed
_____	_____	_____
_____	_____	_____

(e) Excess Emission Reduction:

Attach a description of the measures taken to minimize and/or control emissions during the event.

(f) Corrective Actions:

Attach a description of corrective actions taken to restore the system to normal operation and to minimize or eliminate chances of a recurrence.

(g) Unavoidable Emissions:

Do you intend to assert that these excess emissions were unavoidable?

❑ YES ❑ NO

Do you intend to assert the affirmative defense of 18 AAC 50.235?

❑ YES ❑ NO

Section 2. Other Permit Deviations

(a) Sources Involved:

Identify each emission source involved in the event, using the same identification number and name as in the permit. List any control device or monitoring system affected by the event. Attach additional sheets as necessary.

Source ID No.	Source Name	Description	Control Device

(b) Permit Condition Deviation:

Identify each permit condition deviation or potential deviation. Attach additional sheets as necessary.

Permit Condition	Potential Deviation

(c) Corrective Actions:

Attach a description of actions taken to correct the deviation or potential deviation and to prevent recurrence.

Based on information and belief formed after reasonable inquiry, I certify that the statements and information in and attached to this document are true, accurate, and complete.

Printed Name: Signature: Date:

Alaska Department of Environmental Conservation

Air Permits Program

Final

Agrium U.S. Inc.

Kenai Nitrogen Operations Plant

STATEMENT OF BASIS

of the terms and conditions for

Permit No. AQ0083TVP01

November 10, 2003

Prepared by Robert Dolan

Revision 1 prepared by Robert Dolan

October 6, 2005

Revision 2 prepared by Sally Ryan and Tim Knapp

August 21, 2007

INTRODUCTION

This document sets forth the statement of basis for the terms and conditions of Operating Permit No. AQ0083TVP01.

FACILITY IDENTIFICATION

Section 1 of Operating Permit No. AQ0083TVP01 contains information on the facility as provided in the Title V permit application.

The facility is owned and operated by Agrium U.S. Inc., and Agrium U.S. Inc. is the Permittee for the facility's operating permit. The SIC code for this facility is 2873.

The facility produces ammonia and urea for bulk sales. A description of the production processes follows.

Overview

There are two ammonia and two urea production plants at Agrium's Kenai Nitrogen Operation. The ammonia plants convert natural gas with added steam and air to produce ammonia (NH_3) and carbon dioxide (CO_2). Feedstocks for the urea plant include CO_2 and ammonia. The two utility plants generate the power and steam needed to operate the ammonia and urea plants. Final products are loaded at the Product Loading Wharf for shipment.

Ammonia Process

The ammonia production process involves the use of natural gas, steam, and air with the aid of catalysts, heat exchangers, and compressors. This overall process can be broken down into six distinct process steps:

- Gas preparation and reforming
- Shift conversion
- CO_2 removal
- Methanation and synthesis
- Refrigeration and liquefaction
- Atmospheric storage
- Product loading

In the first step, heated natural gas is prepared through the removal of sulfur. This gas is then mixed with steam, heated and passed through the catalyst tubes in the Primary Reformer. Through the combinations of increased temperature with the catalyst, the methane (CH_4) reacts with steam (H_2O) to form hydrogen (H_2), carbon monoxide (CO), and CO_2. Natural gas is fired in the burners of the Primary Reformer to supply the necessary heat to start this reaction process. The completion of the reforming reaction occurs in the Secondary Reformer, where compressed air is introduced to the gas stream. Some of the H_2 ignites to further increase the temperature and continue reforming the remaining (unreformed) CH_4.

After the reformer step, the gas stream must undergo a shift conversion reaction for the CO to be converted to CO_2. This step is accomplished in two catalyst beds that help CO and steam

convert to CO_2 and H_2. Following shift conversion, CO_2 is removed from the gas stream in an absorber operation called the MDEA Area. The MDEA solution removes the CO_2 from the gas stream and releases it for further use in the urea plants.

The gas stream now has primarily nitrogen (N_2) and H_2 with trace levels of CO and CO_2. The methanation reaction occurs over another catalyst bed (called the Methanator). It converts the CO and CO_2 to CH_4 through reaction with the H_2. With these impurities converted, the compressed and heated gas is then synthesized to NH_3 in another catalyst section in the Ammonia Converter. The gas stream from the converter is then processed through a series of coolers, separator vessels, refrigeration compressors, and flash drums to remove liquid ammonia for storage. The gas stream from this refrigeration and liquefaction loop is recycled back to the Ammonia Converter to maintain the correct process conditions. Also, a small amount of gas is purged from this recycling loop. This purge gas is treated in the Purge Recovery Unit, ammonia is removed, H_2 and N_2 are recycled, and the balance of CH_4 and inerts is used as supplemental fuel in the Primary Reformer.

Liquid ammonia is stored in tanks near atmospheric pressures and at low temperatures. The ammonia vapors that are flashed to gaseous form are collected, compressed, cooled, and liquefied for return to the storage tanks. Ammonia stored is either shipped offsite as product or sent to the urea plants for further processing.

Urea Process

The production of urea is accomplished by combining liquid NH_3 and CO_2 gas under pressure. Both of these feed streams are produced in the ammonia plants. The combined NH_3 and CO_2 form an intermediate compound called ammonium carbamate, which includes water. Urea is produced through a chemical dehydration of these molecules. The primary process steps in this production include the following:

- Compression and feed pumping
- Synthesis
- Crystallization (#2) / evaporation (#5)
- Water treatment (recovery and reuse)
- Prilling (#2) / granulating (#5)
- Product storage and shipping

The first step in the urea process is to compress CO_2 to the desired reaction pressure. The compressors are mostly steam driven, although Plant 2 also uses natural-gas-fired reciprocating pumps. Liquid NH_3 is pumped to the process by reciprocating pumps (steam driven) that raise the NH_3 pressure for the reactor use.

The urea formation occurs in a reactor where spontaneous formation of ammonium carbamate under exothermic conditions starts. Extending the reactor time allows the further dehydration of the carbamate solution to form urea. Once the urea formation has occurred, a series of separations is used to remove unconverted NH_3, CO_2, and carbamate as well as water. The product stream leaving this reaction section of the plant is primarily urea and water. The separation and recovery of unreacted or incompletely converted materials are slightly different for each plant. In Plant 2, the reactor production stream passes through a flash vessel, decomposers, and separators before delivering the urea stream for further processing. Plant 2

also uses additional absorbers to recover materials from the process for recycle and reuse in the reactor. The unreacted carbamate is decomposed before recovery and recycling. In Plant 5, the reactor section of the plant is a high-pressure synthesis loop that uses condenser and stripper units to control and optimize the urea formation reaction. In connection with this synthesis loop, Plant 5 uses a rectifying column, a condenser, and a scrubber to complete the urea product stream separation from the unreacted NH_3 and CO_2. These reaction materials are recovered and recycled back to the reaction process.

The produced urea and water streams must be dried further in order to complete processing. Plant 2 uses a crystallizer where the urea slurry is heated and processed under vacuum. The crystallizer stream is processed by centrifuges in a recycle loop with the crystallizer. The crystals removed are then dried further in a hot air dryer. Plant 5 uses two evaporators that rely on heat and vacuum conditions to help remove the water. In both plants the water removed is collected and treated for reuse. Plant 2 uses a hydrolyzer stripper to convert residual urea in the water to NH_3 and CO_2 and recovers those two components for recycling back to the urea reactor section. Plant 5 completes the same treatment function with a separate hydrolyzer and desorber.

The last major process function is the conversion of the concentrated urea stream into finished urea product. Different finished product processes constitute the key difference between the two urea plants. Plant 2 produces urea prills, and Plant 5 produces urea granules.

In Plant 2, the urea crystals are sent to the top of the prilling tower, where they are melted. The melted urea is blended with a material that, after contacting the urea, is converted to melthylenediurea. The additive strengthens the prills and provides a coating that prevents caking in storage. The molten urea is thrown out of holes in a spinning bucket at the top of the tower and forms droplets (like rain). The droplets cool and solidify as they fall through the tower. They are collected at the bottom and screened by size criteria. Prills that are too large or small are recycled to the melter. Those that meet the product requirements are sent to storage.

Plant 5 uses four rotating drum granulators in the finishing step. The drums contain undersized product granules that constantly are churned and exposed to the direct spray of concentrated urea from the evaporators. Larger granules are formed through the contacting and cooling from air passed through the granulators. These larger granules are removed from the units by conveyors and sized with screens. The properly sized granules are sent to a storage warehouse, and the off-sized granules are recycled through the granulator process.

There are separate storage warehouses for prills and granules because they are different products for sale. Enclosed belt conveyors deliver the product to the warehouses, and enclosed belt conveyors transfer the product to the ship loading dock. A specially designed telescopic loading boom is used to load cargo holds with urea.

Utility Plants

The utility plants are set up to provide power to each half of the plant. Power Plant 3 provides power for Ammonia Plant 1, Urea Plant 2, and itself. Power Plant 6 provides power for Ammonia Plant 4, Urea Plant 5, and itself. Electrical power comes from gas turbine generators and by purchase from a local utility. Steam is produced through boilers, but is also produced

through waste heat recovery boilers. The steam production is integrated between direct production and waste heat recovery to maximize energy efficiency for the plant.

REVISION 1

Permit revision 1 addressed a request received on January 23, 2004 from Agrium U.S. Inc. The request which is considered significant under 40 CFR Part 71.7(e)(3) consist of the following item that has been changed in this revision 1.

1. Agrium Kenai Nitrogen Operations (KNO) requests a NO_X monitoring frequency change for the heat recovery steam generator (HRSG) (equipment No. B707) that will bring the monitoring requirements in alignment with similar steam generator equipment in other Title V operating permit conditions issued in the State of Alaska. Currently Construction Permit (No 9923-AC004, Revision 1) and the Title V Operating Permit (No. AQ0083TVP01) contain unique conditions that require annual NO_X testing for the HRSG.

Department action consists of reducing monitoring frequency for Source ID 64 (heat recovery steam generator), a Subpart Db boiler, from annual to a frequency that is synchronized with that of Source ID 62 (stationary gas turbine). The source test monitoring frequency for these two sources has been synchronized because they operate in sequence and it is impractical to stack test only one of the sources and not the other. Condition 18.1 has been modified to reflect this change.

A new condition has been added to the permit (condition 20) to create a new monitoring scheme for the turbine and effect the synchronization of source testing frequency of the heat recovery steam generator with that of the turbine. Currently the permit does not require stack testing of the turbine. This condition provides for a variable monitoring frequency based on previous test results and the relative safety margin of test results below the NO_X limit. Testing frequency can vary from annual to once every five years.

The Department has accepted Agrium's request to reduce stack testing frequency because:

1. The turbine has active controls consisting of water injection technology to reduce NO_X emissions and is required to continuously monitor the water-to-fuel ratio necessary to comply with the NO_X standard over various loads.

2. Since startup of the turbine/duct firing unit has demonstrated compliance with the federal NO_X emission standards for Subpart GG (turbines) and Subpart Db (duct firing heat recovery unit) during source test conducted during 2001, 2002, and 2003 with ample safety margin, the test in 2004 was waived pending processing of this monitoring reduction request. Results of the tests are tabulated below.

	GE Frame 6B Turbine			**Heat Recovery Steam Generator**		
	Test result in ppm	% of 91 ppm limit	Test results accepted?	Test result in lb/MMBtu	% of 0.20 lb/MMBtu limit	Test results accepted
2001	68	75	yes	0.120	60	yes
2002	75	82	yes	0.124	62	yes

2003	74	81	yes	0.122	61	yes

Notes: 1) Test results for turbine are at 100% load.
2) Test results for HRSG are at 30% load.

3. Excess emission reporting requirements for the active controls on the turbine will identify any future problems with operations that may affect NO_X emissions.

4. The Department has the authority to require Agrium to perform a source test at any time for cause.

REVISION 2

On September 21, 2006, Agrium submitted an application requesting Title V permit significant revisions and incorporation of Minor Permit No. AQ00083MSS02. In Minor Permit No. AQ0083MSS02, the Department

1. revised Title I provisions in the Title V permit that were originally established in Permit-to-Operate No. 9423-AA011 (amended through January 16, 1997); and

2. revised Title I provisions in Permit No. 9923-AC004, amended through July 14, 2003.

Prior to Revision 2, the Title V permit was an "Operating/Construction" permit. The Department had revised Title I provisions in this permit. This was problematic in that the permit will expire, and the revisions will expire along with it. To correct this issue, the Department reinstated all applicable Title I provisions from Permit-to-Operate No. 9423-AA011 (as revised) and Construction Permit No. 9923-AC004 (as revised) in Minor Permit No. AQ0083MSS02. For clarity, the Department rescinded Permit No. 9923-AC004 (Permit No. 9423-AA001 has expired). Permit No. AQ0083MSS01 still exists as a totally separate permit.

In addition, this Title V revision included administrative changes and removed inapplicable used oil requirements and prill tower design limitations. The prill tower design limitations were established in a Consent Decree that has been terminated. These conditions are no longer necessary as the obligation to apply for permits for modifications is established in regulation.

SOURCE INVENTORY AND DESCRIPTION

Table 1 of Operating Permit No. AQ0083TVP01 contains information on the sources regulated by this permit as provided in the application. The table is provided for informational and identification purposes only. Specifically, the source rating/size provided in the table is not intended to create an enforceable limit.

EMISSIONS

Section 2 of Operating Permit No. AQ0083TVP01 contains emission information as provided in the Title V application. A summary of the potential to emit (PTE)[5] and assessable PTE as

[5] *Potential to Emit or PTE* means the maximum quantity of a release of an air contaminant, considering a facility's physical or operational design, based on continual operation of all sources within the facility for 24 hours a day, 365 days a year, reduced by the effect of pollution control equipment and approved state or federal limitations on

indicated in the application from the **Kenai Nitrogen Operations Plant** is shown in the table below.

Table A - Emissions Summary, in Tons Per Year (TPY)

Pollutant	NO_X	CO	PM-10	SO_2	VOC	NH_3	CH_3OH	Total
PTE	3936	1898	579	10	386	1314	150	8273
Assessable PTE	3936	1898	579	10	386	1314	150	8273

The assessable PTE listed under condition 1.1 is the sum of the emissions of each individual regulated air contaminant for which the facility has the potential to emit quantities greater than 10 TPY. The emissions listed in Table A are estimates that are for informational use only. The listing of the emissions does not create an enforceable limit to the facility.

For criteria pollutants and HAPs, emissions are as provided in the application. According to recent toxic release inventory data, actual methanol emissions are approximately 50 TPY. A conservative estimate of the assessable PTE for methanol is 150 TPY for emission fee purposes.

BASIS FOR REQUIRING AN OPERATING PERMIT

Section 2 of Operating Permit No. AQ0083TVP01 lists the regulatory classifications of the **Kenai Nitrogen Operations Plant**.

This facility is classified as a Prevention of Significant Deterioration (PSD) Major Facility as defined in 18 AAC 50.300(c)(1), because it emits or has the PTE ≥ 250 tpy of a regulated air contaminant in an area designated attainment or unclassifiable for that air contaminant under 18 AAC 50.015. This facility is also classified as having the potential to violate one or more of the ambient air quality standards under 18 AAC 50.300(b)(2) because it contains a fuel-burning equipment with a rated capacity of 100 MMBtu per hour or more. This facility is also classified as having the potential to violate one or more of the ambient air quality standards under 18 AAC 50.300(b)(1)(A) because it contains equipment classified as an industrial process with a total rated capacity or design throughput greater than 5 tons per hour. This facility requires an operating permit under 18 AAC 50.325(b)(1) & (3) because it has the potential to emit more than 100 tpy of a regulated air contaminant and has source(s) subject to new source performance standards.). As defined by 18 AAC 50.325(c), the **Kenai Nitrogen Operations Plant** is a facility described in 18 AAC 50.300(b)-(e) therefore it is within the category of facilities subject to AS 46.14.130(b)(4).

the capacity of the facility's sources or the facility to emit an air contaminant, including limitations such as restrictions on hours or rates of operation and type or amount of material combusted, stored, or processed as defined in AS 46.14.990(21), effective 1/18/97.

Alaska regulations require operating permit applications to include identification of "regulated sources." As applied to **Kenai Nitrogen Operations Plant**, the state regulations require a description of:

⇒ Each source regulated by a standard in 18 AAC 50.055, Industrial Processes and Fuel Burning Equipment, under18 AAC 50.335(e)(4)(C);

⇒ Each source subject to a standard adopted by reference in 18 AAC 50.040 under 18 AAC 50.335(e)(2); and

⇒ Sources subject to requirements in an existing Department permit 18 AAC 50.335(e)(5).

The emission sources at **Kenai Nitrogen Operations Plant** classified as "regulated sources" according to the above Department regulations are listed in Table 1 of Operating Permit No. AQ0083TVP01.

CURRENT AIR QUALITY PERMITS

Previous Air Quality Permit to Operate

The most recent permit issued for this facility is permit-to-operate number 9423-AA011. This permit-to-operate include all construction authorizations issued through January 16, 1997, since it was issued before January 18, 1997. All facility-specific requirements established in this previous permit are included in the new operating permit as described in Table C. This permit amends certain conditions in Permit No. 9423-AA011.

Construction Permits

Construction Permit No. 9923-AC004 was issued to this facility on September 15, 1999 and amended on July 14, 2003. The facility-specific requirements established in this construction permit are included in the new operating permit as described in Table C. This permit amends certain conditions in Construction Permit No. 9923-AC004.

The Department issued O/C Permit No. AQ0083TVP01 on November 10, 2003. This permit revised permit provisions established in Permit-to-Operate 9423-AA011 and Construction Permit No. 9923-AC004, Revsion 1, as indicated in Tables B and C, respectively.

The Department issued Minor Permit No. AQ0083MSS01 on August 8, 2005. This permit revised condition 32.4 of Permit No. 9923-AC004, Revision 1 regarding NO_X source testing for the HRSG. It also repealed condition 33.5.1 of Permit No. 9923-AC004, Revision 1 and replaced it with a new monitoring scheme to synchronize source-testing frequency of the HRSG with that of the turbine.

The Department issued Minor Permit No. AQ0083MSS02 on May 29, 2007. The permit reinstated applicable provisions of Permit-to-Operate No. 9423-AA011 and Construction Permit No. 9923-AC004, because these provisions will expire with O/C Permit No. AQ0083TVP01. The permit also revised some of these provisions as indicated in the Table C.

Title V Operating Permit Application History

The owner or operator submitted an application on October 8, 1997.

Additional information was received after July 25, 2003.

COMPLIANCE HISTORY

The facility has operated at its current location since 1968. Review of the permit files for this facility, which includes the past inspection reports indicate a facility generally operating in compliance with its operating permit.

In 1998 KNO's prior owner, the Union Oil Company of California (Unocal), entered into a consent decree with the U.S. Environmental Protection Agency. Although Agrium did not own the facility at the time, the consent decree applied to subsequent owners of the KNO. The decree included operating conditions applicable to the Plant 2 prill tower (Source ID 27), and required operation of the Plant 4 reformer (Source ID 12) consistent with applicable provisions of Subparts A and D of the federal New Source Performance Standards. Under the consent decree Unocal also agreed to perform supplemental environmental projects, including implementation of a combustion efficiency monitoring program for cogeneration unit sources, and installation of flares to reduce emissions of process gases. The flare project has reduced ammonia emissions to the environment by approximately 90%. Agrium complied with the consent decree provisions and the consent decree was terminated on February 17, 2005.

FACILITY-SPECIFIC REQUIREMENTS CARRIED FORWARD

State of Alaska regulations in 18 AAC 50.350(d)(1)(D) require that an operating permit include each facility-specific requirement established in a prior Title I permit. Table B below lists the each facility-specific requirement in Minor Permit No. AQ0083MSS01 corresponding condition in Operating Permit No. AQ0083TVP01, Revision 2. Table C lists the each facility-specific requirement in Minor Permit No. AQ0083MSS02 corresponding condition in Operating Permit No. AQ0083TVP01, Revision 2.

Table B - Comparison of Permit No. AQ0083MSS01 Conditions to Operating Permit No. AQ0083TVP01 Revision 2 Conditions[6]

AQ0083MSS01 Condition Number	Description of Requirement	Permit No. AQ0083TVP01 Rev 2 Condition Number[7]	How condition was revised
4	NSPS Periodic NO_X testing for HRSG (Source ID 64)	20.1	No change
5	NSPS Periodic stack test monitoring for turbine (Source ID 62)	22	No change

[6] This table does not include all standard and general conditions

[7] Note that the condition numbers refer to Permit No. AQ0083TVP01, Revision 1. The condition numbers have changed in Revision 2.

Table C - Comparison of Permit No. AQ0083MSS02 Conditions to Operating Permit No. AQ0083TVP01 Revision 2 Conditions[8]

AQ0083MSS02 Condition Number	Description of Requirement	Permit No. AQ0083TVP01 Rev 2 Condition Number	How condition was revised
1-3	Permit Administration	NA	Conditions clarify scope of MSS02. Details of TVP match this scope
4	Limits Ammonia Flare System (Source ID(s) 9 – 11, 22, and 23) to 102 tons per year of NO_X as the regulatory limit, and requires monitoring of NH_3 and methane combustion as parametric measures of NO_X emissions.	6	No change
5	Permittee shall ensure that Syngas Compressor Purge Recovery System is operated for no more than 90 percent of the total hourly operational time for ammonia plant #4	7	No change
6	In Source IDs 62 and 64, use natural gas with an H_2S concentration of no more than 40 ppmv	8	No change
7	Burn no more than 2000 gallons of fuel per 12-month period in Source ID 63	9	No change
8	In Source ID 63, use only No. 1 or No. 2 diesel fuel oil	10	No change
9	Burn no greater than 3,250 mmscf of natural gas per 12-month period in Source IDs 42-44, 48, and 49, combined	11	No change
10	Permittee shall monitor visible emissions using the four transmissometers on the Urea Prilling Tower….	29.1	No change
11	Permittee shall perform continuous ambient air quality monitoring for NH_3 to demonstrate compliance with the ambient air quality standard…..	34	No change
12	Fire training obligations	35	No change

[8] This table does not include all standard and general conditions

STATEMENT OF BASIS FOR THE PERMIT CONDITIONS

The state and federal regulations for each condition are cited in Operating Permit No. AQ0083TVP01.

Conditions 1 - 2, Emission Fees

Applicability: The regulations require all permits to include due dates for the payment of fees and any method the Permittee may use to re-compute assessable emissions.

Factual Basis: These standard conditions require the Permittee to pay fees in accordance with the Department's billing regulations. The billing regulations set the due dates for payment of fees based on the billing date.

The default assessable emissions are emissions of each air contaminant authorized by the permit (AS 46.14.250(h)(1)(A)). Air contaminant means any regulated air contaminant and any hazardous air contaminant. Therefore, assessable emissions under AS 46.14.250(h)(1)(A) means the **potential** to emit any air contaminant identified in the permit, including those not specifically limited by the permit. For example, hydrogen chloride (HCl) emissions from an incinerator are assessable emissions because they are a hazardous air contaminant, even if there is currently no emission limit on HCl for that class of incinerator.

The conditions also describe how the Permittee may calculate **actual** annual assessable emissions based on previous actual annual emissions. According to AS 46.14.250(h)(1)(B), assessable emissions are based on each air contaminant. Therefore, fees based on actual emissions must also be paid on any contaminant emitted whether or not the permit contains any limitation of that contaminant.

This standard condition specifies that, unless otherwise approved by the Department, calculations of assessable emission based on actual emissions use the most recent previous calendar year's emissions. Since each current year's assessable emission are based on the previous year, the Department will not give refunds or make additional billings at the end of the current year if the estimated emissions and current year actual emissions do not match. The Permittee will normally pay for actual emissions - just with a one-year time lag.

Projected actual emissions may differ from the previous year's actual emissions if there is a change at the facility, such as changes in equipment or an emission rate from existing equipment.

If the Permittee does not choose to annually calculate assessable emissions, emissions fees will be based on “potential to emit” (PTE).

The PTE set forth in the condition is based on liquid fuel with a sulfur content of 0.5 percent by weight or fuel gas with a sulfur content of 40 ppm H_2S by volume. If the actual sulfur content of the fuel is greater than these assumptions, the assessable emissions calculations provided by the Permittee should reflect the actual sulfur content.

Condition 3 and Section 6, Visible Emissions Standard

Applicability: This regulation applies to operation of all industrial process and fuel-burning equipment in Alaska. Source ID(s) 1, 4 – 7, 14 – 20, 28 – 33, 35 – 39, and 41 are industrial process equipment. Source ID(s) 2, 3, 9 – 13, 22 – 26, 42 – 44, and 48 - 64 are fuel-burning equipment. The standard does not apply separately to Source ID 64 because it shares a common exhaust stack with Source ID 62. The standard does not apply to Source IDs 8, 21, 34, 40, 45, 46, and 47 because storage tanks, cooling towers and the wharf are neither industrial processes nor fuel burning equipment. The SIP standard for opacity applies to all industrial process and fuel-burning equipment because it is contained in the federally approved SIP dated October 1983.

The opacity standard applies to operation of all urea prill towers (Source ID 27) constructed prior to July 1, 1972.

Factual Basis: Condition 3 requires the Permittee to comply with the federal and the state visible emission standards applicable to industrial process and fuel-burning equipment. The Permittee shall not cause or allow the equipment to violate these standards.

This condition has recently been adopted into regulation as a standard condition. MR&R requirements are listed in Section 6 of the permit.

Gas Fired:

Monitoring – The monitoring of gas fired sources for visible emissions is waived, i.e. no source testing will be required. The Department has found that natural gas fired equipment inherently has negligible PM emissions. However, the Department can request a source test for PM emissions from any smoking equipment.

Reporting – The Permittee must annually certify that only gaseous fuels are used in the equipment.

Liquid Fuel Sources, Dual Fuel Sources and Scrubber Exhaust Vents:

Monitoring – The visible emissions shall be monitored using Method 9 as detailed in Section 6. Corrective actions such as maintenance procedures and additional testing may be required depending on the results of the observations.

Recordkeeping - The Permittee is required to record the results of all visible emission observations and record any actions taken to reduce visible emissions.

Reporting - The Permittee is required to report: 1) emissions in excess of the federal and the state visible emissions standard and 2) deviations from permit conditions. The Permittee is required to include copies of the results of all visible emission observations with the facility operating report.

Source IDs 1, 4 - 7, 14 - 20, 28 – 33, 35 – 39, and 41:

The emissions vented from these process vents are gases and do not contain combustion products such as carbon particulates. Therefore, because the vented gases will not create opacity no source testing for these sources is required. Monitoring will consist of an annual certification of compliance with the opacity standard.

Flares:

Flares at the KNO do not combust liquid hydrocarbons or other compounds that generate carbon particulates when burned. As a result, this permit treats monitoring for flares (Source ID(s) 9 – 11, 22, and 23) in the same manner as other gas-fired equipment. The Permittee must annually certify that only gaseous fuels are used in the equipment.

Prill Tower:

Monitoring is by continuous opacity transmissometers.

Condition 4 and Section 6, Particulate Matter (PM) Standard

Applicability: The PM standard applies to operation of all industrial process and fuel burning equipment in Alaska. Source ID(s) 1, 4 – 7, 14 – 20, 28 – 33, 35 – 39, and 41 are industrial process equipment. Source ID(s) 2, 3, 9 – 13, 22 – 26, 42 – 44, and 48 - 64 are fuel-burning equipment. The standard does not apply separately to Source ID 64 because it shares a common exhaust stack with Source ID 62. The standard does not apply to Source IDs 8, 21, 34, 40, 45, 46, and 47 because storage tanks, cooling towers and the wharf are neither industrial processes nor fuel burning equipment. The SIP standard for PM applies to all industrial process and fuel-burning equipment because it is contained in the federally approved SIP dated October 1983.

Factual Basis: Condition 4 requires the Permittee to comply with the state PM (also called grain loading) standard applicable to industrial process and fuel-burning equipment. The Permittee shall not cause or allow the equipment to violate this standard.

MR&R requirements are listed in Section 6 of the permit.

Gas Fired:

Monitoring – The monitoring of gas fired sources for particulate matter is waived, i.e. no source testing will be required. The Department has found that natural gas fired equipment inherently has negligible PM emissions. However, the Department can request a source test for PM emissions from any smoking equipment.

Reporting – The Permittee must annually certify that only gaseous fuels are used in the equipment.

Liquid Fuel Sources, Dual Fuel Sources and Scrubber Exhaust Vents:

Monitoring – The Permittee is required to conduct PM source testing if threshold values for opacity are exceeded.

Recordkeeping - The Permittee is required to record the results of PM source tests.

Reporting - The Permittee is required to report: 1) incidents when emissions in excess of the opacity threshold values have been observed, 2) and results of PM source tests. The Permittee is required to include copies of the results of all visible emission observations with the facility operating report.

Source IDs 1, 4 - 7, 14 - 20, 28 – 33, 35 – 39, and 41:

The emissions vented from the process equipment are gases and do not contain combustion products such as carbon particulates. Therefore, because the vented gases will not contain particulates no source testing for these sources is required. Monitoring will consist of an annual certification of compliance with the particulate matter standard.

Flares:

Flares at the KNO do not combust liquid hydrocarbons or other compounds that generate carbon particulates when burned. As a result, this permit treats monitoring for flares (Source ID(s) 9 – 11, 22, and 23) in the same manner as other gas-fired equipment. The Permittee must annually certify that only gaseous fuels are used in the equipment.

Condition 5, Sulfur Compound Emissions

Applicability: The sulfur emission standard applies to operation of all industrial process and fuel-burning equipment in the State of Alaska. Source ID(s) 1, 4 – 7, 14 – 20, 28 – 33, 35 – 39, and 41 are industrial process equipment. Source ID(s) 2, 3, 9 – 13, 22 – 26, 42 – 44, and 48 - 64 are fuel-burning equipment. The standard does not apply separately to Source ID 64 because it shares a common exhaust stack with Source ID 62. The standard does not apply to Source IDs 8, 21, 34, 40, 45, 46, and 47 because storage tanks and the wharf are neither industrial processes nor fuel burning equipment. The SIP standard for sulfur dioxide applies because it is contained in the federally approved SIP dated October 1983.

Factual Basis: The condition requires the Permittee to comply with the sulfur emission standard applicable to fuel-burning and industrial process equipment. The Permittee may not cause or allow the affected equipment to violate this standard.

Field monitoring of vents and the ammonia flares is not required since the natural gas used at the facility is of extremely high quality (low sulfur) by contract and there is no likelihood of the sulfur compound emissions ever approaching the state standard.

Liquid Fuel: Sulfur dioxide comes from the sulfur in the liquid, hydrocarbon fuel. The Department has previously determined that No. 1 and No. 2 fuel oil will always comply with the emission standard.[9] Agrium is limited to only No. 1 or No. 2 fuel oil at the KNO Plant in condition 10, for SO_2 PSD avoidance and ambient air quality protection. To show compliance with the state sulfur compound standard, while using liquid fuel the Permittee is required to keep records of the fuel grade as described in condition 10.1, report as excess emissions if the fuel grade is other than No. 1 or No. 2 fuel oil under conditions 10.2, and include copies of the record in the operating report under condtion **Error! Reference source not found.**.

Gaseous Fuel: Fuel gas sulfur is measured as hydrogen sulfide (H_2S) concentration in ppm by volume (ppmv). Calculations[10] show that fuel gas containing no more than 4,000 ppmv H_2S will always comply with this emission standard. This is true for all fuel gases, even with no excess air.

Equations to calculate the exhaust gas SO_2 concentrations resulting from the combustion of fuel gas were not included in this permit. Fuel gas with an H_2S concentration of even 10 percent of 4,000 ppmv is currently not available in Alaska and is not projected to be available during the life of this permit.

[9] See memorandum from John Kuterbach to John Stone, "Maximum SO_2 Concentration from Combustion of No. 2 Diesel Fuel", dated March 24, 1998 located at: http://www.dec.state.ak.us/air/ap/docs/sulfliq.pdf

[10] See ADEC Air Permits Web Site at http://www.state.ak.us/dec/dawq/aqm/newpermit.htm, under "Stoichiometric Mass Balance Calculations of Exhaust Gas SO2 Concentration."

Agrium is limited in condition 8 to fuel gas with an H_2S content of less 40 ppmv for Source IDs 62 and 64, and in condition 21 to less than 0.8 percent by weight for Source ID 62. To show compliance with the state sulfur compound standard for all gaseous fuel used at the KNO Plant, the Permittee is required to: monitor gaseous fuel sulfur as described in condition 21.1a, maintain records as described in 21.3, and report as described in 21.4 for NSPS Subpart GG sulfur requirements. (Note that, while the Permittee may use the fuel sulfur monitoring exemption described in condition 21.2 to comply with NSPS Subpart GG, the Permittee MUST monitor fuel sulfur using condition 21.1a to show compliance with the state sulfur compound standard.) In addition, the Permittee must report as excess emissions any time the H_2S content exceeds 4,000 ppmv H2S.

Conditions 6 - 7, NO_X PSD Avoidance Requirements carried over from Permit AQ0083MSS02

Applicability and Factual Basis: Minor Permit No. AQ0083MSS02 contained requirements for NO_X PSD avoidance (originally established in previous permit-to-operate 9423-AA011). Condition 6 contains a 102 TPY NO_X emission limit for the Ammonia Flare System, to be monitored by tracking NH_3 and methane burned in the Ammonia Flare System on an annual basis. Condition 7 requires operation of the purge and vent recovery system in Plant 4.

Conditions 8- 11, CO-Gen Project – SO_2 PSD Modification Avoidance and SO_2 Ambient Air Quality Protection Requirements

Applicability and Factual Basis: Conditions 8 through 11 address fuel gas H_2S content, fuel oil usage, fuel oil grade (limits fuel sulfur to no more than 0.5 wt%S, by limiting Permittee to only No. 1 and No. 2 diesel fuel oil), and a fuel gas consumption limit.

In an application dated September 21, 2006, Agrium indicated that Source IDs 62 and 64 "are not equipped and never have been equipped for any fuel other than natural gas" (page 11). The SO_2 PSD Avoidance and ambient air quality protection requirement in this permit reflect this assumption. (Also, the Permittee must certify that these sources only fire natural gas to show compliance with the state visible emission standard as required by condition 23.1.)

Conditions 12 – 15, NSPS Subpart A Requirements

Applicability: The Department has incorporated by reference the NSPS effective July 1, 2001, for specific industrial activities, as listed in 18 AAC 50.040[11].

Most (with the exception of some storage tanks) sources subject to an NSPS are subject to Subpart A. At this facility, Source ID 12 is subject to NSPS Subpart D, Source ID 62 is subject to NSPS Subpart GG, Source ID 64 is subject to NSPS Subpart Db, and all are therefore subject to applicable provisions of Subpart A.

[11] EPA has not delegated to the Department the authority to administer the NSPS program as of the issue date of this permit.

Condition 12 - Start-up, shutdown, or malfunction record maintenance requirements in 40 C.F.R. 60.7(b) are applicable to all NSPS sources subject to Subpart A.

Condition 13 - Good air pollution control practices in 40 C.F.R. 60.11 are applicable to all NSPS sources subject to Subpart A (Source ID(s) 12, 62, and 64).

Condition 14 states that nothing in 40 CFR Part 60 prohibits the use of any credible evidence to demonstrate compliance or establish violations of relevant NSPS standards for Source ID(s) Source ID(s) 12, 62, and 64.

Condition 15 - Concealment of emissions prohibitions in 40 C.F. R. 60.12 are applicable to Source ID(s) 12, 62, and 64.

Factual Basis: Subpart A contains the general requirements applicable to all affected facilities (sources) subject to NSPS. In general the intent of NSPS is to provide technology-based emission control standards.

Conditions 16 and 17, NSPS Subpart D Standards

Applicability: Apply because the Primary Reformer (Source ID 12) is a steam generating unit of more than 73 megawatts heat input rate (250 MMBtu/hr) and was constructed or modified after August 17, 1971.

Factual Basis: The conditions incorporate NSPS Subpart D emission standards for particulate matter, opacity, and nitrogen oxides. Monitoring for compliance with the nitrogen oxides standard is determined by conducting a source test once during the life of the permit. Opacity monitoring contained in condition 3 for gas-fired sources is sufficient to determine compliance with the opacity and particulate matter standards.

Condition 18, NSPS Subpart Db Standard for Nitrogen Oxides

Applicability: Applies because the Heat Recovery Steam Generator (Source ID 64) is a steam generating unit constructed, modified, or reconstructed after June 19, 1984 and has a heat input capacity from fuels combusted of greater than 29 MW (100 MMBtu/hr).

Factual Basis: The condition incorporates the NSPS Subpart Db emission standard for nitrogen oxides. Monitoring for compliance with the standard is determined by performing a periodic source test for nitrogen oxides at the same time as Source ID 62 is being tested.

Conditions 19 and 21, NSPS Subpart GG Requirements

Applicability: NSPS Subpart GG applies to stationary gas turbines with a heat input at peak load (maximum load at 60 percent relative humidity, 59 degrees F, and 14.7 psi) equal to or greater than 10.7 gigajoules per hour (10 MMBtu/hr), based on the lower heating value of the fuel fired and constructed, modified, or reconstructed after October 3, 1977.

Factual Basis: These conditions incorporate NSPS Subpart GG NO_X emission and sulfur compound limits. The Permittee may not allow equipment to violate these standards.

NO_X Standard: For a turbine subject to 40 C.F.R. 60.332, the NO_X standard is determined by the following equation:

$$STD_{NOX} = 0.015(14.4 / Y) + F$$

where,

STD_{NOX} = allowable NO_X emissions (percent by volume at 15 percent oxygen and on a dry basis)

Y = manufacturer's maximum rated heat input (kJ/W-hr), or actual measured heat rate based on lower heating value of fuel as measured at actual peak load for the affected facility. The value of Y shall not exceed 14.4 kJ/W-hr

F = NO_X emissions allowance for fuel bound nitrogen, percent by volume, **assumed to be zero for Alaska fuel**.

Based on the manufacturer's heat rating at manufacturer's rated peak load, and assuming fuel bound nitrogen of zero, the NO_X standard is 91 ppmv for Source ID(s) 62.

SO_2 Standard: The Permittee is required to comply with one of the following sulfur requirements for Source ID(s) 62:

(1) do not cause or allow SO_2 emission in excess of 0.015 percent by volume, at 15 percent O_2 and on a dry basis (150 ppmv), or

(2) do not cause or allow the sulfur content for the fuel burned in Source ID(s) 65 to exceed 0.8 percent by weight .

Condition 19.1 - 19.2, NO_X Monitoring, Recordkeeping, and Reporting

Applicability: Continuous parametric monitoring is included in condition 19. This monitoring is necessary to ensure that turbine emissions stay below the NSPS NO_X standard.

Factual Basis: Subpart GG requires continuous monitoring of fuel consumption and the ratio of water to fuel fired in the turbine, as a parametric means of monitoring compliance by a water injected turbine with the NOx emissions limit in 40 CR 60.332(a). Condition 25 contains the requirements stated in Subpart GG for installation and operation of a continuous monitoring system, and for reporting.

Condition 20, Periodic Turbine Stack Testing for NO_X

Applicability: Periodic monitoring is included in condition 19.1. This additional monitoring is necessary to ensure that turbine emissions stay below the NSPS NO_X standard. This condition is as established in AQ0083MSS01.

Factual basis: The Department does not have enough information to make categorical determinations that certain types of turbines, or turbines with emission test results below a certain percentage of the Subpart GG NO_x emission limit will inherently comply with the Subpart GG limit at all times and will never need additional testing. After a sufficient body of NO_x data is gathered under monitoring conditions for compliance with 40 C.F.R. 60, Subpart GG, the Department may find that it has enough information to make such categorical determinations. In that event, the Department would revise the NO_x monitoring conditions. The Department may determine that to assure compliance it is necessary to retain or increase the current monitoring frequency.

These conditions do not include the initial NSPS performance test requirements. If a turbine under this permit is still subject to the performance test requirement of 40 C.F.R. 60.8, a source specific condition will be necessary.

The intent of these conditions is that turbines or groups of turbines be initially tested on a 5-year cycle. If no testing is required during the permit term, and if the same condition were used in the renewal permit initial testing could be on a 10-year testing cycle. After the first testing cycle, the Department intends to re-evaluate the necessary monitoring frequency.

The condition does not state how load must be measured. For some turbines it may be possible to directly measure load as either mechanical or electrical output. For others, it may be necessary to calculate load indirectly based on measurements of other parameters. The Department is not attempting to dictate what method is most appropriate through the permit condition, but should evaluate the adequacy of methods of calculating load based on the load monitoring proposed by the Permittee.

Subpart GG defines "emergency gas turbine[12]" and exempts turbines meeting that definition from the GG emission standards. Some turbines may be operated as standby equipment but not meet the definition of emergency turbine, so the Department has added a Method 20 monitoring threshold of 400 hours per 12-month period. For turbines expected to operate less than 400 hours the Department has also added recordkeeping for hours of operation. The Department does not intend to require the Permittee to operate a turbine solely for the purpose of testing.

The condition requires testing at a range of loads, consistent with the performance test requirements in Subpart GG, that is, test at 30, 50, 75, and 100 percent load. If testing at these four loads is not reasonable, the condition allows the Permittee to propose to the Department what test loads will be reasonable and adequate, and the Department will have the responsibility to make a finding on that proposal. If EPA has already approved alternative test loads for the initial performance test the Department would allow those test loads if the information that went into that decision were still representative of the turbine operation.

In condition 20.3c(i)(C), the Department considers "fuel type" to mean, for liquid fuels a type of fuel as described in an ASTM or similar fuel specification.

Load measurements or load calculations from load surrogate measurements are for one-hour periods. The intent is to match the averaging period for the test method. Method 20

[12] *Emergency Gas Turbine* means any stationary gas turbine that operates as a mechanical or electrical power source only when the primary power source for a facility has been rendered inoperable by an emergency situation, as defined in 40 C.F.R. 60.331(e), effective 7/01/01.

identifies a number of traverse points that vary with the size of the stack. From these points the tester is to choose at least 8 points for NO_x measurements. The time at each point is to be at least one minute plus the average response time of the instrument. The recorded value is the average steady state response. Presumably, the steady state response would exclude some or all of the response time of the instrument. Three runs are to be done at each test load.

The three runs would represent 24 minutes of measurement time or more. A one-hour average load is therefore a reasonable approximation of a load period corresponding to the test method.

Condition 21, SO_2 Standard and Monitoring, Recordkeeping, and Reporting

Applicability: This condition incorporates NSPS Subpart GG SO_2 emission and sulfur compound limits. The Permittee may not allow equipment to violate these standards.

Factual Basis: Monitoring, recordkeeping, and reporting requirements for this condition are described in NSPS Subpart GG and have been referenced here. No additional monitoring outside of the Subpart GG requirements is necessary to ensure compliance with the NSPS SO_2 standard.

Monitoring: Conditions 21.1 and 21.2 incorporates NSPS Subpart GG fuel sulfur monitoring requirements, as amended by an EPA Alternative Monitoring Schedule issued on 1/14/98.

Recordkeeping: The Permittee is required to maintain records of all sulfur monitoring data required by NSPS Subpart GG for five years as set out in 18 AAC 50.350(h)(5).

Reporting: NSPS Subpart GG SO_2 standard reporting requirements are incorporated in the permit in condition 21.4. In condition 21.4 the Department requests that a summary report of the results from the monitoring requirements in conditions 21.1 be included in the Operating Report required under condition 67.

Conditions 22 - 28 (Section 6), Visible Emissions and PM Monitoring Plan

Applicability: Applies because these conditions detail the monitoring, recordkeeping, and reporting required in conditions 3 and 4.

Factual Basis: Each permit term and condition must include MR&R requirements showing verifiable compliance with each permit term and condition. The Permittee must establish by actual visual observations which can be supplemented by other means, such as a defined Facility Operation and Maintenance Program, that the facility is in continuous compliance with the State's emission standards for visible emissions and particulate matter. The correlation between particulate matter and visible emissions that is the basis for this monitoring procedure is discussed under conditions 3 and 4.

These conditions detail a stepwise process for monitoring compliance with the State's visible emissions and particulate matter standards for liquid and gas fired sources. Equipment types covered by these conditions are internal combustion engines, turbines, heaters, boilers, and flares. Initial monitoring frequency schedules are established along with subsequent reductions or increases in frequency depending on the results of the self-monitoring program.

Monitoring frequencies for hydrocarbon fuels, both liquid and gaseous, are detailed in these conditions. The monitoring intervals for gaseous fuels are less frequent than for liquid fuels in recognition of the reduced propensity of gaseous fuels to produce particulate matter as a result of combustion. This reduced level of monitoring for individual facilities in conjunction with the very large number of gas fired sources in Alaska should provide the Department with sufficient data to evaluate the compliance history of these sources as a category.

Monitoring of the ammonia flare for opacity is not required because of the composition of the gas sent to the flare. Methane and ammonia flaring is not expected to cause soot formation and hence opacity because of the low molecular weight and high volatility of the compounds. If in the future as a result of either complaints or agency inspections opacity problems are observed periodic monitoring may be required.

Conditions 29 and 30, Prill Tower Visible Emission and PM Monitoring

Applicability: Applies because these conditions detail the monitoring, recordkeeping, and reporting required in conditions 3 and 4.

Factual Basis: Compliance monitoring with the opacity standard is conducted by four transmissometers installed in the Urea Prill Tower. Compliance monitoring with the particulate standard use the most stringent opacity standard as a surrogate for direct PM source testing.

Conditions 31 and 32, Phase II MACT Application Requirements

Applicability: Apply because the facility is a Section 112 "major source" that contains sources potentially subject to regulation under a MACT standard that has been proposed but not yet adopted at the time of permit issuance.

Factual Basis: The conditions require the facility to file a Part 2 Application for a MACT determination with the U.S. EPA by a specified date, if EPA has not adopted the relevant MACT standard by a specified date, and if the proposed MACT standard would regulate sources or emission points at the facility.

Condition 33, NESHAPS Applicability Determinations

Applicability: The Permittee has the responsibility to determine if specific federal regulations apply to its facilities.

Factual Basis: If the Permittee determines that the facility falls within a source category regulated by a MACT standard but that the facility is not subject to the relevant MACT standard, this condition requires the Permittee to keep a record of the applicability determination on site.

Conditions 34 - 34.5, NH3 Ambient Air Quality Protection Requirements

Applicability and Factual Basis: Minor Permit No. AQ0083MSS02 contained requirements for NO_X PSD avoidance (originally established in previous permit-to-operate 9423-AA011). Conditions 34 through 34.5 contain a requirement to operate an ambient air quality monitoring station for ammonia and provide detailed instructions concerning operation of the monitoring station, processing of the data, and reporting requirements.

Condition 35, Fire Training Exercises

Applicability and Factual Basis: The previous operating permit 9423-AA011 contained conditions that must be carried forward to this Title V permit. Condition 35 contains requirements for conducting fire training exercises at the facility. Those requirements have been updated to reflect the current requirements of 18 AAC 50.065.

Conditions 36 - 39, Insignificant Sources

Applicability: These general emission standards apply to all industrial processes fuel-burning equipment, and incinerators regardless of size.

Factual Basis: The conditions re-iterate the general standards and require compliance for insignificant sources. The Permittee may not cause or allow their equipment to violate these standards. Insignificant sources are not listed in the permit unless specific monitoring, recordkeeping and reporting are necessary to ensure compliance.

The Department finds that the insignificant sources at this facility do not need specific monitoring, recordkeeping and reporting to ensure compliance under these conditions.

Condition 36 requires certification that the sources did not exceed state emission standards during the previous year and did not emit any prohibited air pollution.

State air quality regulations adopted effective May 3, 2002 allow for an average six minute opacity observation. The existing regulation, limiting opacity to no more than 20% for more than 3 minutes in any one hour, is included because EPA Region X has not formally approved the changed opacity regulation as part of Alaska's State Implementation Plan (SIP).

Condition 40, Asbestos NESHAP

Applicability: The asbestos demolition and renovation requirements apply if the Permittee engages in asbestos demolition or renovation.

Factual Basis: The condition requires the Permittee to comply with asbestos demolition or renovation requirements in 40 C.F.R. 61, Subpart M. Because these regulations include adequate monitoring and reporting requirements and because the Permittee is not currently engaged in such activity, simply citing the regulatory requirements is sufficient to ensure compliance with these federal regulations.

Condition 41, Refrigerant Recycling and Disposal

Applicability: Applies if the Permittee engages in the recycling or disposal of certain refrigerants.

Factual Basis: The condition requires the Permittee to comply with the standards for recycling and emission reduction of refrigerants set forth in 40 C.F.R. 82, Subpart F, that will apply if the Permittee uses certain refrigerants. Because these regulations include adequate

monitoring and reporting requirements and because the Permittee is not currently engaged in such activity, simply citing the regulatory requirements is sufficient to ensure compliance with this federal regulation.

Condition 42, Good Air Pollution Control Practice

Applicability: Applies to all sources, **except** NSPS regulated sources, i.e., except Source ID(s) 12, 62, 63, and process vents that emit ammonia generated at upstream points in the production process.

Factual Basis: The condition requires the Permittee to comply with good air pollution control practices for all sources not subject to NSPS maintenance requirements, and for which regular maintenance is necessary to maintain compliance with emission standards.

Maintaining and operating equipment in good working order is fundamental to preventing unnecessary or excess emissions. Standard conditions for monitoring compliance with emission standards are based on the assumption that good maintenance is performed. Without appropriate maintenance, equipment can deteriorate more quickly than with appropriate maintenance. If appropriate maintenance is not applied to the equipment, the Department may have to apply more frequent periodic monitoring requirements (unless the monitoring is already continuous) to ensure that the monitoring results are representative of actual emissions.

The Permittee is required to keep maintenance records to show that proper maintenance procedures were followed, and to make the records available to the Department. The Department may use these records as a trigger for requesting source testing if the records show that maintenance has been deferred.

Condition 43, Dilution

Applicability: This state regulation applies to the Permittee because the Permittee is subject to emission standards in 18 AAC 50.

Factual Basis: The condition prohibits the Permittee from diluting emissions as a means of compliance with any standard in 18 AAC 50.

Condition 44, Reasonable Precautions to Prevent Fugitive Dust

Applicability: Bulk material handling requirements apply to the Permittee because the Permittee will engage in bulk material handling, transporting, or storing; or will engage in industrial activity at the facility.

This condition applies to operating permits for facilities that do not have an approved dust control plan, and contain one of the following sources: coal-fired boilers; coal handling facilities; construction of gravel pads or roads that are part of a permitted facility or other construction that has the potential to generate fugitive dust that reaches ambient air; commercial/industrial/municipal solid waste, air curtain, and medical waste incinerators; sewage sludge incinerators not using wet methods to handle that ash; mines; urea manufacturing; soil remediation units; or dirt roads under the control of the operator with frequent vehicle traffic.

Factual Basis: The underlying regulation, 18 AAC 50.045(d), requires the Permittee to take reasonable action to prevent particulate matter (PM) from being emitted into the ambient air.

Not all facilities have the potential to generate fugitive dust during the life of the permit. The Department will determine whether precautions are reasonable based on a variety of factors, including the distance to the facility boundaries, nature and content of the dust, proximity to neighbors, and the nature of the activity. This condition applies to the types of sources or activities that are likely to generate fugitive dust as identified above. It allows the precautions that are identified under the permit to be appropriate and specific to the activities conducted by the Permittee.

Condition 45, Stack Injection

Applicability: Stack injection requirements apply to the facility because the facility contains a stack or source constructed or modified after November 1, 1982.

Factual Basis: The condition prohibits the Permittee from releasing materials other than process emissions, products of combustion, or materials introduced to control pollutant emissions from a stack (i.e. disposing of material by injecting it into a stack). No specific monitoring for this condition is practical. Compliance is ensured by inspections, because the source or stack would need to be modified to accommodate stack injection.

Condition 46, Air Pollution Prohibited

Applicability: Air Pollution Prohibited requirements apply to the facility because the facility will have emissions.

Factual Basis: The condition prohibits the Permittee from causing any emission which is injurious to human health or welfare, animal or plant life, or property, or which would unreasonably interfere with the enjoyment of life or property. While the other permit conditions and emissions limitation should ensure compliance with this condition, unforeseen emission impacts can cause violations of this standard. These violations would go undetected except for complaints from affected persons. Therefore, to monitor compliance, the Permittee must monitor and respond to complaints.

The Permittee is required to report any complaints and injurious emissions. The Permittee must keep records of the date, time, and nature of all complaints received and summary of the investigation and corrective actions undertaken for these complaints and to submit copies of these records upon request of the Department.

The Department will determine whether the necessary actions were taken. No corrective actions are necessary if the complaint is frivolous or there is not a violation of 18 AAC 50.110, however this condition is intended to prevent the Permittee from prejudging that complaints are invalid.

Condition 47, Technology-Based Emission Standard

Applicability: Technology Based Emission Standard requirements apply to the facility because the facility contains equipment subject to a technology-based emission standard, such as BACT, MACT, LAER, NSPS or other “technologically feasible” determinations.

Factual Basis: The Permittee is required to take reasonable steps to minimize emissions if certain activity causes an exceedance of any technology-based emission standard in this permit. The conditions of this permit list applicable technology-based emission standards and require excess emission reporting for each standard in accordance with condition 65. Excess emission reporting under condition 65 requires information on the steps taken to minimize emissions. Monitoring of compliance for this condition consists of the report required under condition 65.

Condition 48, Hazardous Air Pollutant (HAP)[13] Reconstruction

Applicability: Applies to the facility because the facility is a hazardous air pollutant-(HAP-) major facility as described in 18 AAC 50.300(f).

Factual Basis: The condition requires the Permittee obtain written approval from the Department before reconstructing a HAP-major source. Pre-construction approval for reconstructing a HAP-major source is a requirement of the Clean Air Act. Alaska's construction permit program does not require a construction permit for reconstructing a source, only for reconstructing a facility. Therefore, this condition is a standard condition in all HAP-major facility operating permits.

Condition 49, Chemical Accident Prevention, 40 CFR 68

Applicability: Applies to the facility because it is a stationary source that has more than a threshold quantity of a substance regulated by the part.

Factual Basis: The Permittee is required to comply with all applicable requirements of 40 CFR 68.

Condition 50, Permit Renewal

Applicability: Applies if the Permittee intends to renew the permit.

Factual Basis: The Permittee is required to submit an application for permit renewal by the specific dates applicable to **Kenai Nitrogen Operations Plant** as listed in this condition. Monitoring, recordkeeping, and reporting for this condition consist of the application submittal.

Condition 51, Requested Source Tests

Applicability: Applies because this is a standard condition to be included in all permits.

Factual Basis: The Permittee is required to conduct source tests as requested by the Department. Monitoring consists of conducting the requested source test.

Conditions 52 - 54, Operating Conditions, Reference Test Methods, Excess Air Requirements

Applicability: Apply because the Permittee is required to conduct source tests by this permit.

[13] Also known as Hazardous Air Contaminant (HAC).

Factual Basis: The Permittee is required to conduct source test as set out in conditions 52 through 54. These conditions supplement the specific monitoring requirements stated elsewhere in this permit. Compliance monitoring with conditions 52 through 54 consist of the test reports required by condition 59.

Condition 55, Test Exemption

Applicability: Applies when the source exhaust is observed for visible emissions.

Factual Basis: As provided in 18 AAC 50.345(a), 5/03/02, the requirements for test plans, notifications and reports do not apply to visible emissions observations by smoke readers, except in connection with required particulate matter testing.

Conditions 56 - 59, Test Deadline Extension, Test Plans, Notifications and Reports

Applicability: Apply because the Permittee is required to conduct source test by this permit.

Factual Basis: Standard conditions 18 AAC 50.345(l) - (o) are incorporated through these conditions. These standard conditions supplement specific monitoring requirements stated elsewhere in this permit. The source test itself monitors compliance with this condition.

Condition 60, Particulate Matter (PM) Calculations

Applicability: Applies when the Permittee tests for compliance with the PM standard.

Factual Basis: The condition incorporates a regulatory requirement for PM source tests. The Permittee must use the equation given in this condition to calculate the PM emission concentration from the source test results. This condition supplements specific monitoring requirements stated elsewhere in this permit.

Condition 61, Certification

Applicability: This is a standard condition to be included in all permits. Applies because every permit requires the Permittee to submit reports.

Factual Basis: This condition requires the Permittee to certify all reports submitted to the Department. To ease the certification burden on the Permittee, the condition allows the excess emission reports to be **certified** with the facility report, even though it must still be **submitted** more frequently than the facility operating report. This condition supplements the reporting requirements of this permit.

Condition 62, Submittals

Applicability: Applies because the Permittee is required to send reports to the Department.

Factual Basis: This condition requires the Permittee to send submittals to the address specified in this condition. Receipt of the submittal at the correct Department office is sufficient monitoring for this condition. This condition supplements the reporting requirements of this permit.

Condition 63, Information Requests

Applicability: Applies to all Permittees, and incorporates a standard condition.

Factual Basis: This condition incorporates a standard condition in regulation, which requires the Permittee to submit information requested by the Department. Monitoring consists of receipt of the requested information.

Condition 64, Recordkeeping Requirements

Applicability: Applies because the Permittee is required by the permit to keep records.

Factual Basis: The condition restates the regulatory requirements for recordkeeping, and supplements the recordkeeping defined for specific conditions in the permit. The records being kept provide an evidence of compliance with this requirement.

Condition 65, Excess Emission and Permit Deviation Reports

Applicability: Applies when the emissions or operations deviate from the requirements of the permit.

Factual Basis: This condition satisfies two state regulations related to excess emissions - the technology-based emission standard regulation and the excess emission regulation. Although there are some differences between the regulations, the condition satisfies the requirements of each regulation.

The reports themselves and the other monitoring records required under this permit provide monitoring of whether the Permittee has complied with the condition. Please note that there may be additional federally required excess emission reporting requirements.

Condition 66, NSPS and NESHAP Reports

Applicability: Applies to facilities subject to NSPS and NESHAP federal regulations.

Factual Basis: The condition supplements the specific reporting requirements in 40 C.F.R. 60 and 40 C.F.R. 61. The reports themselves provide monitoring for compliance with this condition.

Condition 67, Operating Reports

Applicability: Applies to all permits.

Factual Basis: The condition restates the requirements for reports listed in regulation. The condition supplements the specific reporting requirements elsewhere in the permit. The reports themselves provide monitoring for compliance with this condition.

Condition 68, Annual Compliance Certification

Applicability: Applies to all Permittees.

Factual Basis: This condition specifies the periodic compliance certification requirements, and specifies a due date for the annual compliance certification. The reports themselves provide monitoring for compliance with this condition.

Conditions 69 - 75, Standard Conditions

Applicability: Applies because these are standard conditions to be included in all permits.

Factual Basis: These are standard conditions required for all operating permits.

Condition 76, Permit Shield

Applicability: Applies because the Permittee has requested a shield for the applicable requirements listed under this condition.

Factual Basis: Table 2 of Operating Permit No. AQ0083TVP01 shows the permit shields that the Department granted to the Permittee. The permit conditions set forth the requirements that the Department determined were not applicable to the facility.