

217/782-2113

FEDERALLY ENFORCEABLE STATE OPERATING PERMIT
REVISED

PERMITTEE

North Shore Gas Company
Attn: Mr. Steven J. Matuszak
130 East Randolph Drive
Chicago, Illinois 60601

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| <u>Application No.:</u> 85080021 | <u>I.D. No.:</u> 097090ABN |
| <u>Applicant's Designation:</u> | <u>Date Received:</u> February 23, 2007 |
| <u>Subject:</u> Propane Storage, Vaporization and Distribution | |
| <u>Date Issued:</u> May 15, 2007 | <u>Expiration Date:</u> September 6, 2010 |
| <u>Location:</u> Peterson Road and U.S. Route 45, Libertyville, Lake County, 60048 | |

Permit is hereby granted to the above-designated Permittee to OPERATE emission source(s) and/or air pollution control equipment consisting of eight (8) heavy duty natural gas fired pipeline compressor engines, three (3) natural gas fired I.C. engines powering 3 pumps, a natural gas fired I.C. emergency generator, two (2) natural gas fired Vaporizer (one 26 mmBtu/hour and one 12 mmBtu/hour), ten (10) natural gas fired small heating units, nine (9) 61,400 gallon aboveground propane pressurized storage tanks, twenty four (24) 60,000 gallon aboveground propane pressurized storage tanks and eighteen (18) 30,000 gallon aboveground propane pressurized storage tanks pursuant to the above-referenced application. This Permit is subject to standard conditions attached hereto and the following special condition(s):

- 1a. This federally enforceable state operating permit is issued to limit the emissions of Nitrogen Oxide (NO_x) and Carbon Monoxide (CO) from the propane storage, vaporization and distribution plant to less than major source thresholds (100 tons/year of each), as further described in Attachment A. As a result, the source is excluded from requirements to obtain a Clean Air Act Permit Program permit.
- b. Prior to initial issuance, a draft of this permit has undergone a public notice and comment period.
- c. This permit supersedes the current permit(s) issued for this location.
- 2a. 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 Ill. Adm. Code 212.122, pursuant to 35 Ill. Adm. Code 212.123(a), except as allowed by 35 Ill. Adm. Code 212.123(b) and 212.124.

- b. 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 Ill. Adm. Code 212.301 and 212.314.
- c. Pursuant to 35 Ill. Adm. Code 212.321(a), no person shall cause or allow the emission of particulate matter into the atmosphere in any one hour period from any new process emission unit which, either alone or in combination with the emission of particulate matter from all other similar process emission units for which construction or modification commenced on or after April 14, 1972, at a source or premises, exceeds the allowable emission rates specified in 35 Ill. Adm. Code 212.321(c).
- 3. Pursuant to 35 Ill. Adm. Code 214.301, no person shall cause or allow the emission of sulfur dioxide into the atmosphere from any process emission source to excess 2000 ppm.
- 4. No person shall cause or allow the emission of carbon monoxide (CO) into the atmosphere from any fuel combustion emission source with actual heat input greater than 2.9 MW (10 mmBtu/hour) to exceed 200 ppm, corrected to 50 percent excess air, pursuant to 35 Ill. Adm. Code 216.121.
- 5. This permit is issued based on the 12 mmBtu/hour vaporizer not being subject to the New Source Performance Standard (NSPS) Small Industrial-Commercial-Institutional Steam Generating Units, 40 CFR 60 Subpart Dc, pursuant to 40 CFR 60.41c, which excludes process heaters from the definition of steam generating unit.
- 6a. Operation of the natural gas fired equipment shall not exceed the following limits:

| <u>Item of Equipment</u> | <u>E M I S S I O N S</u> | | | |
|--------------------------|--------------------------|--------------------------|-----------------------|--------------------|
| | <u>Natural Gas Usage</u> | <u>Natural Gas Usage</u> | <u>NO_x</u> | <u>CO</u> |
| | <u>(mmscf/Month)</u> | <u>(mmscf/Year)</u> | <u>(Tons/Year)</u> | <u>(Tons/Year)</u> |
| Compressor (1) | 2.0 | 2.0 | 4.40 | 1.80 |
| Compressor (2) | 2.0 | 2.0 | 4.40 | 1.80 |
| Compressor (3) | 2.0 | 2.0 | 4.40 | 1.80 |
| Compressor (4) | 2.0 | 2.0 | 4.40 | 1.80 |
| Compressor (5) | 2.0 | 2.0 | 4.40 | 1.80 |
| Compressor (6) | 2.0 | 2.0 | 4.40 | 1.80 |
| Compressor (7) | 2.0 | 2.0 | 4.40 | 1.8 |
| Compressor (8) | 2.0 | 2.0 | 4.40 | 1.80 |
| Pump Engine (50HP) | 0.3 | 0.3 | 0.67 | 0.27 |
| Pump Engine (90HP) | 0.3 | 0.3 | 0.67 | 0.27 |
| Pump Engine (102HP) | 0.3 | 0.3 | 0.67 | 0.27 |
| Generator | 0.2 | 0.2 | 0.50 | 0.20 |
| 26 mmBtu/hr Vaporizer | 30.0 | 30.0 | 1.50 | 1.30 |
| Heaters (1-10) (Each) | 20.0 | 20.0 | 1.00 | 0.84 |
| Total | <u>67.1</u> | <u>67.1</u> | <u>40.21</u> | <u>17.55</u> |

These limits are based on maximum natural gas usage and standard AP-42 emission factors, Table 3.2-4, for the engines and generator and Table 1.4-1 for other units.

- b. Compliance with the annual limits of this permit shall be determined on a monthly basis from the sum of the data for the current month plus the preceding 11 months (running 12 months total).
 - c. Natural gas shall be the only fuel fired in this equipment.
- 7a. Operation of the 12 mmBtu/hour natural gas fired vaporizer shall not exceed the following limits:

| <u>Item of Equipment</u> | <u>(mmBtu/Hr)</u> | <u>(mmscf/Yr)</u> | <u>Pollutant</u> | <u>Emission</u> | <u>Emissions</u> | |
|--------------------------|-------------------|-------------------|------------------|-----------------|------------------|------------------|
| | | | | <u>Factor</u> | <u>(Lbs/Hr)</u> | <u>(Tons/Yr)</u> |
| 12 mmBtu/hr Vaporizer | 12.0 | 20.0 | NO _x | 100.0 | 1.20 | 1.00 |
| | | | CO | 84.0 | 1.01 | 0.84 |
| | | | PM | 7.6 | 0.09 | 0.08 |
| | | | SO ₂ | 0.6 | 0.01 | 0.01 |
| | | | VOM | 5.5 | 0.07 | 0.06 |

These limits are based on maximum natural gas usage and standard AP-42 emission factors Table 1.4-1.

- b. Compliance with the annual limits of this permit shall be determined on a monthly basis from the sum of the data for the current month plus the preceding 11 months (running 12 months total).
 - c. Natural gas shall be the only fuel fired in this equipment.
8. This permit is issued based on negligible emission of volatile organic material from the 51 pressurized propane storage tanks. For this purpose, total emissions from all such units shall not exceed nominal emission rates of 0.1 lbs/hour and 0.44 tons/year.
9. In the event that the operation of this source results in an odor nuisance, the Permittee shall take appropriate and necessary actions to minimize odors, including but not limited to, changes in raw material or installation of controls, in order to eliminate the odor nuisance.
10. At all times the Permittee shall, to the extent practicable, maintain and operate the equipment, including associated air pollution control equipment, in a manner consistent with good pollution control practices for minimizing emissions.
11. The Permittee shall notify the Illinois EPA of any change in the type of materials stored that are different from those identified in the application.

12. The Illinois EPA shall be allowed to sample all fuels stored at the above location.
13. This permit is issued based on no loading of any organic material from the aggregate loading pipes of any loading area having throughput of greater than 151 cubic meters per day (40,000 gallons/day) into any railroad tank car, tank truck or trailer.
- 14a. Pursuant to 35 Ill. Adm. Code 212.107, 212.109, and 212.110, testing for particulate matter emissions shall be performed as follows:
 - i. For both fugitive and nonfugitive particulate matter emissions, a determination as to the presence or absence of visible emissions from emission units shall be conducted in accordance with Method 22, 40 CFR part 60, Appendix A, incorporated by reference in 35 Ill. Adm. Code 212.113, except that the length of the observing period shall be at the discretion of the observer, but not less than one minute. This Condition shall not apply to 35 Ill. Adm. Code 212.301.
 - ii. Except as otherwise provided in 35 Ill. Adm. Code Part 212, and except for the methods of data reduction when applied to 35 Ill. Adm. Code 212.122 and 212.123, measurements of opacity shall be conducted in accordance with Method 9, 40 CFR Part 60, Appendix A, and the procedures in 40 CFR 60.675(c) and (d), if applicable, incorporated by reference in 35 Ill. Adm. Code 212.113, except that for roadways and parking areas the number of readings required for each vehicle pass will be three taken at 5-second intervals. The first reading shall be at the point of maximum opacity and second and third readings shall be made at the same point, the observer standing at right angles to the plume at least 15 feet away from the plume and observing 4 feet above the surface of the roadway or parking area. After four vehicles have passed, the 12 readings will be averaged.
 - iii. Measurement of particulate matter emissions from stationary emission units subject to 35 Ill. Adm. Code Part 212 shall be conducted in accordance with 40 CFR part 60, Appendix A, Methods 5, 5A, 5D, or 5E.
 - iv. The volumetric flow rate and gas velocity shall be determined in accordance with 40 CFR part 60, Appendix A, Methods 1, 1A, 2, 2A, 2C, 2D, 3, and 4.
 - v. Upon a written notification by the Illinois EPA, the owner or operator of a particulate matter emission unit subject to 35 Ill. Adm. Code Part 212 shall conduct the applicable testing for particulate matter emissions, opacity, or visible emissions at such person's own expense, to demonstrate compliance. Such test results shall be submitted to the Illinois EPA within thirty (30) days after conducting the test unless an alternative time for submittal is agreed to by the Illinois EPA.

- b. Testing required by Condition 7(a) shall be performed by a qualified independent testing service.
- 15a. Pursuant to 35 Ill. Adm. Code 212.110(e), the owner or operator of an emission unit subject to 35 Ill. Adm. Code Part 212 shall retain records of all tests which are performed. These records shall be retained for at least three (3) years after the date a test is performed.
- b. The Permittee shall maintain records of the following items so as to demonstrate compliance with the conditions of this permit:
 - i. Usage rates of natural gas for above emission unit covered in this permit (mmscf/month and mmscf/year); and
 - ii. Monthly and annual emissions of CO, NO_x, PM, SO₂ and VOM (tons/month and tons/year) with supporting calculations.
16. All records and logs required by this permit shall be retained at a readily accessible location at the source for at least five (5) years from the date of entry and shall be made available for inspection and copying by the Illinois EPA or USEPA upon request. Any records retained in an electronic format (e.g., computer) shall be capable of being retrieved and printed on paper during normal source office hours so as to be able to respond to an Illinois EPA or USEPA request for records during the course of a source inspection.
17. Pursuant to 35 Ill. Adm. Code 212.110(d), a person planning to conduct testing for particulate matter emissions to demonstrate compliance shall give written notice to the Illinois EPA of that intent. Such notification shall be given at least thirty (30) days prior to the initiation of the test unless a shorter period is agreed to by the Illinois EPA. Such notification shall state the specific test methods from 35 Ill. Adm. Code 212.110 that will be used.
18. If there is an exceedance of or deviation from the requirements of this permit as determined by the records required by this permit, the Permittee shall submit a report to the Illinois EPA's Compliance Section in Springfield, Illinois within 30 days after the exceedance/deviation. The report shall include the emissions released in accordance with the recordkeeping requirements, a copy of the relevant records, and a description of the exceedance or deviation and efforts to reduce emissions and future occurrences.

19. Two (2) copies of required reports and shall be sent to:

Illinois Environmental Protection Agency
Division of Air Pollution Control
Compliance Section (#40)
P.O. Box 19276
Springfield, Illinois 62794-9276

and one (1) copy shall be sent to the Illinois EPA's regional office at the following address unless otherwise indicated:

Illinois Environmental Protection Agency
Division of Air Pollution Control
9511 West Harrison
Des Plaines, Illinois 60016

This permit has been revised to incorporate Construction Permit 07020066, for replacement of two boilers with a natural gas fired 12 mmBtu/hour vaporizer.

If you have any questions on this, please call George Kennedy at 217/782-2113.

Edwin C. Bakowski, P.E.
Acting Manager, Permit Section
Division of Air Pollution Control

ECB:GMK:eh

cc: Region 1

Attachment A - Emissions Summary

This attachment provides a summary of the maximum emissions from the propane storage and distribution plant operating in compliance with the requirements of this federally enforceable permit. In preparing this summary, the Illinois EPA used the annual operating scenario which results in maximum emissions from such a plant. The resulting maximum emissions are below the levels (e.g., 100 tons per year of NO_x, CO, SO₂ and PM) at which this source would be considered a major source for purposes of the Clean Air Act Permit Program. Actual emissions from this source will be less than predicted in this summary to the extent that less material is handled, and control measures are more effective than required in this permit.

| <u>Equipment</u> | <u>NO_x</u> <u>(Tons/Yr)</u> | <u>CO</u> <u>(Tons/Yr)</u> | <u>VOM</u> <u>(Tons/Yr)</u> | <u>PM</u> <u>(Tons/Yr)</u> | <u>SO₂</u> <u>(Tons/Yr)</u> |
|-------------------------|---|-------------------------------|--------------------------------|-------------------------------|---|
| 8 Compressors | 35.20 | 14.40 | --- | | |
| 3 Pump Engines | 2.01 | 0.81 | | | |
| 1 Generator | 0.50 | 0.20 | | | |
| 26 mmBtu/hour Vaporizer | 1.50 | 1.30 | | | |
| 12 mmBtu/hour Vaporizer | 1.00 | 0.84 | 0.06 | 0.08 | 0.01 |
| Storage Tanks | | | <u>0.44</u> | | |
| Totals | <u>40.21</u> | <u>17.55</u> | <u>0.50</u> | <u>0.08</u> | <u>0.01</u> |

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