

217/782-2113

"REVISED"
TITLE V - CLEAN AIR ACT PERMIT PROGRAM (CAAPP) PERMIT
and
TITLE I PERMIT¹

PERMITTEE

Natural Gas Pipeline of America
Attn: Lisa Carty, Air Quality Engineer
Kinder Morgan, Inc.
370 Van Gordon Street, P.O. Box 281304
Lakewood, Colorado 80228-8304

I.D. No.: 051808AAB
Application No.: 95120217

Date Received: December 8, 1995
Date Issued: March 14, 2002
Expiration Date:¹ March 14, 2007

Operation of: Natural Gas Transmission Station #206
Source Location: R.R. #2, Box 142B, St. Elmo, Fayette County
Responsible Official: Joseph McLaughlin, Director of Operations

This permit is hereby granted to the above-designated Permittee to operate a natural gas transmission station, pursuant to the above referenced permit application. This permit is subject to the conditions contained herein.

Revision Date Received: May 10, 2005
Revision Date Issued: June 9, 2006
Purpose of Revision: Administrative Amendment

This administrative amendment consists of changing the name and address of the technical person. Because the changes in the permit were only administrative, no formal public notice was issued.

This document only contains those portions of the entire CAAPP permit that have been revised as a result of this permitting action. If a conflict exists between this document and previous versions of the CAAPP permit, this document supercedes those terms and conditions of the permit for which the conflict exists. The previous permit issued March 14, 2002 is incorporated herein by reference. Please attach a copy of this amendment and the following revised pages to the front of the most recently issued entire permit.

If you have any questions concerning this permit, please contact Mohamed Anane at 217/782-2113.

Donald E. Sutton, P.E.
Manager, Permit Section
Division of Air Pollution Control

DES:MA:psj

cc: Illinois EPA, FOS Region 3
CES
Lotus Notes

¹ This permit contains terms and conditions that address the applicability, and, if determined applicable, substantive requirements of Title I of the Clean Air Act (CAA) and regulations promulgated thereunder, including 40 CFR 52.21, Prevention of Significant Deterioration (PSD) and 35 IAC Part 203, Major Stationary Sources Construction and Modification. The authority for these provisions is found in these regulations and in the general authority provided to the Illinois EPA by Section 9.1 of the Environmental Protection Act (Act) and Sections 39(a) and 39.5(7)(a) of the Act, which authorize the Illinois EPA to include conditions in permits that are required to accomplish the purposes of the Act. Any such terms and conditions are specifically identified within this permit as T1 conditions. These terms and conditions continue in effect as provided by Condition 8.7 of this permit, notwithstanding the expiration date specified above, as their authority derives from Title I, as well as from Title V of the CAA.

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1.0 SOURCE IDENTIFICATION

1.1 Source

Natural Gas Pipeline Company of America - Station 206
R.R. #2, Box 142B
St. Elmo, Illinois 62458
630/691-3756

I.D. No.: 051808AAB
Standard Industrial Classification: 4922, Natural Gas
Transmission

1.2 Owner/Parent Company

Natural Gas Pipeline Company of America (Kinder Morgan)
370 Van Gordon Street
Post Office Box 281304
Lakewood, Colorado 80228-8304

1.3 Operator

Natural Gas Pipeline Company of America
R.R. #2, Box 142B
St. Elmo, Illinois 62458

Lisa Carty
303/914-7575

1.4 General Source Description

The Natural Gas Pipeline - Station 206 is located in St. Elmo, in Fayette County. The source utilizes compressors driven by natural gas fired reciprocating engines for the transmission of natural gas through pipelines and also for injection/withdrawal of natural gas contained in high pressure, under ground storage fields. Station 206 also operates natural gas dehydration equipment, an acid gas sweetening unit, and a sulfur recovery unit. The primary sources of pollutants at this location are the natural gas fired engines, dehydration equipment, flare and emission units that have been determined to be insignificant emission sources.

2.0 LIST OF ABBREVIATIONS/ACRONYMS USED IN THIS PERMIT

Acfm	Actual cubic feet per minute
Act	Illinois Environmental Protection Act [415 ILCS 5/1 et seq.]
AIRS	Aerometric Information Retrieval System
AP-42	Compilation of Air Pollutant Emission Factors, Volume 1, Stationary Point and Other Sources (and Supplements A through F), USEPA, Office of Air Quality Planning and Standards, Research Triangle Park, NC 27711
ASTM	American Society for Testing and Materials
Btu	British thermal unit
CAA	Clean Air Act [42 U.S.C. Section 7401 et seq.]
CAAPP	Clean Air Act Permit Program
CFR	Code of Federal Regulations
CO	Carbon Monoxide
CO ₂	Carbon Dioxide
dscf	Dry Standard Cubic Feet
dscm	Dry Standard Cubic Meter
°F	degrees Fahrenheit
ft	Foot
ft ²	square feet
ft ³	cubic foot
g	Gram
gr	Grains
Gal	Gallon
H ₂ S	Hydrogen Sulfide
HAP	Hazardous Air Pollutant
Hp	Horsepower
hr	Hour
IAC	Illinois Administrative Code
ILCS	Illinois Compiled Statutes
I.D. No.	Identification Number of Source, assigned by Illinois EPA
Illinois EPA	Illinois Environmental Protection Agency
in	Inches
K	degrees Kelvin
Kg	Kilogram
kpa	Kilopascals
kW	Kilowatts
l	Liter
lb	Pound
LT/D	Long Ton per Day
m	Meter
m ²	square meter
mg	Milligram
min	Minute
mmBtu	Million British thermal units
mmscf	Million Standard Cubic Feet
mo	Month
MW	mega-watts
NESHAP	National Emission Standards for Hazardous Air Pollutants
NGPL	National Gas Pipeline - Station 206

NO _x	Nitrogen Oxides
NSPS	New Source Performance Standards
PM	Particulate Matter
PM ₁₀	Particulate matter with an aerodynamic diameter less than or equal to a nominal 10 microns as measured by applicable test or monitoring methods
ppm	parts per million
PSD	Prevention of Significant Deterioration
psia	pounds per square inch absolute
scf	standard cubic feet
SIC	Standard Industrial Classification
SO ₂	Sulfur Dioxide
T1	Title I - identifies Title I conditions that have been carried over from an existing permit
T1N	Title I New - identifies Title I conditions that are being established in this permit
T1R	Title I Revised - identifies Title I conditions that have been carried over from an existing permit and subsequently revised in this permit
TPY	Ton per Year
USEPA	United States Environmental Protection Agency
VOC	Volatile Organic Compounds
VOL	Volatile Organic Liquid
VOM	Volatile Organic Material
yr	Year

3.0 INSIGNIFICANT ACTIVITIES

3.1 Identification of Insignificant Activities

The following activities at the source constitute insignificant activities as specified in 35 IAC 201.210:

- 3.1.1 Activities determined by the Illinois EPA to be insignificant activities, pursuant to 35 IAC 201.210(a)(1) and 201.211, as follows:

Corrosion Inhibitor Tank
Schafer Operations
Road Dust
Stretford Pond
Slugcatcher
Glycol Dehydration Unit Reboilers

- 3.1.2 Activities that are insignificant activities based upon maximum emissions, pursuant to 35 IAC 201.210(a)(2) or (a)(3), as follows:

None

- 3.1.3 Activities that are insignificant activities based upon their type or character, pursuant to 35 IAC 201.210(a)(4) through (18), as follows:

Direct combustion units designed and used for comfort heating purposes and fuel combustion emission units as follows: (A) Units with a rated heat input capacity of less than 2.5 mmBtu/hr that fire only natural gas, propane, or liquefied petroleum gas; (B) Units with a rated heat input capacity of less than 1.0 mmBtu/hr that fire only oil or oil in combination with only natural gas, propane, or liquefied petroleum gas; and (C) Units with a rated heat input capacity of less than 200,000 Btu/hr which never burn refuse, or treated or chemically contaminated wood [35 IAC 201.210(a)(4)].

Storage tanks of organic liquids with a capacity of less than 10,000 gallons and an annual throughput of less than 100,000 gallons per year, provided the storage tank is not used for the storage of gasoline or any material listed as a HAP pursuant to Section 112(b) of the CAA [35 IAC 201.210(a)(10)].

Storage tanks of any size containing virgin or re-refined distillate oil, hydrocarbon condensate from natural gas pipeline or storage systems, lubricating oil, or residual fuel oils [35 IAC 201.210(a)(11)].

Gas turbines and stationary reciprocating internal combustion engines of less than 112 kW (150 horsepower) power output [35 IAC 201.210(a)(15)].

Gas turbines and stationary reciprocating internal combustion engines of between 112 kW and 1,118 kW (150 and 1,500 horsepower) power output that are emergency or standby units [35 IAC 201.210(a)(16)].

Storage tanks of any size containing exclusively soaps, detergents, surfactants, glycerin, waxes, vegetable oils, greases, animal fats, sweeteners, corn syrup, aqueous salt solutions, or aqueous caustic solutions, provided an organic solvent has not been mixed with such materials [35 IAC 201.210(a)(17)].

Loading and unloading systems for railcars, tank trucks, or watercraft that handle only the following liquid materials, provided an organic solvent has not been mixed with such materials: soaps, detergents, surfactants, lubricating oils, waxes, glycerin, vegetable oils, greases, animal fats, sweetener, corn syrup, aqueous salt solutions, or aqueous caustic solutions [35 IAC 201.210(a)(18)].

3.1.4 Activities that are considered insignificant activities pursuant to 35 IAC 201.210(b).

3.2 Compliance with Applicable Requirements

Insignificant activities are subject to applicable requirements notwithstanding status as insignificant activities. In particular, in addition to regulations of general applicability, such as 35 IAC 212.301 and 212.123 (Condition 5.2.2), the Permittee shall comply with the following requirements, as applicable:

3.2.1 For each cold cleaning degreaser, the Permittee shall comply with the applicable equipment and operating requirements of 35 IAC 215.182, 218.182, or 219.182.

3.2.2 For each particulate matter process emission unit, the Permittee shall comply with the applicable particulate matter emission limit of 35 IAC 212.321 or 212.322. For example, the particulate matter emissions from a process emission unit shall not exceed 0.55 pounds per hour if the emission unit's process weight rate is 100 pounds per hour or less, pursuant to 35 IAC 266.110.

3.2.3 For each organic material emission unit that uses organic material, e.g., a mixer or printing line, the Permittee shall comply with the applicable VOM emission limit of 35 IAC 215.301, 218.301, or 219.301, which requires that

organic material emissions not exceed 8.0 pounds per hour or do not qualify as photochemically reactive material as defined in 35 IAC 211.4690.

3.3 Addition of Insignificant Activities

- 3.3.1 The Permittee is not required to notify the Illinois EPA of additional insignificant activities present at the source of a type that is identified in Condition 3.1, until the renewal application for this permit is submitted, pursuant to 35 IAC 201.212(a).
- 3.3.2 The Permittee must notify the Illinois EPA of any proposed addition of a new insignificant activity of a type addressed by 35 IAC 201.210(a) and 201.211 other than those identified in Condition 3.1, pursuant to Section 39.5(12) (b) of the Act.
- 3.3.3 The Permittee is not required to notify the Illinois EPA of additional insignificant activities present at the source of a type identified in 35 IAC 201.210(b).

4.0 SIGNIFICANT EMISSION UNITS AT THIS SOURCE

Emission Unit	Plant Emission Unit	Emission Unit Description	Rated Capacity	Date of Construction	Emission Control
01	01-ENG	Natural Gas Fired Engine, Cooper GMVC	1,000 HP	1966	None
	02-ENG	Natural Gas Fired Engine, Cooper GMVC	1,000 HP	1966	None
	03-ENG	Natural Gas Fired Engine, Clark TLA	2,000 HP	1969	None
	04-ENG	Natural Gas Fired Engine, Cooper GMVH-10	2,000 HP	1972	None
	05-ENG	Natural Gas Fired Engine, Waukesha 12V-AT25GL	2,587 HP	1993	None
02	AMINE-1	Amine Plants		Modified in 1992	Stretford Unit STRET-1
03	1A-DHY	Glycol Dehydration Unit #1A Still Vent	140 mmscf/day	1969	Flare 01-FLR
	2A-DHY	Glycol Dehydration Unit #2A Still Vent	140 mmscf/day	1969	
	1B-DHY	Glycol Dehydration Unit #1B Still Vent	115 mmscf/day	1973	
	2B-DHY	Glycol Dehydration Unit #2B Still Vent	115 mmscf/day	1973	
	03-DHY	Glycol Dehydration Unit #03 Still Vent	0.500 mmscf/day	1980	
04	01-BOL	Steam Boiler	8.0 mmBtu/hr	1969	None
	STRET-BOL	Steam Boiler	6.28 mmBtu/hr	1995	None
05	ACID-RBOL-1	Amine Boiler #1	12.0 mmBtu/hr	1967	None
	ACID-RBOL-2	Amine Boiler #2	12.0 mmBtu/hr	1969	None
06	01-LHT	Pipe Line Heater #1	16.0 mmBtu/hr	1992	None
	02-LHT	Pipe Line Heater #2	10.0 mmBtu/hr	1975	None
	03-LHT	Pipe Line Heater #3	12.0 mmBtu/hr	1969	None
07	GT1	Gasoline Storage Tank	1,000 Gallon	-	Submerged Loading
	MT1	Methanol Storage Tank	10,000 Gallon	-	Bottom Fill Tank
08	02-FLR	Liquid Handling	---	2000	Vapor Recovery System/Flare

5.0 OVERALL SOURCE CONDITIONS

5.1 Source Description

5.1.1 This permit is issued based on the source requiring a CAAPP permit as a major source of NO_x, SO₂, VOM, and HAP emissions.

5.2 Applicable Regulations

5.2.1 Specific emission units at this source are subject to particular regulations as set forth in Section 7 (Unit-Specific Conditions) of this permit.

5.2.2 In addition, emission units at this source are subject to the following regulations of general applicability:

- a. No person shall cause or allow the emission of fugitive particulate matter from any process, including any material handling or storage activity, that is visible by an observer looking generally overhead at a point beyond the property line of the source unless the wind speed is greater than 40.2 kilometers per hour (25 miles per hour), pursuant to 35 IAC 212.301 and 212.314.
- b. No person shall cause or allow the emission of smoke or other particulate matter, with an opacity greater than 30 percent, into the atmosphere from any emission unit other than those emission units subject to the requirements of 35 IAC 212.122, pursuant to 35 IAC 212.123(a), except as allowed by 35 IAC 212.123(b) and 212.124.

5.2.3 The Permittee shall comply with the standards for recycling and emissions reduction of ozone depleting substances pursuant to 40 CFR Part 82, Subpart F, except as provided for motor vehicle air conditioners in Subpart B of 40 CFR Part 82:

- a. Persons opening appliances for maintenance, service, repair, or disposal must comply with the required practices pursuant to 40 CFR 82.156.
- b. Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to 40 CFR 82.158.
- c. Persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program pursuant to 40 CFR 82.161.

5.2.4 Risk Management Plan

Should this stationary source, as defined in 40 CFR Section 68.3, become subject to the Accidental Release Prevention regulations in 40 CFR Part 68, then the owner or operator shall submit [40 CFR 68.215(a)(2)(i) and (ii)]:

- a. A compliance schedule for meeting the requirements of 40 CFR Part 68 by the date provided in 40 CFR 68.10(a); or
- b. A certification statement that the source is in compliance with all requirements of 40 CFR Part 68, including the registration and submission of the Risk Management Plan (RMP), as part of the annual compliance certification required by 40 CFR Part 70 or 71.

- 5.2.5 a. Should this stationary source become subject to a regulation under 40 CFR Parts 60, 61, or 63, or 35 IAC after the date issued of this permit, then the owner or operator shall, in accordance with the applicable regulation(s), comply with the applicable requirements by the date(s) specified and shall certify compliance with the applicable requirements of such regulation(s) as part of the annual compliance certification, as required by 40 CFR Part 70 or 71.
- b. No later than upon the submittal for renewal of this permit, the owner or operator shall submit, as part of an application, the necessary information to address either the non-applicability of, or demonstrate compliance with all applicable requirements of any potentially applicable regulation which was promulgated after the date issued of this permit.

5.2.6 Episode Action Plan

- a. If the source is required to have an episode action plan pursuant to 35 IAC 244.142, the Permittee shall maintain at the source and have on file with the Illinois EPA a written episode action plan (plan) for reducing the levels of emissions during yellow alerts, red alerts, and emergencies, consistent with safe operating procedures. The plan shall contain the information specified in 35 IAC 244.144.
- b. The Permittee shall immediately implement the appropriate steps described in this plan should an air pollution alert or emergency be declared.
- c. If a change occurs at the source which requires a revision of the plan (e.g., operational change, change in the source contact person), a copy of the revised plan shall be submitted to the Illinois EPA

for review within 30 days of the change. Such plans shall be further revised if disapproved by the Illinois EPA.

- d. For sources required to have a plan pursuant to 35 IAC 244.142, a copy of the original plan and any subsequent revisions shall be sent to:
 - i. Illinois EPA, Compliance Section; and
 - ii. For sources located in Cook County and outside of the city of Chicago: Cook County Department of Environmental Control; or
 - iii. For sources located within the city of Chicago: Chicago Department of Environmental Control.

5.2.7 CAM Plan

This stationary source has a pollutant-specific emissions unit that is subject to 40 CFR Part 64, Compliance Assurance Monitoring (CAM) for Major Stationary Sources. The source must submit a CAM plan for each affected pollutant-specific emissions unit upon application for renewal of the initial CAAPP permit, or upon a significant modification to the CAAPP permit for the construction or modification of a large pollutant-specific emissions unit which has the potential post-control device emissions of the applicable regulated air pollutant that equals or exceeds major source threshold levels.

5.3 Non-Applicability of Regulations of Concern

None

5.4 Source-Wide Operational and Production Limits and Work Practices

In addition to the source-wide requirements in the Standard Permit Conditions in Section 9, the Permittee shall fulfill the following source-wide operational and production limitations and/or work practice requirements:

None

5.5 Source-Wide Emission Limitations

5.5.1 Permitted Emissions for Fees

The annual emissions from the source, not considering insignificant activities as addressed by Section 3.0 of this permit, shall not exceed the following limitations. The overall source emissions shall be determined by adding emissions from all emission units. Compliance with these limits shall be determined on a calendar year basis.

These limitations (Condition 5.5.1) are set for the purpose of establishing fees and are not federally enforceable.

Permitted Emissions of Regulated Pollutants

Pollutant	Tons/Year
Volatile Organic Material (VOM)	307.3
Sulfur Dioxide (SO ₂)	451.5
Particulate Matter (PM)	7.2
Nitrogen Oxides (NO _x)	529.67
HAP, not included in VOM or PM	2.62
Total	1,298.29

5.5.2 Emissions of Hazardous Air Pollutants

Source-wide emission limitations for HAPs as listed in Section 112(b) of the CAA are not set. This source is considered to be a major source of HAPs.

5.5.3 Other Source-Wide Emission Limitations

Other source-wide emission limitations are not set for this source pursuant to either the federal rules for Prevention of Significant Deterioration (PSD), 40 CFR 52.21, Illinois EPA rules for Major Stationary Sources Construction and Modification, 35 IAC Part 203, or Section 502(b)(10) of the CAA. However, there may be unit specific emission limitations set forth in Section 7 of this permit pursuant to these rules.

5.6 General Recordkeeping Requirements

5.6.1 Emission Records

The Permittee shall maintain records of the following items for the source to demonstrate compliance with Condition 5.5.1 pursuant to Section 39.5(7)(b) of the Act:

Total annual emissions on a calendar year basis for the emission units covered by Section 7 (Unit Specific Conditions) of this permit.

5.6.2 General Records

N/A

5.6.3 Records for Specific Groups

N/A

5.6.4 Records for VOM and HAPs

The Permittee shall keep records for VOM and HAPs.

5.6.5 Records for Operating Scenarios

N/A

5.6.6 Retention and Availability of Records

- a. All records and logs required by this permit shall be retained for at least five years from the date of entry (unless a longer retention period is specified by the particular recordkeeping provision herein), shall be kept at a location at the source that is readily accessible to the Illinois EPA or USEPA, and shall be made available for inspection and copying by the Illinois EPA or USEPA upon request.
- b. The Permittee shall retrieve and print, on paper during normal source office hours, any records retained in an electronic format (e.g., computer) in response to an Illinois EPA or USEPA request for records during the course of a source inspection.

5.7 General Reporting Requirements

5.7.1 General Source-Wide Reporting Requirements

The Permittee shall promptly notify the Illinois EPA, Compliance Section of noncompliance with the permit requirements as follows pursuant to Section 39.5(7)(f)(ii) of the Act. Reports shall describe the probable cause of such deviations, and any corrective actions or preventive measures taken.

5.7.2 Annual Emissions Report

The annual emissions report required pursuant to Condition 9.7 shall contain emissions information for the previous calendar year.

5.8 General Operational Flexibility/Anticipated Operating Scenarios

N/A

5.9 General Compliance Procedures

5.9.1 General Procedures for Calculating Permitted Emissions

Compliance with the source-wide emission limits specified in Condition 5.5 shall be based on the recordkeeping and reporting requirements, and Compliance Procedures in Section 7 (Unit Specific Conditions) of this permit.

6.0 NOT APPLICABLE TO THIS PERMIT

7.0 UNIT SPECIFIC CONDITIONS

7.1 Unit 01: Natural Gas Fired Engines

7.1.1 Description

These engines are used for natural gas compression and powering station generators. Each engine burns natural gas as a fuel.

7.1.2 List of Emission Units and Pollution Control Equipment

Plant Emission Unit	Natural Gas Fired Engine Description	Rated Horse Power
01-ENG	Cooper GMVC	1,000 HP
02-ENG	Cooper GMVC	1,000 HP
03-ENG	Clark TLA	2,000 HP
04-ENG	Cooper GMVH-10	2,000 HP
05-ENG	Waukesha 12V-AT25GL	2,587 HP

7.1.3 Applicability Provisions and Applicable Regulations

- a. The "affected engine" for the purpose of these unit-specific conditions is an emission unit described in conditions 7.1.1 and 7.1.2.
- b. No person shall cause or allow the emission of sulfur dioxide into the atmosphere from any process emission unit to exceed 2,000 ppm [35 IAC 214.301].
- c. No person shall cause or allow the discharge of more than 3.6 kg/hr (8 lb/hr) of organic material into the atmosphere from any emission unit, except as provided in 35 IAC 215.302, 215.303, or 215.304 and the following exemption: If no odor nuisance exists the limitation of 35 IAC 215 Subpart G shall only apply to photochemically reactive material [35 IAC 215.301].
- d. Each affected engine is subject to the emission limits identified in Condition 5.2.2.

7.1.4 Non-Applicability of Regulations of Concern

- a. The affected engine is not subject to the requirements of 35 IAC 212.321 or 212.322 because due to the unique nature of these units, a process weight rate can not be set so that such rules can not reasonably be applied.
- b. The affected engine is not subject to 35 IAC 216.121, emissions of carbon monoxide from fuel combustion emission units, because the affected engine is not by definition a fuel combustion emission unit.

7.1.5 Operational and Production Limits and Work Practices

- a. Natural Gas shall be the only fuel fired in the affected engine.
- b. Startup Provisions

The Permittee is authorized to operate an affected engine in violation of the applicable limit of 35 IAC 212.123 during startup pursuant to 35 IAC 201.262, as the Permittee has affirmatively demonstrated that all reasonable efforts will be made to minimize startup emissions, duration of individual starts, and frequency of startups. This authorization is subject to the following:

This authorization only extends for a period of up to two-hours following initial firing of fuel during each start-up event.

7.1.6 Emission Limitations

In addition to Condition 5.2.2 and the source wide emission limitations in Condition 5.5, the affected engine 05-ENG is subject to the following:

- a. Emissions from affected engine 05-ENG (Waukesha 12V-AT25GL) shall not exceed 12.83 lb/hr; 32.33 tons/yr of CO, 9.7 lb/hr; 24.44 tons/yr NO_x, and 2.85 lb/hr; 7.18 ton/yr VOM derived from a maximum operating time of 5,040 hr/yr. These limits are based on Construction Permit Number 91110071. [T1]
- b. Compliance with annual limits shall be determined on a monthly basis from the sum of the data for the current month plus the preceding 11 months (running 12 month total) [T1].

The above limitations were established in Construction Permit #91110071, pursuant to Title I of the CAA, specifically 40 CFR 52.21, Prevention of Significant Deterioration (PSD). These limits ensure that the construction and/or modification addressed in the aforementioned permit does not constitute a new major source or major modification pursuant to these rules.

7.1.7 Testing Requirements

None

7.1.8 Monitoring Requirements

None

7.1.9 Recordkeeping Requirements

In addition to the records required by Condition 5.6, the Permittee shall maintain records of the following items for the affected engine to demonstrate compliance with Conditions of Sections 5.5 and 7.1 pursuant to Section 39.5(7) (b) of the Act:

- a. Hours of operation of the affected engine 05-ENG (hrs/yr).

7.1.10 Reporting Requirements

The Permittee shall promptly notify the Illinois EPA, Compliance Section of noncompliance of an affected engine with the permit requirements as follows pursuant to Section 39.5(7) (f) (ii) of the Act. Reports shall describe the probable cause of such deviations, and any corrective actions or preventive measures taken:

- a. Emissions from an affected engine 05-ENG in excess of the limits specified in Condition 7.1.6 within 30 days of such an occurrence.

7.1.11 Operational Flexibility/Anticipated Operating Scenarios

The Permittee shall only repair or replace equipment specified in Conditions 7.1 with equipment of equal or lesser maximum heat input capacity having equal or lesser emission rates. This condition does not affect the Permittee's obligation to properly obtain a construction permit in a timely manner for any activity constituting construction or modification of the source, as defined in 35 IAC 201.142.

7.1.12 Compliance Procedures

- a. Compliance provisions addressing Condition 7.1.3(b) and 7.1.3(c) are not set by this permit as compliance is assumed to be achieved by the normal work practices and maintenance activities inherent in operation of the affected gas engines.
- b. Compliance with the emission limits in Condition 5.5 and 7.1.6 from the affected engines shall be based on the recordkeeping requirements in Condition 7.1.9 and the emission factors and formulas listed below:

Pollutant	Engines 01-ENG and 02-ENG		Engines 03-ENG and 04-ENG		Engine 05-ENG	
	(lb/hr)	Basis	(lb/hr)	Basis	(lb/hr)	Basis
VOM	3.63	1	2.374	1	2.85	2
SO ₂	0.006	2	0.015	2	0.02	2

PM	0.095	2	0.25	2	0.32	2
NO _x	24.3	2	60.7	2	9.7	1

Factor Basis:

- 1 Stack test data - Pound per hour (lb/hr) factors were calculated using maximum consumption conditions.
- 2 AP-42 (5th Edition), Chapter 3, Section 2, Table 3.2-1 10/96 - Emission factor in units of lb/hp-hr were used in combination with maximum operating conditions to establish the lb/hr emission rate.

Gas Engine Emissions (ton/year) = The Appropriate
Emission Factor [lb/hr] x Actual Operating Hours
[hours/year] x 0.0005 [ton/lb]

7.2 Unit 02: Amine Plant and Stretford Sulfur Recovery Unit
 Primary Control: Stretford Unit, STRET-1
 Secondary Control: Flare 01-FLR

7.2.1 Description

Hydrogen sulfide (H₂S) and Carbon dioxide (CO₂) are removed from natural gas by a Sulfinol absorber unit. The H₂S is then piped directly to the Stretford Sulfur Recovery Unit where sulfur solids are produced. Residual H₂S is piped to the flare located in the Stretford Sulfur Recovery Unit.

7.2.2 List of Emission Units and Pollution Control Equipment

Plant Emission Unit	Description	Emission Control
AMINE-1	Amine Plants	Stretford Sulfur Recovery (STRET-1) and Flare (01-FLR)

7.2.3 Applicability Provisions and Applicable Regulations

- a. The "affected Amine Plant and Stretford Sulfur Recovery Unit" for the purpose of these unit-specific conditions is an emission unit described in conditions 7.2.1 and 7.2.2.
- b. An "affected Amine Plant and Stretford Sulfur Recovery Unit" is subject to the NSPS for Onshore Natural Gas Processing, 40 CFR 60 Subparts A and LLL, because the design capacity of this unit is greater than 2 long tons per day of hydrogen sulfide (H₂S) and commenced construction or modification after January 20, 1984. The Illinois EPA administers the NSPS for subject sources in Illinois pursuant to a delegation agreement with the USEPA.
 - i. Pursuant to 40 CFR 60.642(a), the owner or operator of an affected facility shall achieve at a minimum, SO₂ emission reduction efficiency (Z_i) determined from the following table.

H ₂ S Content of Acid Gas (Y), %	Sulfur Feed Rate (X), LT/D			
	2.0 ≤ X ≤ 5.0	5.0 < X ≤ 15.0	15.0 < X ≤ 300.0	X > 300.0
Y ≥ 50	79.0	EQN or 99.8, Whichever is Smaller		
20 ≤ Y < 50	79.0	EQN or 97.9, Whichever is Smaller		97.9
10 ≤ Y < 20	79.0	EQN or 93.5, Whichever is Smaller		93.5
Y < 10	79.0	79.0	79.0	79.0

Where: EQN = 88.51X^{0.0101}Y^{0.0125}

X = Sulfur Feed Rate

Y = Sulfur Content of the Acid Gas

- ii. Pursuant to 40 CFR 60.642(b), after demonstrating compliance with 40 CFR 60.642(b) and Condition 7.2.3(a)(i), the owner or operator of an affected facility shall achieve at a minimum, SO₂ emission reduction efficiency (Z_c) determined from the following table.

H ₂ S Content of Acid Gas (Y), %	Sulfur Feed Rate (X), LT/D			
	2.0 ≤ X ≤ 5.0	5.0 < X ≤ 15.0	15.0 < X ≤ 300.0	X > 300.0
Y ≥ 50	74.0	EQN or 99.8, Whichever is Smaller		
20 ≤ Y < 50	74.0	EQN or 97.5, Whichever is Smaller		
10 ≤ Y < 20	74.0	EQN or 90.8, Whichever is Smaller		90.8
Y < 10	74.0	74.0	74.0	74.0

Where: $EQN = 85.35X^{0.0144}Y^{0.0128}$

X = Sulfur Feed Rate

Y = Sulfur Content of the Acid Gas

- c. No person shall cause or allow the discharge of more than 3.6 kg/hr (8 lb/hr) of organic material into the atmosphere from any emission unit, except as provided in 35 IAC 215.302, 215.303, or 215.304 and the following exemption: If no odor nuisance exists the limitation of 35 IAC 215 Subpart G shall only apply to photochemically reactive material [35 IAC 215.301].

- d. Applicable Emission Limits

The affected Amine Plant and Stretford Sulfur Recovery Unit is subject to the emission limits identified in Condition 5.2.2.

7.2.4 Non-Applicability of Regulations of Concern

- a. This permit is issued based on the affected Amine Plant and Stretford Sulfur Recovery Unit not being subject to the requirements of 35 IAC 212.321, because the liquid and gaseous fuels and combustion of air used in the units is excluded from the definition of process weight rate, as defined in 35 IAC 211.5250.

7.2.5 Operational and Production Limits and Work Practices

- a. At all times, including periods of startup, shutdown, and malfunction, the Permittee shall, to the extent practicable, maintain and operate any affected facility in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Illinois EPA or the

USEPA which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source [40 CFR 60.11(d)].

7.2.6 Emission Limitations

In addition to Condition 5.2.2 and the source wide emission limitations in Condition 5.5, the affected flare is subject to the following:

- a. This permit is issued based on estimated incremental emissions of (NO_x 0.66TPY; CO 0.16 TPY; VOM 0.03 TPY; H₂S 0.19 TPY and SO₂ 34.7 TPY) from the flare. This estimate is based on the information provided in the permit application. [T1].

Compliance with annual limits shall be determined on a monthly basis from the sum of the data for the current month plus the preceding 11 months (running 12 month total) [T1].

The above limitations were established in Construction Permit #91110071, pursuant to Title I of the CAA, specifically 40 CFR 52.21, Prevention of Significant Deterioration (PSD). These limits ensure that the construction and/or modification addressed in the aforementioned permit does not constitute a new major source or major modification pursuant to these rules. [T1].

7.2.7 Testing Requirements

- a. The Permittee shall conduct a performance test required by 40 CFR 60.8 to demonstrate compliance with 40 CFR 60.644. Compliance shall be demonstrated by determining the minimum required reduction efficiency (Z) of SO₂ emissions as required in 40 CFR 60.642(a) and (b) as follows:

- i. The average sulfur feed rate (X) shall be computed as follows:

$$X = K Q_a Y$$

Where:

X = Average sulfur feed rate, long ton/day

Q_a = Average volumetric flow rate of acid gas from sweetening unit, dscf/day.

Y = Average H₂S concentration in acid gas feed from sweetening unit, percent by volume

K = (32 lb S/lb-mole)/[(100%)(385.36 dscf/lb-mole)(2240 lb/long ton)] = 3.707*10⁻⁷

- ii. The continuous readings from the process flowmeter shall be used to determine the average volumetric flow rate (Q_a) in dscf/day of the acid gas from the sweetening unit for each run.
 - iii. The Tutwiler procedure in 40 CFR 60.648 or a chromatographic procedure following ASTM E-260 shall be used to determine the H₂S concentration in the acid gas feed from the sweetening unit. At least one sample per hour (at equally spaced intervals) shall be taken during each 4-hour run. The arithmetic mean of all samples shall be the average H₂S concentration (Y) on a dry basis for the run. By multiplying the result from the Tutwiler procedure by 1.62*10⁻³, the units gr/100 scf are converted to volume percent.
 - iv. Using the information from Condition 7.3.7(a)(1) and (3), the values for initial (Z_i) and continuous (Z_c) reduction efficiencies of SO₂ emissions shall be determined from the tables in Conditions 7.2.3(i) and (ii), respectively.
- b. Pursuant to 40 CFR 60.644(c), the Permittee shall determine compliance with the SO₂ standards in 40 CFR 60.642(a) or (b) as follows:
- i. The emission reduction efficiency (R) achieved by the sulfur recovery technology shall be computed for each run using the following equation:

$$R = (100 S)/(S+E)$$

Where:

S = Sulfur production rate, kg/hr

E = Sulfur emission rate expressed as elemental sulfur, kg/hr

- ii. The level indicators or manual sounding shall be used to measure the liquid sulfur

accumulation rate in the product storage tanks. Readings taken at the beginning and end of each run, the tank geometry, sulfur density at the storage temperature, and sample duration shall be used to determine the sulfur production rate (S) in kg/hr for each run.

- iii. The emission rate (E) of sulfur shall be computed for each run as follows:

$$E = C_e Q_{sd} / K$$

Where:

C_e = Concentration of sulfur equivalent ($SO_2 = TRS$), g/dscm

Q_{sd} = Volumetric flow rate of effluent gas, dscm/hr

K = Conversion factor, 1,000 g/kg

- iv. The concentration (C_e) of sulfur equivalent shall be the sum of the SO_2 and TRS concentrations, after being converted to sulfur equivalents. For each run and each of the test methods specified in this section, the sampling time shall be at least 4 hours. Method 1 shall be used to select the sampling site. The sampling point in the duct shall be at the centroid of the cross section if the area is less than 5 m² (54 ft²) or at a point no closer to the walls than 1 m (39 in.) if the cross-sectional area is 5 m² or more, and the centroid is more than 1 m (39 in) from the wall.

A. Method 6 shall be used to determine the SO_2 concentration. Eight samples of 20 minutes each shall be taken at 30-minute intervals. The arithmetic average in mg/dscm shall be the concentration for the run. The concentration in mg/dscm shall be multiplied by 0.5 to convert the results to sulfur equivalent.

B. Method 15 shall be used to determine the TRS concentration from reduction-type devices or where the oxygen content of the effluent gas is less than 1.0 percent by volume. The sampling rate shall be at least 3 liters/min (0.1 ft³/min) to insure minimum residence time in the sample line. Sixteen samples shall be taken at 15-minute intervals. The arithmetic

average of all the samples shall be the concentration for the run. The concentration in ppm TRS as H₂S shall be multiplied by 1.352×10^{-6} to convert the results to sulfur equivalent.

- C. Method 16A shall be used to determine the TRS concentration from oxidation-type devices or where the oxygen content of the effluent gas is greater than 1.0 percent by volume. Eight samples of 20 minutes each shall be taken at 30-minute intervals. The arithmetic average shall be the concentration for the run. The concentration in ppm TRS as H₂S shall be multiplied by 1.352×10^{-6} to convert the results to sulfur equivalent.
- D. Method 2 shall be used to determine the volumetric flow rate of the effluent gas. A velocity traverse shall be conducted at the beginning and end of each run. The arithmetic average of the two measurements shall be used to calculate the volumetric flow rate (Q_{sd}) for the run. For the determination of the effluent gas molecular weight, a single integrated sample over the 4-hour period may be taken and analyzed or grab samples at 1-hour intervals may be taken, analyzed, and averaged. For the moisture content, two samples of at least 0.10 dscm (0.35 dscf) and 10 minutes shall be taken at the beginning of the 4-hour run and near the end of the time period. The arithmetic average of the two runs shall be the moisture content for the run.

- c. To comply with 40 CFR 60.646(d), the Permittee shall obtain the information required by using the monitoring devices in 40 CFR 60.644(b) and (c) pursuant to 40 CFR 60.644(d).

7.2.8 Monitoring Requirements

Compliance with the monitoring requirements of 40 CFR 60.646(a) and (e) for the affected Amine Plant and Stretford Sulfur Recovery Unit shall be demonstrated in accordance with the alternate method of monitoring operations and emissions approved by the USEPA Region 5 letter of November 13, 2001. The alternate monitoring method proposed by the Permittee in its August 1, 2001 letter (Attachment 5) is incorporated in to the approval including the following:

- a. The Permittee agrees that the minimum sulfur reduction efficiency that NGPL must achieve according to Condition 7.2.3(b) (ii) shall be based on the maximum design rates for the process, which is approximately 12 long tons sulfur per day. Therefore the minimum sulfur reduction efficiency that NGPL must achieve is 92.4%.
- b. The Permittee shall install an H₂S analyzer on the sour gas line that feeds the amine unit, an H₂S analyzer on the line from the amine unit that feeds the natural gas pipeline, and a total sulfur monitor on the line from the Stretford unit to the flare. Each of these monitors shall be equipped with an auto-calibration feature that calibrates each monitor at least once per week to confirm that each monitor is operating properly.

- c. The Permittee will measure the H₂S concentration in the line feeding the amine unit and the line from the amine unit to the natural gas pipeline simultaneously once per hour. These hourly values will be used to calculate a 24-hour average for each line. Using the calculations specified in NGPL's August 1, 2001 letter, the 24-hour averages shall be used as a mass balance to determine the daily average H₂S feed to the Stretford unit.
- d. The Permittee shall measure the total sulfur in the line from the Stretford unit to the flare at least once per hour and calculate a 24-hour average from these values. On a daily basis, NGPL shall use these 24-hour average values and the daily average H₂S feed to the Stretford unit to determine the actual SO₂ reduction efficiency.
- e. A period of excess emissions is defined as any 24-hour period during which the actual SO₂ reduction efficiency is less than the required minimum SO₂ reduction efficiency of 92.4%.

7.2.9 Recordkeeping Requirements

In addition to the records required by Condition 5.6, the Permittee shall maintain records of the following items for each affected sweetening unit to demonstrate compliance with Conditions 5.5.1 and 7.2 pursuant to Section 39.5(7)(b) of the Act:

- a. Records of the calculations and measurements required in Conditions 7.2.3, 7.2.7, and 7.2.8 shall be retained for at least 2 years following the date of the measurements by the Permittee [40 CFR 60.647(a)].
- b. The Permittee shall keep, for the life of the facility, a record demonstrating that the facility's design capacity is less than 150 LT/D of H₂S expressed as sulfur [40 CFR 60.647(d)].

7.2.10 Reporting Requirements

The Permittee shall promptly notify the Illinois EPA, Compliance Section of noncompliance of an affected Amine Plant and Stretford Sulfur Recovery plant with the permit requirements as follows pursuant to Section 39.5(7)(f)(ii) of the Act. Reports shall describe the probable cause of such deviations, and any corrective actions or preventive measures taken:

- a. The Permittee shall submit a written report of excess emissions to the Illinois EPA semiannually. For purposes of reports, excess emissions are defined as any 24-hour period (at consistent intervals) during

which the average sulfur emission reduction efficiency (R) is less than the minimum required efficiency (Z) [40 CFR 60.647(b)].

7.2.11 Operational Flexibility/Anticipated Operating Scenarios

- a. The Permittee shall operate the STRET-1 unit in compliance with 40 CFR 60.642(b) at all times except during startup of the unit. During plant startup, the tail gas from the amine units shall be routed to the flare for control of H₂S.
- b. The Permittee shall take all appropriate action practicable to minimize the frequency and duration of startups of the STRET-1 unit.
 - i. Total startups of the STRET-1 units shall not exceed 10 per year at a maximum duration of 15 hours each resulting in 150 hours per year of noncompliance operation.
 - ii. The Permittee shall keep records of the operating hours during startup of the STRET-1 unit and comply with the reporting requirements of Condition 7.2.10.

7.2.12 Compliance Procedures

- a. Compliance with the emission limits and 40 CFR 60 Subpart LLL shall be based on the recordkeeping requirements in Condition 7.2.9 and the emission factors and formulas listed below:
 - i. SO₂ emissions.

To determine compliance with Conditions 5.5.1 and 7.2.6, the SO₂ emissions from the STRET-1 unit shall be calculated based on the following emission factors:

<u>Pollutant</u>	<u>Emission Factor (lb/hr)</u>
SO ₂	204.2

These are the STRET-1 emissions which are based on the maximum acid gas stream from the amine units to the STRET-1 unit (1,207 lb/hr), a conversion of 91 percent of H₂S to sulfur, and a 99% efficiency of the flare.

SO₂ emissions (lb) = (hours operated) x (The Appropriate Emission Factor)

7.3 Unit 03: Glycol Dehydration Units

7.3.1 Description

These dehydration units are used primarily to separate products and remove contaminants from the natural gas. A flare is used as a type of control device for the dehydration units.

7.3.2 List of Emission Units and Pollution Control Equipment

Plant Emission Unit	Description	Capacity (mmscf/day)	Emission Control Equipment
1A-DHY	Glycol Dehydration Unit #1A Still Vent	140	Flare (01-FLR)
2A-DHY	Glycol Dehydration Unit #2A Still Vent	140	
1B-DHY	Glycol Dehydration Unit #1B Still Vent	115	
2B-DHY	Glycol Dehydration Unit #2B Still Vent	115	
03-DHY	Glycol Dehydration Unit #03 Still Vent	0.5	

7.3.3 Applicability Provisions and Applicable Regulations

- a. The "affected dehydration unit" for the purpose of this unit-specific condition, is the emission unit described in Conditions 7.3.1 and 7.3.2.
- b. No person shall cause or allow the emission of sulfur dioxide into the atmosphere from any process emission unit to exceed 2,000 ppm [35 IAC 214.301].
- c. No person shall cause or allow the discharge of more than 3.6 kg/hr (8 lb/hr) of organic material into the atmosphere from any emission unit, except as provided in 35 IAC 215.302, 215.303, or 215.304 and the following exemption: If no odor nuisance exists the limitation of 35 IAC 215 Subpart G shall only apply to photochemically reactive material [35 IAC 215.301].
- d. Each affected dehydration unit is subject to the emission limits identified in Condition 5.2.2(b).
- e. The "affected dehydration units" are subject to the NESHAP for Natural Gas Transmission and Storage Facilities (40 CFR Part 63 Subpart HHH) and NESHAP General Provisions (40 CFR Part 63 Subpart A) because the dehydration units are located at an existing major source or hazardous air pollutant (HAP) that transmits and stores natural gas. However, the

affected dehydration units are exempt from the control requirements of NESHAP (40 CFR 63.1274(c), because 1A-DHY, 1B-DHY, 2A-DHY and 2B-DHY comply with the exemption threshold in 40 CFR 63.1274(d)(2) with the dehydration unit(s) process vent being controlled by the flare (01-FLR). 03-DHY is exempt from the control requirements of NESHAP (40 CFR 63.1274(c), because 03-DHY complies with the exemption throughput in 40 CFR 63.1274(d)(1) and complies with the exemption threshold in 40 CFR 63.1274(d)(2) with the dehydration unit(s) process vent being controlled by the flare (01-FLR).

7.3.4 Non-Applicability of Regulations of Concern

- a. This permit is issued based on the affected dehydration unit not being subject to the requirements of 35 IAC 212.321 or 212.322 because due to the unique nature of these unit, a process weight rate weight can not be set so that such rules can not reasonably be applied.
- b. This permit is issued based on the affected dehydration unit not being subject to 40 CFR Part 63, Subpart HH: National Emission Standards for Hazardous Air Pollutants from Oil and Natural Gas Production Facilities.

The natural gas pipeline station 206 is not oil and/or natural gas production facility, but rather a natural gas transmission and storage facility.

7.3.5 Operational and Production Limits and Work Practices

Operation of the affected dehydration units are not allowed when flare is not in operation.

7.3.6 Emission Limitations

In addition to Condition 5.2.2 and the source wide emission limitations in Condition 5.5, the affected dehydration units are subject to the following:

None

7.3.7 Testing Requirements

None

7.3.8 Monitoring Requirements

The Permittee shall monitor the presence of a flame in the flare (01-FLR).

7.3.9 Recordkeeping Requirements

In addition to the records required by Condition 5.6, the Permittee shall maintain records of the following items for each affected dehydration unit to demonstrate compliance with Conditions 5.5, and 7.3.3 pursuant to Section 39.5(7) (b) of the Act:

- a. Annual VOM and HAP emissions from each dehydration unit, based on the *GRI-GLYCalc program, including parameters used and pertinent supporting data; and
- b. Calculations which demonstrate that photochemically reactive material emission do not exceed the limit in 7.3.3(c).
- c. The Permittee shall keep records of the actual average benzene emission per year in accordance with 40 CFR 63.1284(d).

7.3.10 Reporting Requirements

The Permittee shall promptly notify the Illinois EPA, Compliance Section of noncompliance of an affected dehydration units with the permit requirements as follows pursuant to Section 39.5(7) (f) (ii) of the Act. Reports shall describe the probable cause of such deviations, and any corrective actions or preventive measures taken:

Photochemically reactive material emissions into the atmosphere from an affected dehydration unit in excess of the emission limits specified in Condition 7.3.3(c) within 30 days of such an occurrence.

7.3.11 Operational Flexibility/Anticipated Operating Scenarios

None

7.3.12 Compliance Procedures

Compliance with the emission limits shall be based on the recordkeeping requirements in Condition 7.3.9 and the emission factors and formulas listed below:

- a. Compliance with Condition 7.3.3(b), 7.3.3(d) and 7.3.3(e) is demonstrated by proper operating conditions of the affected dehydration units and shall be based on the monitoring and recordkeeping requirements in Condition 7.3.8 and 7.3.9.
- b. Compliance with Condition 7.3.3(c) is demonstrated through the non-photochemical reactivity of organic material emissions from each affected dehydration unit by the use of organic material containing

materials whose volumetric portion of organic material does not exceed the volumetric percentage thresholds that would render their emissions photochemically reactive, pursuant to 35 IAC 211.4690.

- c. Compliance with the emission limits in Condition 5.5 from the affected dehydration units shall be based on the recordkeeping requirements in Condition 7.3.9 and the emission factors and formulas listed below:

For purposes of calculating VOM and HAP emissions the current version of the *GRI-GLYCalc estimated air emissions program is acceptable.

- * GRI-GLYCalc model was developed by Radian Corporation for the Gas Research Institute (GRI) specifically for estimating BETX/VOM emissions from triethylene glycol (TEG) and ethylene glycol dehydration units.

7.4 Unit 04: Natural Gas Fired Boiler

7.4.1 Description

A natural gas fired boiler is used to generate steam for heating.

7.4.2 List of Emission Units and Pollution Control Equipment

Plant Emission Unit	Description	Heat Input
01-BOL	Natural Gas Fired Boiler	8.0 mmBtu/hr
STRET-BOL	Natural Gas Fired Boiler	6.28 mmBtu/hr

7.4.3 Applicability Provisions and Applicable Regulations

- a. An "affected boiler" for the purpose of these unit specific conditions, is the emission unit described in Conditions 7.4.1 and 7.4.2.

7.4.4 Non-Applicability of Regulations of Concern

- a. The New Source Performance Standard for Small - Industrial - Commercial - Institutional Steam Generating Units, 40 CFR 60, Subpart Dc, applies to units with design heat input capacity of 10 to 100 mmBtu/hr. These boilers are <10 mmBtu/hr, therefore, these rules do not apply.
- b. Pursuant to 35 IAC 218.303, fuel combustion emission units are not subject to 35 IAC 218.301, "Use of Organic Material".
- c. The affected boiler is not subject to the requirements of 35 IAC 216.121 or 35 IAC 217.141 because the actual heat input of each of the affected boilers is less than 10 mmBtu/hr.

7.4.5 Operating Requirements

- a. Natural gas shall be the only fuel fired in an affected boiler.

7.4.6 Emission Limitations

None

Note: Emission limits for PM, VOM, NO_x, and CO are not set for the affected boiler STRET-BOL as potential to emit in the absence of permit limit is less than the significant and major source thresholds for these pollutants pursuant to Title I of the CAA, specifically 35 IAC Part 203, Major Stationary Sources Construction and

Modification and 40 CFR 52.21, Prevention of Significant Deterioration (PSD).

7.4.7 Testing Requirements

N/A

7.4.8 Inspection Requirements

None

7.4.9 Recordkeeping Requirements

In addition to the records required by Condition 5.6, the Permittee shall maintain records of the following items which allow to demonstrate compliance with Condition 5.5.1 pursuant to Section 39.5 (7) (b) of the Act:

- a. Hours of operation of the affected boiler (hrs/yr).

7.4.10 Reporting Requirements

The Permittee shall promptly notify the Illinois EPA, Compliance Section of noncompliance with applicable requirements within 30 days pursuant to Section 39.5 (7) (f) (ii) of the Act.

7.4.11 Operational Flexibility/Anticipated Operating Scenarios

N/A

7.4.12 Compliance Procedures

- a. Compliance with the emission limits in Conditions 5.5.1 shall be based on the recordkeeping requirements in Condition 7.5.9 and the emission factors and formulas listed below:

- i. Emission factors for the affected boiler when fired by natural gas:

<u>Boiler</u>	<u>NO_x</u>	<u>Emissions</u> (lbs/hr)	
		<u>PM</u>	<u>VOM</u>
01-BOL	1.0	0.1	0.1
STRET-BOL	0.63	0.05	0.03

The emission factor for uncontrolled natural gas combustion in small industrial boilers (<10 mmBtu/hr), Tables 1.4.1, and 1.4.2, AP-42 Fifth Edition, Volume 1, Supplement D, March, 1998. lb/hr rate is calculated from maximum operating conditions.

ii. Boiler Emissions (ton/year) = The Appropriate
Emission Factor (lb/hr) x Actual Hours of
Operation (hours/year) x 0.0005 [ton/lb]

7.5 Unit 05: Amine Boilers

7.5.1 Description

Saturated amine (Methyl Diethylcrolamine) is dehydrated in natural gas fired boilers. The Amine boilers are process heaters.

7.5.2 List of Emission Units and Pollution Control Equipment

Plant Emission Unit	Description	Emission Control
ACID-RBOL-1	Amine Boiler #1 12.0 mmBtu/hr	None
ACID-RBOL-2	Amine Boiler #2 12.0 mmBtu/hr	None

7.5.3 Applicable Regulations

- a. The "affected Amine boiler" for the purpose of these unit specific conditions, is the emission unit described in Conditions 7.5.1 and 7.5.2.
- b. The emission of carbon monoxide (CO) into the atmosphere from any fuel combustion emission unit with actual heat input greater than 2.9 MW (10 mmBtu/hr) shall not exceed 200 ppm, corrected to 50 percent excess air [35 IAC 216.121].

7.5.4 Non-Applicability of Regulations of Concern

- a. The New Source Performance Standard for Small - Industrial - Commercial - Institutional Steam Generating Units, 40 CFR 60, Subpart Dc, applies to steam generating units. The Amine boilers are process heaters; therefore, these rules do not apply.
- b. Pursuant to 35 IAC 218.303, fuel combustion emission units are not subject to 35 IAC 218.301, "Use of Organic Material".

7.5.5 Operating Requirements

None

7.5.6 Emission Limitations

In addition to Condition 5.2.2 and the source wide emission limitations in Condition 5.5, the affected boiler is subject to the following:

None

Note: Emission limits for PM, VOM, NO_x and CO are not set for the affected boiler modified in 1992 to increase heat input by 1.8 mmBtu/hr, as potential to emit in the absence of permit limit is less than the significant and major source thresholds for these pollutants pursuant to Title I of the CAA, specifically 35 IAC Part 203, Major Stationary

Sources Construction and Modification and 40 CFR 52.21, Prevention of Significant Deterioration (PSD).

7.5.7 Testing Requirements

N/A

7.5.8 Inspection Requirements

None

7.5.9 Recordkeeping Requirements

In addition to the records required by Condition 5.6, the Permittee shall maintain records of the following items which allow to demonstrate compliance with Condition 5.5.1 pursuant to Section 39.5 (7) (b) of the Act:

- a. Hours of operation of the affected boiler (hrs/yr).

7.5.10 Reporting Requirements

The Permittee shall promptly notify the Illinois EPA, Compliance Section of noncompliance with applicable requirements within 30 days pursuant to Section 39.5 (7) (f) (ii) of the Act.

7.5.11 Operational Flexibility/Anticipated Operating Scenarios

N/A

7.5.12 Compliance Procedures

- a. Compliance provisions addressing Condition 7.5.3(b) are not set by this permit as compliance is assumed to be achieved by the normal work practices and maintenance activities inherent in operation of the affected boiler.
- b. Compliance with the emission limits in Conditions 5.5.1 shall be based on the recordkeeping requirements in Condition 7.5.9 and the emission factors and formulas listed below:
 - i. Emission factors for the affected boiler when fired by natural gas:

Emissions (lbs/hr)		
<u>NO_x</u>	<u>PM</u>	<u>VOM</u>
2.0	0.14	0.12

The emission factor for uncontrolled natural gas combustion in small industrial boilers (10

mmBtu/hr to 100 mmBtu/hr), Tables 1.4.1, and 1.4.2, AP-42 Fifth Edition, Volume 1, Supplement D, March, 1998. lb/hr rate is calculated from maximum operating conditions.

- ii. Boiler Emissions (ton/year) = The Appropriate Emission Factor (lb/hr) x Actual Hours of Operation (hours/year) x 0.0005 [ton/lb]

7.6 Unit 06: Pipeline Heaters

7.6.1 Description

The pipeline heaters are primarily used to provide heat to the natural gas contained in a pipeline. The pipeline heaters are process heaters and burn natural gas as a fuel.

7.6.2 List of Emission Units and Pollution Control Equipment

Emission Unit	Description	Date Constructed
06	Natural Gas Fired Line Heater (01-LHT) 15.0 mmBtu/hr	1992
	Natural Gas Fired Line Heater (02-LHT) 10.0 mmBtu/hr	1975
	Natural Gas Fired Line Heater (03-LHT) 12.0 mmBtu/hr	1969

7.6.3 Applicability Provisions and Applicable Regulations

- a. The "affected pipeline heater" for the purpose of these unit specific conditions, is the emission unit described in Conditions 7.6.1 and 7.6.2.
- b. The emission of carbon monoxide (CO) into the atmosphere from any fuel combustion emission unit with actual heat input greater than 2.9 MW (10 mmBtu/hr) shall not exceed 200 ppm, corrected to 50 percent excess air [35 IAC 216.121].

7.6.4 Non-Applicability of Regulations of Concern

- a. The New Source Performance Standard for Small - Industrial - Commercial - Institutional Steam Generating Units, 40 CFR 60, Subpart Dc, applies to steam generating units. The line heaters are process heaters; therefore, these rules do not apply.
- b. Pursuant to 35 IAC 218.303, fuel combustion emission units are not subject to 35 IAC 218.301, "Use of Organic Material".

7.6.5 Operational and Production Limits and Work Practices

- a. Natural Gas shall be the only fuel fired in the affected pipeline heater.

7.6.6 Emission Limitations

In addition to Condition 5.2.2 and the source wide emission limitations in Condition 5.5, the affected pipeline heater is subject to the following:

None

Note: Emission limits for PM, VOM, NO_x and CO are not set for the affected pipeline heater 01-LHT constructed in 1992 to replace line heater with a new line heater from 5 mmBtu/hr to 15 mmBtu/hr, as potential to emit in the absence of permit limit is less than the significant and major source thresholds for these pollutants pursuant to Title I of the CAA, specifically, 40 CFR 52.21, Prevention of Significant Deterioration (PSD).

7.6.7 Testing Requirements

None

7.6.8 Monitoring Requirements

None

7.6.9 Recordkeeping Requirements

In addition to the records required by Condition 5.6, the Permittee shall maintain records of the following items, which allow demonstrating compliance with Condition 5.5.1 pursuant to Section 39.5 (7) (b) of the Act:

- a. Hours of operation of the affected boiler (hrs/yr).

7.6.10 Reporting Requirements

The Permittee shall promptly notify the Illinois EPA, Compliance Section of noncompliance with applicable requirements within 30 days pursuant to Section 39.5 (7) (f) (ii) of the Act.

7.6.11 Operational Flexibility/Anticipated Operating Scenarios

N/A

7.6.12 Compliance Procedures

- a. Compliance provisions addressing Condition 7.6.3(b) are not set by this permit as compliance is assumed to be achieved by the normal work practices and maintenance activities inherent in operation of the affected pipeline heater.
- b. Compliance with the emission limits in Conditions 5.5.1 shall be based on the recordkeeping requirements in Condition 7.6.9 and the emission factors and formulas listed below:
 - i. Emission factors for the affected pipeline heater when fired by natural gas:

Emissions (lbs/hr)		
<u>NO_x</u>	<u>PM</u>	<u>VOM</u>
2.0	0.14	0.12

The emission factors for uncontrolled natural gas combustion in small industrial boilers (10 mmBtu/hr to 100 mmBtu/hr), Tables 1.4.1, and 1.4.2, AP-42 Fifth Edition, Volume 1, Supplement D, March 1998. lb/hr rate is calculated from maximum operating conditions.

- ii. Emissions (ton/year) = The Appropriate Emission Factor (lb/hr) x Actual Hours of Operation (hours/year) x 0.0005 [ton/lb]

7.7 Unit 07: Storage Tanks

7.7.1 Description

The Source operates storage tanks for gasoline and methanol storage.

7.7.2 List of Emission Units and Pollution Control Equipment

Emission Unit Storage tank	Description	Emission Control Equipment
GT1	1,000 Gallon Gasoline Storage Tank	Submerged Loading Pipe
MT1	10,000 Gallon Methanol Storage Tank	Bottom Fill Tank

7.7.3 Applicability Provisions

- a. An "affected tank", for the purpose of these unit-specific conditions, is the emission unit described in Conditions 7.7.1 and 7.7.2.
- b. No person shall cause or allow the loading of any organic material in any stationary tank having a storage capacity of greater than 946 liter (250 gal), unless such tank is equipped with a permanent submerged loading pipe [35 IAC 215.122(b)]. Except as provided in the following exemptions: If the tank is a pressure tank then the limitations of 35 IAC 215.122(b) shall not apply [35 IAC 215.122(c)] or if no odor nuisance exists then the limitation of 35 IAC 215.122(b) shall only apply when the tank is used to store a volatile organic liquid with a vapor pressure of 2.5 psia or greater at 70°F [35 IAC 215.122(d)].
- c. No person shall cause or allow the transfer of gasoline from any delivery vessel into any stationary tank at gasoline dispensing operation, unless such tank is equipped with a submerged loading pipe [35 IAC 215.583(a)(1)].

7.7.4 Non-Applicability of Regulations of Concern

- a. The affected storage tank is not subject to the requirements of 35 IAC 215.121, because the tank is less than 40,000 gal.
- b. The affected storage tank is not subject to the requirements of 35 IAC 215.122(a), because the tank is less than 40,000 gal.

7.7.5 Operational and Production Limits and Work Practices

Each affected tank subject to the applicable provisions of Condition 7.7.3(c) shall be equipped and operated with a submerged loading pipe, submerged fill, or an equivalent

device approved by the Illinois EPA, pursuant to 35 IAC 215.122(b) and/or 215.583(a). (The Illinois EPA has not approved use of other equivalent equipment in lieu of a submerged loading pipe or submerged loading fill.)

7.7.6 Emission Limitations

In addition to Condition 5.2.2 and the source wide limitations in Condition 5.5, the affected tank is subject to the following:

N/A

7.7.7 Testing Requirements

None

7.7.8 Inspection and Monitoring Requirements

None

7.7.9 Recordkeeping Requirements

In addition to the records required by Condition 5.6, the Permittee shall maintain records of the following items for the affected tank to demonstrate compliance with Condition 7.7.5 pursuant to Section 39.5(7) of the Act:

- a. Design information for the tank showing the presence of a submerged loading pipe or submerged fill.
- b. Maintenance and repair records for the tank, as related to the repair or replacement of the loading pipe, if applicable.
- c. If applicable, a written description of the practices used for submerged filling the tank(s).

7.7.10 Reporting Requirements

The Permittee shall promptly notify the Illinois EPA, Compliance Section of noncompliance with the control and operating requirements as follows pursuant to Section 39.5(7) (f) (ii) of the Act:

- a. Any loading of gasoline or other VOL into an affected tank that was not in compliance with Condition 7.7.5, e.g., no "submerged loading pipe or submerged fill" within five days of becoming aware of the noncompliance status. This notification shall include a description of the event, the cause for the noncompliance, actions taken to correct the noncompliance and the steps taken to avoid future noncompliance.
- b. Any storage of gasoline or other VOL in an affected tank that is out of compliance with the control requirements (Condition 7.7.5) due to damage,

deterioration, or other condition of the loading pipe, within 30 days of becoming aware of the noncompliance status. This notification shall include a description of the event, the cause for the noncompliance, actions taken to correct the noncompliance, and the steps to be taken to avoid future noncompliance.

7.7.11 Operational Flexibility/Anticipated Operating Scenarios

The Permittee is authorized to make the following physical or operational change with respect to an affected tank without prior notification to the Illinois EPA or revision of this permit. This condition does not affect the Permittee's obligation to properly obtain a construction permit in a timely manner for any activity constituting construction or modification of the source, as defined in 35 IAC 201.102:

- a. Changes to components related to either the "submerged loading pipe or submerged fill", including addition of new components and repair and replacement of components.
- b. Changes in the material stored in a tank provided the tank continues to comply with the Conditions of Section 7.7.5 of this permit.

7.7.12 Compliance Procedures

Compliance with the emission limits in condition 5.5 and 7.7.6 shall be based on the recordkeeping requirements in Condition 7.7.9 and the emission factors and formulas listed below:

For the purpose of estimating VOM emissions from the affected storage tank, the current version of the TANKS program is acceptable.

7.8 Unit 08: Liquid Handling Equipment controlled by a Vapor Recovery

Unit and a Back-Up Flare 02-FLR

7.8.1 Description

Natural gas from the storage field will enter the slugcatcher. The slugcatcher will be utilized to remove free liquid from the gas being withdrawn from the storage field. Gas discharging from the slugcatcher will be routed to existing separators and on to the main gas line. Liquid removed at the slugcatcher will be fed to a three-phase separator. Gas that may flash at the three-phase separator is routed to the fuel system. Water separated at the three-phase separator is fed to a 10,000-barrel (bbls) storage tank. There are no air emission point sources associated with the operation of the slug catcher or three-phase separator.

A vapor recovery system will be utilized to control VOM emissions from the 10,000 bbl. storage tank and two 210 bbl. storage tanks (T3010 and T3030). A gas blanket will be maintained on each tank, and a vapor return line will be utilized to capture gas generated from flashing, working and breathing mechanisms occurring at each of the two tanks. This captured gas will also be routed to the facility fuel system through the use of an electric compressor, so no substantial emissions are anticipated from these storage tanks. The remaining four 210 bbl. storage tanks (T3020, 3040, 3080, and 3090) will be atmospheric oil transfer tanks. Water stored at the 10,000-bbl storage tank will be piped to underground injection wells for disposal. Oil stored in the four 210-bbl storage tanks will be loaded to trucks for transport off-site.

In the event that the vapor recovery system is not operating, a back-up flare (02-FLR) will be manually ignited and used as the primary control device until such time as the vapor recovery system is put back in service.

7.8.2 List of Emission Units and Pollution Control Equipment

Emission Unit	Description	Emission Control Equipment
08	Three-Phase Separator	---
	1-10,000 bbl Oil/Water Storage Tank	Vapor Recovery System/Back-Up Flare
	2-210 bbl Oil Storage Tank	Vapor Recovery System/Back-Up Flare
	4-210 bbl Oil Storage Tank	---

7.8.3 Applicability Provisions and Applicable Regulations

The 10,000-bbl oil/water storage tank is subject to a New Source Performance Standard (NSPS) for Volatile Organic Liquid storage Vessels, 40 CFR 60 Subpart Kb. The Illinois EPA is administering NSPS in Illinois on behalf of the United States EPA under a delegation agreement.

7.8.4 Non-Applicability of Regulations of Concern

None

7.8.5 Operational and Production Limits and Work Practices

At all times, the Permittee shall also, to the extent practicable, maintain and operate the volatile organic liquid storage vessels, including associated air pollution control equipment, in a manner consistent with good air pollution control practice for minimizing emissions.

7.8.6 Emission Limitations

- a. VOM emissions and operation of the truck loading operation shall not exceed 1.7 tons/month and 20.1 tons/year. This limit is based on the annual throughput of 511,000-bbl and emission factor 1.87 lb/1,000 gal calculated from AP-42. Compliance with the annual limits shall be determined from running total of 12 months of data.
- b. Emissions and operation of the backup flare shall not exceed the following limits:

<u>Pollutant</u>	<u>Emissions</u>	
	<u>(Lb/Hr)</u>	<u>(Ton/Yr)</u>
NO _x	0.2	0.05
CO	1.1	0.28
VOM	0.4	0.10
SO ₂	5.2	1.3

These limits are based on the manufacturer's emission rate and operating hours (504 hr/yr). Compliance with annual limit shall be determined from running total of 12 months of data [T1].

The above limitations were established in Permit #99050093, pursuant to 40 CFR 52.21, Prevention of Significant Deterioration (PSD). These limits ensure that the construction and/or modification addressed in the aforementioned permit does not constitute a new major source or major modification pursuant to Title I of the CAA, specifically the federal rules for Prevention of Significant Deterioration (PSD), 40 CFR 52.21 [T1].

7.8.7 Testing Requirements

None

7.8.8 Monitoring Requirements

None

7.8.9 Recordkeeping Requirements

- a. The Permittee shall keep readily accessible records showing the dimensions of storage vessel and an analysis showing the capacity of storage tank.
- b. The Permittee shall keep monthly records of the throughput for all storage tanks.
- c. The Permittee shall keep monthly records of the operating time for the backup flare.

7.8.10 Reporting Requirements

None

7.8.11 Operational Flexibility/Anticipated Operating Scenarios

None

7.8.12 Compliance Procedures

Compliance with the emission limits in condition 5.5 and 7.8.6 shall be based on the recordkeeping requirements in Condition 7.8.9 and the emission factors listed in Condition 7.8.6.

8.0 GENERAL PERMIT CONDITIONS

8.1 Permit Shield

Pursuant to Section 39.5(7)(j) of the Act, the Permittee has requested and has been granted a permit shield. This permit shield provides that compliance with the conditions of this permit shall be deemed compliance with applicable requirements which were applicable as of the date the proposed permit for this source was issued, provided that either the applicable requirements are specifically identified within this permit, or the Illinois EPA, in acting on this permit application, has determined that other requirements specifically identified are not applicable to this source and this determination (or a concise summary thereof) is included in this permit.

This permit shield does not extend to applicable requirements which are promulgated after January 7, 2002 (the date of issuance of the draft permit) unless this permit has been modified to reflect such new requirements.

8.2 Applicability of Title IV Requirements (Acid Deposition Control)

This source is not an affected source under Title IV of the CAA and is not subject to requirements pursuant to Title IV of the CAA.

8.3 Emissions Trading Programs

No permit revision shall be required for increases in emissions allowed under any USEPA approved economic incentives, marketable permits, emissions trading, and other similar programs or processes for changes that are provided for elsewhere in this permit and that are authorized by the applicable requirement [Section 39.5(7)(o)(vii) of the Act].

As of the date of issuance of this permit, there are no such economic incentive, marketable permit or emission trading programs that have been approved by USEPA.

8.4 Operational Flexibility/Anticipated Operating Scenarios

8.4.1 Changes Specifically Addressed by Permit

Physical or operational changes specifically addressed by the Conditions of this permit that have been identified as not requiring Illinois EPA notification may be implemented without prior notice to the Illinois EPA.

8.4.2 Changes Requiring Prior Notification

The Permittee is authorized to make physical or operational changes that contravene express permit terms without applying for or obtaining an amendment to this

permit, provided that [Section 39.5(12)(a)(i) of the Act]:

- a. The changes do not violate applicable requirements;
- b. The changes do not contravene federally enforceable permit terms or conditions that are monitoring (including test methods), recordkeeping, reporting, or compliance certification requirements;
- c. The changes do not constitute a modification under Title I of the CAA;
- d. Emissions will not exceed the emissions allowed under this permit following implementation of the physical or operational change; and
- e. The Permittee provides written notice to the Illinois EPA, Division of Air Pollution Control, Permit Section, at least 7 days before commencement of the change. This notice shall:
 - i. Describe the physical or operational change;
 - ii. Identify the schedule for implementing the physical or operational change;
 - iii. Provide a statement of whether or not any New Source Performance Standard (NSPS) is applicable to the physical or operational change and the reason why the NSPS does or does not apply;
 - iv. Provide emission calculations which demonstrate that the physical or operational change will not result in a modification; and
 - v. Provide a certification that the physical or operational change will not result in emissions greater than authorized under the Conditions of this permit.

8.5 Testing Procedures

Tests conducted to measure composition of materials, efficiency of pollution control devices, emissions from process or control equipment, or other parameters shall be conducted using standard test methods. Documentation of the test date, conditions, methodologies, calculations, and test results shall be retained pursuant to the recordkeeping procedures of this permit. Reports of any tests conducted as required by this permit or as the result of a request by the Illinois EPA shall be submitted as specified in Condition 8.6.

8.6 Reporting Requirements

8.6.1 Monitoring Reports

If monitoring is required by any applicable requirements or conditions of this permit, a report summarizing the required monitoring results, as specified in the conditions of this permit, shall be submitted to the Air Compliance Section of the Illinois EPA every six months as follows [Section 39.5(7) (f) of the Act]:

<u>Monitoring Period</u>	<u>Report Due Date</u>
January - June	September 1
July - December	March 1

All instances of deviations from permit requirements must be clearly identified in such reports. All such reports shall be certified in accordance with Condition 9.9.

8.6.2 Test Notifications

Unless otherwise specified elsewhere in this permit, a written test plan for any test required by this permit shall be submitted to the Illinois EPA for review at least 60 days prior to the testing pursuant to Section 39.5(7) (a) of the Act. The notification shall include at a minimum:

- a. The name and identification of the affected unit(s);
- b. The person(s) who will be performing sampling and analysis and their experience with similar tests;
- c. The specific conditions under which testing will be performed, including a discussion of why these conditions will be representative of maximum emissions and the means by which the operating parameters for the source and any control equipment will be determined;
- d. The specific determination of emissions and operation which are intended to be made, including sampling and monitoring locations;
- e. The test method(s) which will be used, with the specific analysis method, if the method can be used with different analysis methods;
- f. Any minor changes in standard methodology proposed to accommodate the specific circumstances of testing, with justification; and
- g. Any proposed use of an alternative test method, with detailed justification.

8.6.3 Test Reports

Unless otherwise specified elsewhere in this permit, the results of any test required by this permit shall be submitted to the Illinois EPA within 60 days of completion of the testing. The test report shall include at a minimum [Section 39.5(7) (e) (i) of the Act]:

- a. The name and identification of the affected unit(s);
- b. The date and time of the sampling or measurements;
- c. The date any analyses were performed;
- d. The name of the company that performed the tests and/or analyses;
- e. The test and analytical methodologies used;
- f. The results of the tests including raw data, and/or analyses including sample calculations;
- g. The operating conditions at the time of the sampling or measurements; and
- h. The name of any relevant observers present including the testing company's representatives, any Illinois EPA or USEPA representatives, and the representatives of the source.

8.6.4 Reporting Addresses

- a. The following addresses should be utilized for the submittal of reports, notifications, and renewals:
 - i. Illinois EPA - Air Compliance Section

Illinois Environmental Protection Agency
Bureau of Air
Compliance Section (MC 40)
P.O. Box 19276
Springfield, Illinois 62794-9276
 - ii. Illinois EPA - Air Regional Field Office

Illinois Environmental Protection Agency
Division of Air Pollution Control
2009 Mall Street
Collinsville, Illinois 62234
 - iii. Illinois EPA - Air Permit Section

Illinois Environmental Protection Agency
Division of Air Pollution Control

Permit Section (MC 11)
P.O. Box 19506
Springfield, Illinois 62794-9506

iv. USEPA Region 5 - Air Branch

USEPA (AE - 17J)
Air & Radiation Division
77 West Jackson Boulevard
Chicago, Illinois 60604

b. Unless otherwise specified in the particular provision of this permit, reports shall be sent to the Illinois EPA - Air Compliance Section with a copy sent to the Illinois EPA - Air Regional Field Office.

8.7 Obligation to Comply with Title I Requirements

Any term, condition, or requirement identified in this permit by T1, T1R, or T1N is established or revised pursuant to 35 IAC Part 203 or 40 CFR 52.21 ("Title I provisions") and incorporated into this permit pursuant to both Section 39.5 and Title I provisions. Notwithstanding the expiration date on the first page of this permit, the Title I conditions remain in effect pursuant to Title I provisions until the Illinois EPA deletes or revises them in accordance with Title I procedures.

9.0 STANDARD PERMIT CONDITIONS

9.1 Effect of Permit

9.1.1 The issuance of this permit does not release the Permittee from compliance with State and Federal regulations which are part of the Illinois State Implementation Plan, as well as with other applicable statutes and regulations of the United States or the State of Illinois or applicable ordinances, except as specifically stated in this permit and as allowed by law and rule [Section 39.5(7)(j)(iv) of the Act].

9.1.2 In particular, this permit does not alter or affect the following:

- a. The provisions of Section 303 (emergency powers) of the CAA, including USEPA's authority under that Section;
- b. The liability of an owner or operator of a source for any violation of applicable requirements prior to or at the time of permit issuance;
- c. The applicable requirements of the acid rain program consistent with Section 408(a) of the CAA; and
- d. The ability of USEPA to obtain information from a source pursuant to Section 114 (inspections, monitoring, and entry) of the CAA.

9.1.3 Notwithstanding the conditions of this permit specifying compliance practices for applicable requirements, any person (including the Permittee) may also use other credible evidence to establish compliance or noncompliance with applicable requirements.

9.2 General Obligations of Permittee

9.2.1 Duty to Comply

The Permittee must comply with all terms and conditions of this permit. Any permit noncompliance constitutes a violation of the CAA and the Act, and is grounds for any or all of the following: enforcement action, permit termination, revocation and reissuance, modification, or denial of a permit renewal application [Section 39.5(7)(o)(i) of the Act].

The Permittee shall meet applicable requirements that become effective during the permit term in a timely manner unless an alternate schedule for compliance with the applicable requirement is established.

9.2.2 Duty to Maintain Equipment

The Permittee shall maintain all equipment covered under this permit in such a manner that the performance or operation of such equipment shall not cause a violation of applicable requirements.

9.2.3 Duty to Cease Operation

No person shall cause, threaten or allow the continued operation of any emission unit during malfunction or breakdown of the emission unit or related air pollution control equipment if such operation would cause a violation of an applicable emission standard, regulatory requirement, ambient air quality standard or permit limitation unless such malfunction or breakdown is allowed by a permit condition [Section 39.5(6)(c) of the Act].

9.2.4 Disposal Operations

The source shall be operated in such a manner that the disposal of air contaminants collected by the equipment operations, or activities shall not cause a violation of the Act or regulations promulgated thereunder.

9.2.5 Duty to Pay Fees

The Permittee must pay fees to the Illinois EPA consistent with the fee schedule approved pursuant to Section 39.5(18) of the Act, and submit any information relevant thereto [Section 39.5(7)(o)(vi) of the Act]. The check should be payable to "Treasurer, State of Illinois" and sent to: Fiscal Services Section, Illinois Environmental Protection Agency, P.O. Box 19276, Springfield, Illinois 62794-9276.

9.3 Obligation to Allow Illinois EPA Surveillance

Upon presentation of proper credentials and other documents, the Permittee shall allow the Illinois EPA, or an authorized representative to perform the following [Section 39.5(7)(a) and (p)(ii) of the Act and 415 ILCS 5/4]:

- a. Enter upon the Permittee's premises where an actual or potential emission unit is located; where any regulated equipment, operation, or activity is located or where records must be kept under the conditions of this permit;
- b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
- c. Inspect during hours of operation any sources, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit;

- d. Sample or monitor any substances or parameters at any location:
 - i. At reasonable times, for the purposes of assuring permit compliance; or
 - ii. As otherwise authorized by the CAA, or the Act.
- e. Obtain and remove samples of any discharge or emission of pollutants authorized by this permit; and
- f. Enter and utilize any photographic, recording, testing, monitoring, or other equipment for the purposes of preserving, testing, monitoring, or recording any activity, discharge or emission at the source authorized by this permit.

9.4 Obligation to Comply with Other Requirements

The issuance of this permit does not release the Permittee from applicable State and Federal laws and regulations, and applicable local ordinances addressing subjects other than air pollution control.

9.5 Liability

9.5.1 Title

This permit shall not be considered as in any manner affecting the title of the premises upon which the permitted source is located.

9.5.2 Liability of Permittee

This permit does not release the Permittee from any liability for damage to person or property caused by or resulting from the construction, maintenance, or operation of the sources.

9.5.3 Structural Stability

This permit does not take into consideration or attest to the structural stability of any unit or part of the source.

9.5.4 Illinois EPA Liability

This permit in no manner implies or suggests that the Illinois EPA (or its officers, agents or employees) assumes any liability, directly or indirectly, for any loss due to damage, installation, maintenance, or operation of the source.

9.5.5 Property Rights

This permit does not convey any property rights of any sort, or any exclusive privilege [Section 39.5(7) (o) (iv) of the Act].

9.6 Recordkeeping

9.6.1 Control Equipment Maintenance Records

A maintenance record shall be kept on the premises for each item of air pollution control equipment. As a minimum, this record shall show the dates of performance and nature of preventative maintenance activities.

9.6.2 Records of Changes in Operation

A record shall be kept describing changes made at the source that result in emissions of a regulated air pollutant subject to an applicable requirement, but not otherwise regulated under this permit, and the emissions resulting from those changes [Section 39.5(12) (b) (iv) of the Act].

9.6.3 Retention of Records

- a. Records of all monitoring data and support information shall be retained for a period of at least 5 years from the date of the monitoring sample, measurement, report, or application. Support information includes all calibration and maintenance records, original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit [Section 39.5(7) (e) (ii) of the Act].
- b. Other records required by this permit shall be retained for a period of at least 5 years from the date of entry unless a longer period is specified by a particular permit provision.

9.7 Annual Emissions Report

The Permittee shall submit an annual emissions report to the Illinois EPA, Compliance Section no later than May 1 of the following year, as required by 35 IAC Part 254.

9.8 Requirements for Compliance Certification

Pursuant to Section 39.5(7) (p) (v) of the Act, the Permittee shall submit annual compliance certifications. The compliance certifications shall be submitted no later than May 1 or more frequently as specified in the applicable requirements or by permit condition. The compliance certifications shall be submitted to the Air Compliance Section, Air Regional Field Office, and USEPA Region 5 - Air Branch. The addresses for the

submittal of the compliance certifications are provided in Condition 8.6.4 of this permit.

- a. The certification shall include the identification of each term or condition of this permit that is the basis of the certification; the compliance status; whether compliance was continuous or intermittent; the method(s) used for determining the compliance status of the source, both currently and over the reporting period consistent with the conditions of this permit.
- b. All compliance certifications shall be submitted to USEPA Region 5 in Chicago as well as to the Illinois EPA.
- c. All compliance reports required to be submitted shall include a certification in accordance with Condition 9.9.

9.9 Certification

Any document (including reports) required to be submitted by this permit shall contain a certification by a responsible official of the Permittee that meets the requirements of Section 39.5(5) of the Act [Section 39.5(7)(p)(i) of the Act]. An example Certification by a Responsible Official is included as an attachment to this permit.

9.10 Defense to Enforcement Actions

9.10.1 Need to Halt or Reduce Activity Not a Defense

It shall not be a defense for the Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit [Section 39.5(7)(o)(ii) of the Act].

9.10.2 Emergency Provision

- a. An emergency shall be an affirmative defense to an action brought for noncompliance with the technology-based emission limitations under this permit if the following conditions are met through properly signed, contemporaneous operating logs, or other relevant evidence:
 - i. An emergency occurred as provided in Section 39.5(7)(k) of the Act and the Permittee can identify the cause(s) of the emergency. Normally, an act of God such as lightning or flood is considered an emergency;
 - ii. The permitted source was at the time being properly operated;

- iii. The Permittee submitted notice of the emergency to the Illinois EPA within two working days of the time when emission limitations were exceeded due to the emergency. This notice must contain a detailed description of the emergency, any steps taken to mitigate emissions, and corrective actions taken; and
 - iv. During the period of the emergency the Permittee took all reasonable steps to minimize levels of emissions that exceeded the emission limitations, standards, or regulations in this permit.
- b. This provision is in addition to any emergency or upset provision contained in any applicable requirement. This provision does not relieve a Permittee of any reporting obligations under existing federal or state laws or regulations.

9.11 Permanent Shutdown

This permit only covers emission units and control equipment while physically present at the indicated source location(s). Unless this permit specifically provides for equipment relocation, this permit is void for the operation or activity of any item of equipment on the date it is removed from the permitted location(s) or permanently shut down. This permit expires if all equipment is removed from the permitted location(s), notwithstanding the expiration date specified on this permit.

9.12 Reopening and Reissuing Permit for Cause

9.12.1 Permit Actions

This permit may be modified, reopened, and reissued, for cause pursuant to Section 39.5(15) of the Act. The filing of a request by the Permittee for a permit modification, revocation, and reissuance, or of a notification of planned changes or anticipated noncompliance does not stay any permit condition [Section 39.5(7)(o)(iii) of the Act].

9.12.2 Reopening and Revision

This permit must be reopened and revised if any of the following occur [Section 39.5(15)(a) of the Act]:

- a. Additional requirements become applicable to the equipment covered by this permit and three or more years remain before expiration of this permit;

- b. Additional requirements become applicable to an affected source for acid deposition under the acid rain program;
- c. The Illinois EPA or USEPA determines that this permit contains a material mistake or inaccurate statement when establishing the emission standards or limitations, or other terms or conditions of this permit; and
- d. The Illinois EPA or USEPA determines that this permit must be revised to ensure compliance with the applicable requirements of the Act.

9.12.3 Inaccurate Application

The Illinois EPA has issued this permit based upon the information submitted by the Permittee in the permit application. Any misinformation, false statement or misrepresentation in the application shall be grounds for revocation under Section 39.5(15) (b) of the Act.

9.12.4 Duty to Provide Information

The Permittee shall furnish to the Illinois EPA, within a reasonable time specified by the Illinois EPA any information that the Illinois EPA may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. Upon request, the Permittee shall also furnish to the Illinois EPA copies of records required to be kept by this permit, or for information claimed to be confidential, the Permittee may furnish such records directly to USEPA along with a claim of confidentiality [Section 39.5(7) (o) (v) of the Act].

9.13 Severability Clause

The provisions of this permit are severable, and should any one or more be determined to be illegal or unenforceable, the validity of the other provisions shall not be affected. The rights and obligations of the Permittee shall be construed and enforced as if this permit did not contain the particular provisions held to be invalid and the applicable requirements underlying these provisions shall remain in force [Section 39.5(7) (i) of the Act].

9.14 Permit Expiration and Renewal

The right to operate terminates on the expiration date unless the Permittee has submitted a timely and complete renewal application. For a renewal to be timely it must be submitted no later than 9 and no sooner than 12 months prior to expiration. The equipment may continue to operate during the renewal period until final action is taken by the Illinois EPA, in accordance

with the original permit conditions [Section 39.5(5)(1), (n),
and (o) of the Act].

10.0 ATTACHMENTS

10.1 Attachment 1 - Example Certification by a Responsible Official

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature: _____

Name: _____

Official Title: _____

Telephone No.: _____

Date Signed: _____

10.2 Attachment 2 - Guidance on Revising This Permit

The Permittee must submit an application to the Illinois EPA using the appropriate revision classification in accordance with Sections 39.5(13) and (14) of the Act and 35 IAC 270.302. Specifically, there are currently three classifications for revisions to a CAAPP permit. These are:

1. Administrative Permit Amendment;
2. Minor Permit Modification; and
3. Significant Permit Modification.

The Permittee must determine, request, and submit the necessary information to allow the Illinois EPA to use the appropriate procedure to revise the CAAPP permit. A brief explanation of each of these classifications follows.

1. Administrative Permit Amendment
 - Corrects typographical errors;
 - Identifies a change in the name, address, or phone number of any person identified in the permit, or provides a similar minor administrative change at the source;
 - Requires more frequent monitoring or reporting by the Permittee;
 - Allows for a change in ownership or operational control of the source where no other change in the permit is necessary, provided that a written agreement containing a specific date for transfer of permit responsibility, coverage, and liability between the current and new Permittees has been submitted to the Illinois EPA;
 - Incorporates into the CAAPP permit a construction permit, provided the conditions of the construction permit meet the requirements for the issuance of CAAPP permits; or
 - Incorporates into the CAAPP permit revised limitations or other requirements resulting from the application of an approved economic incentives rule, marketable permits rule, or generic emissions trading rule.
2. Minor Permit Modification
 - Do not violate any applicable requirement;

- Do not involve significant changes to existing monitoring, reporting, or recordkeeping requirements in the permit;
- Do not require a case-by-case determination of an emission limitation or other standard, or a source-specific determination of ambient impacts, or a visibility or increment analysis;
- Do not seek to establish or change a permit term or condition for which there is no corresponding underlying requirement and which avoids an applicable requirement to which the source would otherwise be subject. Such terms and conditions include:
 - A federally enforceable emissions cap assumed to avoid classification as a modification under any provision of Title I of the CAA; and
 - An alternative emissions limit approved pursuant to regulations promulgated under Section 112(i)(5) of the CAA.
- Are not modifications under any provision of Title I of the CAA; and
- Are not required to be processed as a significant permit modification.

An application for a minor permit modification shall include the following:

- A description of the change, the emissions resulting from the change, and any new applicable requirements that will apply if the change occurs;
- The source's suggested draft permit/conditions;
- Certification by a responsible official that the proposed modification meets the criteria for use of minor permit modification procedures and a request that such procedures be used; and
- Information as contained on form 271-CAAPP for the Illinois EPA to use to notify USEPA and affected States.

3. Significant Permit Modification

- Applications that do not qualify as either minor permit modifications or as administrative permit amendments;
- Applications requesting a significant change in existing monitoring permit terms or conditions;
- Applications requesting a relaxation of reporting or recordkeeping requirements; and
- Cases in which, in the judgment of the Illinois EPA, action on an application for modification would require decisions to be made on technically complex issues.

An application for a significant permit modification shall include the following:

- A detailed description of the proposed change(s), including all physical changes to equipment, changes in the method of operation, changes in emissions of each pollutant, and any new applicable requirements which will apply as a result of the proposed change. Note that the Permittee need only submit revised forms for equipment and operations that will be modified.

The Illinois EPA requires the information on the following appropriate forms to be submitted in accordance with the proper classification:

- Form 273-CAAPP, REQUEST FOR ADMINISTRATIVE PERMIT AMENDMENT FOR CAAPP PERMIT; or
- Form 271-CAAPP, MINOR PERMIT MODIFICATION FOR CAAPP PERMIT; or
- Form 200-CAAPP, APPLICATION FOR CAAPP PERMIT (for significant modification).

Application forms can be obtained from the Illinois EPA website at <http://www.epa.state.il.us/air/forms>.

Note that the request to revise the permit must be certified for truth, accuracy, and completeness by a responsible official.

Note that failure to submit the required information may require the Illinois EPA to deny the application. The Illinois EPA reserves the right to require that additional information be submitted as needed to evaluate or take final action on applications pursuant to Section 39.5(5)(g) of the Act and 35 IAC 270.305.



Illinois Environmental Protection Agency
 Division Of Air Pollution Control -- Permit Section
 P.O. Box 19506
 Springfield, Illinois 62794-9506

Application For Construction Permit (For CAAPP Sources Only)	For Illinois EPA use only
	I.D. number:
	Permit number:
Date received:	

This form is to be used by CAAPP sources to supply information necessary to obtain a construction permit. Please attach other necessary information and completed CAAPP forms regarding this construction/modification project.

Source Information		
1. Source name:		
2. Source street address:		
3. City:	4. Zip code:	
5. Is the source located within city limits? <input type="checkbox"/> Yes <input type="checkbox"/> No		
6. Township name:	7. County:	8. I.D. number:

Owner Information		
9. Name:		
10. Address:		
11. City:	12. State:	13. Zip code:

Operator Information (if different from owner)		
14. Name		
15. Address:		
16. City:	17. State:	18. Zip code:

Applicant Information	
19. Who is the applicant? <input type="checkbox"/> Owner <input type="checkbox"/> Operator	20. All correspondence to: (check one) <input type="checkbox"/> Owner <input type="checkbox"/> Operator <input type="checkbox"/> Source
21. Attention name and/or title for written correspondence:	
22. Technical contact person for application:	23. Contact person's telephone number:

This Agency is authorized to require and you must disclose this information under 415 ILCS 5/39. Failure to do so could result in the application being denied and penalties under 415 ILCS 5 et seq. It is not necessary to use this form in providing this information. This form has been approved by the forms management center.

Summary Of Application Contents	
24. Does the application address whether the proposed project would constitute a new major source or major modification under each of the following programs: a) Non-attainment New Source Review – 35 IAC Part 203; b) Prevention of Significant Deterioration (PSD) – 40 CFR 52.21; c) Hazardous Air Pollutants: Regulations Governing Constructed or Reconstructed Major Sources – 40 CFR Part 63?	<input type="checkbox"/> Yes <input type="checkbox"/> No
25. Does the application identify and address all applicable emissions standards, including those found in the following: a) Board Emission Standards – 35 IAC Chapter I, Subtitle B; b) Federal New Source Performance Standards – 40 CFR Part 60; c) Federal Standards for Hazardous Air Pollutants – 40 CFR Parts 61 and 63?	<input type="checkbox"/> Yes <input type="checkbox"/> No
26. Does the application include a process flow diagram(s) showing all emission units and control equipment, and their relationship, for which a permit is being sought?	<input type="checkbox"/> Yes <input type="checkbox"/> No
27. Does the application include a complete process description for the emission units and control equipment for which a permit is being sought?	<input type="checkbox"/> Yes <input type="checkbox"/> No
28. Does the application include the information as contained in completed CAAPP forms for all appropriate emission units and air pollution control equipment, listing all applicable requirements and proposed exemptions from otherwise applicable requirements, and identifying and describing any outstanding legal actions by either the USEPA or the Illinois EPA? Note: The use of "APC" application forms is not appropriate for applications for CAAPP sources. CAAPP forms should be used to supply information.	<input type="checkbox"/> Yes <input type="checkbox"/> No
29. If the application contains TRADE SECRET information, has such information been properly marked and claimed, and have two separate copies of the application suitable for public inspection and notice been submitted, in accordance with applicable rules and regulations?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Applicable, No TRADE SECRET information in this application

Note 1: Answering "No" to any of the above may result in the application being deemed incomplete.

Signature Block	
This certification must be signed by a responsible official. Applications without a signed certification will be returned as incomplete.	
30. I certify under penalty of law that, based on information and belief formed after reasonable inquiry, the statements and information contained in this application are true, accurate and complete. Authorized Signature:	
BY:	_____
_____	_____
AUTHORIZED SIGNATURE	TITLE OF SIGNATORY
_____	_____/_____/_____
TYPED OR PRINTED NAME OF SIGNATORY	DATE

Note 2: An operating permit for the construction/modification permitted in a construction permit must be obtained by applying for the appropriate revision to the source's CAAPP permit, if necessary.

10.4 Attachment 4 - Guidance on Renewing This Permit

Timeliness - Pursuant to Section 39.5(5)(n) of the Act and 35 IAC 270.301(d), a source must submit to the Illinois EPA a complete CAAPP application for the renewal of a CAAPP permit not later than 9 months before the date of permit expiration of the existing CAAPP permit in order for the submittal to be deemed timely. Note that the Illinois EPA typically sends out renewal notices approximately 18 months prior to the expiration of the CAAPP permit.

The CAAPP application must provide all of the following information in order for the renewal CAAPP application to be deemed complete by the Illinois EPA:

1. A completed renewal application form 200-CAAPP, APPLICATION FOR CAAPP PERMIT.
2. A completed compliance plan form 293-CAAPP, COMPLIANCE PLAN/SCHEDULE OF COMPLIANCE FOR CAAPP PERMIT.
3. A completed compliance certification form 296-CAAPP, COMPLIANCE CERTIFICATION, signed by the responsible official.
4. Any applicable requirements that became effective during the term of the permit and that were not included in the permit as a reopening or permit revision.
5. If this is the first time this permit is being renewed and this source has not yet addressed CAM, the application should contain the information on form 464-CAAPP, COMPLIANCE ASSURANCE MONITORING (CAM) PLAN.
6. Information addressing any outstanding transfer agreement pursuant to the ERMS.
7.
 - a. If operations of an emission unit or group of emission units remain unchanged and are accurately depicted in previous submittals, the application may contain a letter signed by a responsible official that requests incorporation by reference of existing information previously submitted and on file with the Illinois EPA. This letter must also include a statement that information incorporated by reference is also being certified for truth and accuracy by the responsible official's signing of the form 200-CAAPP, APPLICATION FOR CAAPP PERMIT and the form 296-CAAPP, COMPLIANCE CERTIFICATION. The boxes should be marked yes on form 200-CAAPP, APPLICATION FOR CAAPP PERMIT, as existing information is being incorporated by reference.
 - b. If portions of current operations are not as described in previous submittals, then in addition to the information above for operations that remain

unchanged, the application must contain the necessary information on all changes, e.g., discussion of changes, new or revised CAAPP forms, and a revised fee form 292-CAAPP, FEE DETERMINATION FOR CAAPP PERMIT, if necessary.

8. Information about all off-permit changes that were not prohibited or addressed by the permit to occur without a permit revision and the information must be sufficient to identify all applicable requirements, including monitoring, recordkeeping, and reporting requirements, for such changes.
9. Information about all changes made under 40 CFR 70.4(b)(12)(i) and (ii) that require a 7-day notification prior to the change without requiring a permit revision.

The Illinois EPA will review all applications for completeness and timeliness. If the renewal application is deemed both timely and complete, the source shall continue to operate in accordance with the terms and conditions of its CAAPP permit until final action is taken on the renewal application.

Notwithstanding the completeness determination, the Illinois EPA may request additional information necessary to evaluate or take final action on the CAAPP renewal application. If such additional information affects your allowable emission limits, a revised form 292-CAAPP, FEE DETERMINATION FOR CAAPP PERMIT must be submitted with the requested information. The failure to submit to the Illinois EPA the requested information within the time frame specified by the Illinois EPA, may force the Illinois EPA to deny your CAAPP renewal application pursuant to Section 39.5 of the Act.

Application forms may be obtained from the Illinois EPA website at <http://www.epa.state.il.us/air/forms.html>.

If you have any questions regarding this matter, please contact a permit analyst at 217/782-2113.

Mail renewal applications to:

Illinois Environmental Protection Agency
Division of Air Pollution Control
Permit Section (MC 11)
P.O. Box 19506
Springfield, Illinois 62794-9506

10.5 Attachment 5 - Applicant Letter Dated August 1, 2001 to USEPA
August 1, 2001

Ms. Katherine Keith
US EPA Region V
AE-17J
77 West Jackson Boulevard
Chicago, Illinois 60604-3507

RE: NEW SOURCE PERFORMANCE STANDARD LLL
REQUEST FOR ALTERNATE OPERATING AND MONITORING
NATURAL GAS PIPELINE COMPANY OF AMERICA - STATION 206, ST.
ELMO, ILLINOIS
SITE I.D. NO. 051808AABCAAPP APPLICATION NO. 95120217

Dear Ms. Keith:

Natural Gas Pipeline Company of America (NGPL), a subsidiary of Kinder Morgan, Inc., hereby requests an alternate method of monitoring operations and emissions of natural gas sweetening units (amine units) and an associated sulfur recovery process (Stretford Plant).

NGPL proposes the following monitoring protocol to demonstrate compliance with New Source Performance Standard LLL (40 CFR Part 60, Subpart LLL).

MINIMUM SULFUR REDUCTION EFFICIENCY

Based on 40 CFR 60.642(b), Table 2, the minimum sulfur reduction efficiency (Z_c) is calculated at the maximum design rates for the process. The minimum sulfur dioxide reduction efficiency is based on the design sulfur feed rate (X) and the H₂S content of the acid gas (Y).

$$X = \text{Sulfur Feed Rate in LT/Day} = K Q_a Y \quad (40 \text{ CFR } \S 60.644(b)(1))$$

$$K = \frac{(32 \text{ lb S /lb-mole})}{(100\%) (385.36 \text{ dscf/lb-mole})} = 3.707 \times 10^{-7} \text{ long-ton/dscf} \quad (2240 \text{ lb/long ton})$$

$$Q_a = \text{Average volumetric flow rate of acid gas from sweetening unit, dscf/day}$$

$$Q_a = 716.7 \text{ scf/minute} \times 60 \text{ min/hr} \times 24 \text{ hr/day} = 1,032,000 \text{ scf/day} \quad (\text{Based on Maximum Design Rates, Not Average Rates})$$

$$Y = \text{Average H}_2\text{S concentration in acid gas feed from sweetening unit, percent by volume}$$

$$Y = 31.4\% \quad (\text{maximum design conditions for 640 ppm H}_2\text{S to amine plant})$$

$$X = \frac{32 \text{ lb S /lb-mole}}{(100\%) (385.36 \text{ dscf/lb-mole})} \times 1,032,000 \text{ scf acid gas/day} \times 31.4\% \text{ H}_2\text{S} \quad (2240 \text{ lb/long ton})$$

X = 11.99 long-ton Sulfur/day

From Table 2 (40 CFR §60.642(b): If x = 11.99 long-ton/day and Y = 31.4%
 $85.35 X^{0.0144} Y^{0.0128} = 92.4\%$ (Based on Maximum Design)

or

97.5, Whichever is Smaller

MONITORING OF EMISSIONS AND OPERATIONS (40 CFR § 60.646 (a))

1. Accumulation of Sulfur Product

NGPL does not produce liquid sulfur, but rather the sulfur recovery process is a batch process producing "cake" elemental sulfur. The sulfur cake includes impurities such as excess water and Stretford Solution. The sulfur cake is stored in dumpsters on-site until sufficient quantities are accumulated to warrant disposal of the sulfur cakes at an off-site special waste disposal facility. NGPL manifests each shipment of sulfur cake, and maintains manifests and associated weight tickets at Station 206 to document the production of sulfur cake from the Stretford process.

2. H₂S Concentration in acid gas from sweetening units (Amine Plant)

NGPL will calculate the total H₂S in the acid gas stream going to the Stretford (sulfur treating plant) Plant utilizing the H₂S ppm concentration of the gas going to the amine units (gas sweetening units) and the H₂S ppm concentration of the gas going to the main pipeline. NGPL will monitor the H₂S concentration in both streams and record the concentrations once per hour and calculate a 24-hour average H₂S concentration in each line.

NGPL will calculate the following material balance based on the daily average H₂S concentrations going to the amine units and to the mainline.

$$\text{H}_2\text{S to Stretford Plant} = \text{H}_2\text{S to Amine Units} - \text{H}_2\text{S to Mainline}$$

Total H₂S to Amine Unit

NGPL will utilize an H₂S analyzer to monitor the H₂S in the gas going to the amine units.

$$\text{H}_2\text{S to Amine Units scf/d} = \frac{\text{Gas flow to amine units} [\text{mmscf/day}] \times 1,000,000 [\text{cf/mm scf}] \times \text{H}_2\text{S Concentration} [\text{ppm}]}{1,000,000 \text{ ppm}}$$

Total H₂S to Mainline

NGPL will utilize an H₂S analyzer to monitor the H₂S in the gas going to the main pipeline for transmission along the system. The flow of gas will be determined based on the flow of gas going to the mainline.

$$\text{H}_2\text{S to Mainline scf/d} = \frac{\text{Gas flow to mainline [mmscf/day]} \times 1,000,000 \text{ [cf/mmscf]} \times \text{H}_2\text{S Concentration [ppm]} \times 1,000,000 \text{ ppm}}{1,000,000 \text{ [cf/mmscf]} \times \text{H}_2\text{S Concentration [ppm]}}$$

3. Average acid gas flow rate from the sweetening unit

Since NGPL will be using a material mass balance to determine the H₂S flow rate going to the Stretford plant, a volumetric flow meter and monitoring of flow is not applicable.

4. Sulfur Feed Rate

THE SULFUR FEED RATE WILL BE DETERMINED BY THE MATERIAL MASS BALANCE - THE DIFFERENCE BETWEEN THE TOTAL H₂S TO AMINE UNIT MINUS THE TOTAL H₂S TO MAINLINE.

scf H₂S / day can be converted to long tons S/day

5. SO₂ reduction efficiency for the 24-hour period

NGPL will calculate the sulfur reduction efficiency of the Stretford plant utilizing the following material mass balance equation.

$$\text{Sulfur Reduction Efficiency} = \frac{\text{Moles Sulfur to Stretford Plant} - \text{Moles Sulfur to Flare}}{\text{Moles Sulfur to Stretford Plant}} \times 100\%$$

MOLES SULFUR TO STRETFORD PLANT

NGPL will use the total H₂S to the Stretford plant calculated in number 2 above to determine the moles of sulfur equivalent in the tail gas stream from the Stretford.

$$\text{Moles H}_2\text{S to Stretford Plant} = \frac{\text{Total H}_2\text{S to Stretford Unit (cf/day)} \times 1 \text{ mole of gas}}{380 \text{ cf gas}}$$



Thus,

$$\text{Moles of equivalent SO}_2 \text{ to Stretford Plant} = \text{Moles of H}_2\text{S to Stretford Plant}$$

Moles Sulfur (H₂S) from Stretford Plant (Tail Gas)

NGPL will use a total sulfur monitor to monitor the total sulfur content of the Stretford plant tail gas prior to the gas going to the flare.

Moles H₂S to Flare = $\frac{\text{Total H}_2\text{S to Flare ppm} \times \text{Gas Flow Rate to Flare (mmcf/day)}}{1,000,000 \text{ ppm}} \times 1 \text{ mole of gas}$



Thus,

Moles of equivalent SO₂ to Flare = Moles of H₂S to Flare

6. SO₂ reduction efficiency compliance check for the 24-hour period

For each 24-hour period, NGPL will compare the minimum SO₂ reduction efficiency to the calculated SO₂ reduction efficiency.

If, the minimum sulfur reduction efficiency is less than the actual sulfur reduction efficiency the facility is in compliance. However, if the minimum sulfur reduction efficiency is greater than the actual sulfur reduction efficiency the facility is out of compliance.

MONITORING OF EMISSIONS AND OPERATIONS (40 CFR § 60.646 (b))

NGPL utilizes a flare to control emissions from the Stretford tail gas. The flare will be equipped with a continuous pilot. The flare operation will be monitored using a thermocouple, which will detect the presence of the flare pilot.

MONITORING DEVICE QUALITY CONTROL

The two H₂S monitors and total sulfur monitor will be equipped with an "auto calibration" feature. NGPL will calibrate each monitor weekly to confirm that the monitors are operating in the appropriate concentration ranges.

RECORDKEEPING AND REPORTING REQUIREMENTS

Records of the calculations and measurements proposed above will be maintained at Station 206 in accordance with 40 CFR §60.647 (a).

NGPL will submit excess emissions reports to US EPA Region V semi-annually, in accordance with 40 CFR §60.647 (b).

Excess emissions are defined as:

1. Any 24-hr period during which the average sulfur emission reduction efficiency ® is less than the minimum required efficiency (Z).

NGPL appreciates your timely review of the information provided, and subsequent notice of approval of the proposed monitoring protocol. If you have any questions or comments pertaining to this request, please contact me at (303) 914-7819.

Sincerely,

NATURAL GAS PIPELINE COMPANY OF AMERICA

Kristine M. Akridge, EIT
Environmental Coordinator

Enclosures: Monitor Specifications

cc: Mangu Patel
Illinois EPA - Division of Air Pollution Control
1021 North Grand Ave. East
P.O. Box 19276
Springfield, Illinois 62794-9276
Gary Buchler - NGPL Station 206
File