

217/782-2113

FEDERALLY ENFORCEABLE STATE OPERATING PERMIT
REVISED

PERMITTEE

Nicor Gas
Attn: Nancy Huston
1844 Ferry Road
Naperville, Illinois 60563-9600

Application No.: 95040140
Applicant's Designation: STA50
Subject: Dehydration Yard

I.D. No.: 099832AAL
Date Received: November 8, 2000

Date Issued: December 13, 2000

Expiration Date: May 19, 2002

Location: 1/4 Mile West of Route 251 and 1/2 Mile North of Route 52, Mendota

This permit is hereby granted to the above-designated Permittee to OPERATE emission source(s) and/or air pollution control equipment consisting of three triethylene glycol (TEG) dehydration unit vapor vents controlled by 2 natural gas-fired flares (VV1-N, VV2-N, and VV3-N), one methanol storage tank (M1-N), one TEG storage tank (G1-N), and three TEG dehydration unit reboilers (GR1-N, GR2-N, and GR3-N) 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 air pollutants from the source to less than major source thresholds (i.e., 100 tons/year from VOM, 10 tons/year from Hexane, 10 tons/year from Benzene, 10 tons/year from Toluene, and 25 tons/year from HAPs). As a result the source is excluded from the requirement to obtain a Clean Air Act Permit Program (CAAPP) permit. The maximum emissions of this source, as limited by the conditions of this permit, are described in Attachment A.
- b. Prior to issuance, a draft of this permit has undergone a public notice and comment period.
- c. This permit supersedes all operating permits issued for this location.
- 2a. Operation of the TEG dehydration unit vapor vents shall not exceed 31 days per month and 279 days per year.
- b. All TEG dehydration unit vapor vents shall be controlled by flares and the flares operating at all times when any dehydration unit is operating.
- c. Operation of the flares shall be operated to have a destruction efficiency of a minimum of 60%.

3a. Emissions of equipment shall not exceed the following limits:

Item of Equipment	VOM Emissions		Hexane Emissions		Benzene Emissions		Toluene Emissions	
	(Lb/Hr)	(T/Yr)	(Lb/Hr)	(T/Yr)	(Lb/Hr)	(T/Yr)	(Lb/Hr)	(T/Yr)
VV1-N	3.2	10.8	0.7	2.2	0.5	1.6	1.0	3.2
VV2-N	3.2	10.8	0.7	2.2	0.5	1.6	1.0	3.2
VV3-N	3.2	<u>10.8</u>	0.7	<u>2.2</u>	0.5	<u>1.6</u>	1.0	<u>3.2</u>
Totals		32.4		6.6		4.8		9.6

These limits are based on the uncontrolled emissions calculated by using the GRI-GLYCalc™ program, maximum hourly throughputs from the TEG dehydration unit vapor vents, a 60% control efficiency of the flares, and potential hours of operation of 279 days/year as indicated in the permit application.

- b. This permit is issued based on negligible emissions of VOM from the methanol storage tank, the TEG storage tank, and the three reboilers. For this purpose emissions from all such sources shall not exceed nominal emission rates of 0.1 lb/hour and 0.44 ton/yr.
 - c. This permit is issued based on no increase in emissions from the replacement of 3 natural gas-fired flares with 2 natural gas-fired flares to control the 3 TEG dehydration units.
 - d. Compliance with annual limits shall be determined from a running total of 12 months of data.
4. The emissions of Hazardous Air Pollutants (HAPs) as listed in Section 112(b) of the Clean Air Act shall not equal or exceed 10 tons per year of any single HAP or 25 tons per year of any combination of such HAPs, or such lesser quantity as USEPA may establish in rule which would require the Permittee to obtain a CAAPP permit from the Agency. As a result of this condition, this permit is issued based on the emissions of any HAP from this source not triggering the requirement to obtain a CAAPP permit from the Agency.
- 5a. The Permittee shall, in accordance with the manufacturer(s) and/or vendor(s) recommendations, perform periodic maintenance on all the above-referenced equipment such that the equipment be kept in proper working condition and not cause a violation of the Environmental Protection Act or regulations promulgated therein.
- b. The Permittee shall maintain an operating log for the equipment, which at a minimum includes any adjustments of the equipments operating parameters, and the results of inspections, maintenance, and repair activities.
- 6a. The Permittee shall maintain records of the following:
- i. Operation of the TEG dehydration unit vapor vents (days/month and days/year).

- b. All records and logs required by this permit shall be retained at a readily accessible location at the source for at least three years from the date of entry and shall be made available for inspection and copying by the Agency and 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 Agency request for records during the course of a source inspection.
7. If there is an exceedance of the requirements of this permit as determined by the records required by this permit, the Permittee shall submit a report to the Agency's Compliance Unit in Springfield, Illinois within 30 days after the exceedance. 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 violation and efforts to reduce emissions and future occurrences.
8. Two (2) copies of required reports and notifications concerning equipment operation or repairs, performance testing or a continuous monitoring system shall be sent to:

Illinois Environmental Protection Agency
Division of Air Pollution Control
Compliance Section (#40)
1340 North Ninth Street
P.O. Box 19276
Springfield, Illinois 62794-9276

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

Illinois Environmental Protection Agency
Division of Air Pollution Control
5415 North University
Peoria, Illinois 61614

Please note that the 3 natural gas-fired flares controlling the 3 TEG dehydration units have been replaced by the 2 natural gas-fired flares from Construction Permit #00110026.

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

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

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cc: IEPA, FOS Region 2
IEPA, Compliance Unit
USEPA

Attachment A - Emission Summary

This attachment provides a summary of the maximum emissions from a dehydration yard operating in compliance with the requirements of this federally enforceable permit. In preparing this summary, the Agency used the annual operating scenario which results in maximum emissions from such a plant. This is operating 9 continuous months. The resulting maximum emissions are well below the levels, e.g., 100 tons/year from VOM, 10 tons/year from Hexane, 10 tons/year from Benzene, 10 tons/year from Toluene, and 25 tons/year from HAPs 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, less operating hours occur, and control measures are more effective than required in this permit.

1a. VOM emissions from the facility:

<u>Item of Equipment</u>	<u>VOM Emissions</u> <u>(Lb/Hr) (Ton/Yr)</u>	
VV1-N	3.2	10.8
VV2-N	3.2	10.8
VV3-N	3.2	<u>10.8</u>
Total		32.4

These limits are based on the uncontrolled emissions calculated by using the GRI-GLYCalc™ program, maximum hourly throughputs from the TEG dehydration unit vapor vents, a 60% control efficiency of the flares, and potential hours of operation of 279 days/year as indicated in the permit application.

b. VOM emissions from the methanol storage tank, the TEG storage tank, and the three reboilers have negligible emissions.

2. HAP emissions from the facility:

<u>Item of Equipment</u>	<u>Hexane Emissions</u> <u>(Lb/Hr) (T/Yr)</u>	
VV1-N	0.7	2.2
VV2-N	0.7	2.2
VV3-N	0.7	<u>2.2</u>
Total		6.6

These limits are based on the uncontrolled emissions calculated by using the GRI-GLYCalc™ program, maximum hourly throughputs from the TEG dehydration unit vapor vents, a 60% control efficiency of the flares, and potential hours of operation of 279 days/year as indicated in the permit application.

b.	<u>Item of Equipment</u>	Benzene Emissions	
		<u>(Lb/Hr)</u>	<u>(T/Yr)</u>
	VV1-N	0.5	1.6
	VV2-N	0.5	1.6
	VV3-N	0.5	<u>1.6</u>
	Total		4.8

These limits are based on the uncontrolled emissions calculated by using the GRI-GLYCalc™ program, maximum hourly throughputs from the TEG dehydration unit vapor vents, a 60% control efficiency of the flares, and potential hours of operation of 279 days/year as indicated in the permit application.

c.	<u>Item of Equipment</u>	Toluene Emissions	
		<u>(Lb/Hr)</u>	<u>(T/Yr)</u>
	VV1-N	1.0	3.2
	VV2-N	1.0	3.2
	VV3-N	1.0	<u>3.2</u>
	Total		9.6

These limits are based on the uncontrolled emissions calculated by using the GRI-GLYCalc™ program, maximum hourly throughputs from the TEG dehydration unit vapor vents, a 60% control efficiency of the flares, and potential hours of operation of 279 days/year as indicated in the permit application.

d.	<u>Item of Equipment</u>	2,2,4 TMP Emissions	
		<u>(Lb/Hr)</u>	<u>(T/Yr)</u>
	VV1-N	0.1	0.1
	VV2-N	0.1	0.1
	VV3-N	0.1	<u>0.1</u>
	Total		0.3

These limits are based on the uncontrolled emissions calculated by using the GRI-GLYCalc™ program, maximum hourly throughputs from the TEG dehydration unit vapor vents, a 60% control efficiency of the flares, and potential hours of operation of 279 days/year as indicated in the permit application.

e. Methanol emissions from the methanol storage tank have negligible emissions.

3. NO_x emissions from each of the three reboilers have negligible emissions.

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4. CO emissions from each of the three reboilers have negligible emissions.

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