

**ILLINOIS ENVIRONMENTAL PROTECTION AGENCY**

**BUREAU OF AIR**

**DIVISION of AIR POLLUTION CONTROL**

**PERMIT SECTION**

PROJECT SUMMARY for the  
DRAFT CLEAN AIR ACT PERMIT PROGRAM (CAAPP) PERMIT

Natural Gas Pipeline Company of America  
5611 South 12000 West Road, Hersher, Kankakee County

Illinois EPA ID Number: 091811AAB

Application Number: 95120215

Application Type: Renewal

Start of Public Comment Period: November 30, 2006

Close of Public Comment Period: December 30, 2006

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(This Project Summary generally describes the source and explains the draft permit. This document has been prepared pursuant to Section 39.5(8)(b) of the Illinois Environmental Protection Act, which requires "a statement that sets forth the legal and factual basis for the draft CAAPP permit conditions.")

## I. INTRODUCTION

This source has applied for a renewal Clean Air Act Permit Program (CAAPP) operating permit. The CAAPP is the program established in Illinois for operating permits for significant stationary sources as required by Title V of the federal Clean Air Act and Section 39.5 of Illinois' Environmental Protection Act. The conditions in a CAAPP permit are enforceable by the Illinois Environmental Protection Agency (Illinois EPA), the USEPA, and the public. This document is for informational purposes only and does not shield the Permittee from enforcement actions or its responsibility to comply with applicable regulations. This document shall not constitute a defense to a violation of the Act or any rule or regulation.

A CAAPP permit contains conditions identifying the applicable state and federal air pollution control requirements that apply to a source. The permit also establishes emission limits, appropriate compliance procedures, and specific operational flexibility. The appropriate compliance procedures may include monitoring, record keeping, and reporting to show compliance with these requirements. The Permittee must carry out these procedures on an on-going basis to demonstrate that the source is operating in accordance with the requirements of the permit. Further explanations of the specific provisions of the draft CAAPP permit are contained in the attachments to this document, which also identify the various emission units at the source.

## II. GENERAL SOURCE DESCRIPTION

### a. Nature of source

The source, Natural Gas Pipeline - Station #201 is located at Herscher, Kankakee County. The primary function of the compressor station is to transmit natural gas to and from high-pressure underground storage fields and between other compressor stations. Prior to pipeline transmission water is removed from the natural gas by a natural gas dehydration unit. Next, natural gas is injected into the storage fields during the low demand months and withdrawn from storage during the high demand months. The natural gas fired engines or turbines that provide the mechanical energy to power the compressors are typically the primary source of emissions at the Herscher Station #201.

### b. Ambient air quality status for the area

The source is located in an area that is currently designated attainment or unclassifiable for the National Ambient Air Quality Standards for all criteria pollutants (carbon monoxide, lead, nitrogen dioxide, ozone, PM<sub>2.5</sub>, PM<sub>10</sub>, sulfur dioxide).

### c. Major source status

1. The source requires a CAAPP permit as a major source of NO<sub>x</sub>, VOM, and HAP's emissions.

d. Source Emissions

The following table lists annual emissions of criteria pollutants from this source, as reported in the Annual Emission Reports sent to the Illinois EPA.

Pollutant	Annual Emissions (tons)				
	2001	2002	2003	2004	2005
CO	158.51	198.01	187.40	552.56	421.71
NO <sub>x</sub>	1,983.13	2,447.11	2,242.34	1,934.52	2,240.27
PM	4.52	5.62	5.45	7.32	21.17
SO <sub>2</sub>	0.25	0.31	0.30	0.17	0.74
VOM	53.18	61.54	58.80	17.96	49.52

III. NEW SOURCE REVIEW/TITLE I CONDITIONS

This draft permit contains terms and conditions that address the applicability of permit programs for new and modified sources under 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. Any such terms and conditions are identified within the draft permit by T1, T1R, or T1N. Any conditions established in a construction permit pursuant to Title I and not revised or deleted in this draft permit, remain in effect pursuant to Title I provisions until such time that the Illinois EPA revises or deletes them. Where the source has requested that the Illinois EPA establish new conditions or revise such conditions in a Title I permit, those conditions are consistent with the information provided in the CAAPP application and will remain in effect pursuant to Title I provisions until such time that the Illinois EPA revises or deletes them.

This draft permit would not establish any new Title I requirements or revised Title I requirements.

IV. COMPLIANCE INFORMATION

The source has certified compliance with all applicable rules and regulations; therefore, a compliance schedule is not required for this source. In addition, the draft permit requires the source to certify its compliance status on an annual basis.

V. PROPOSED ILLINOIS EPA ACTION/REQUEST FOR COMMENTS

It is the Illinois EPA's preliminary determination that this source's permit application meets the standards for issuance of a CAAPP permit. The Illinois EPA is therefore proposing to issue a CAAPP permit, subject to the conditions proposed in the draft permit.

Comments are requested by the Illinois EPA for the draft or proposed permit, pursuant to 35 IAC Part 252 and Sections 39.5(8) and (9) of the Illinois Environmental Protection Act. A final decision on the draft or proposed permit will not be made until the public, affected states, and USEPA have had an opportunity to comment. The Illinois EPA is not required to accept recommendations that are not based on applicable requirements. If substantial public interest is shown in this matter, the Illinois EPA will consider holding a public hearing in accordance with 35 IAC Part 166.

ATTACHMENT 1: Summary of Source-Wide Requirements

The following table indicates the source-wide emissions control programs and planning requirements that are applicable to this source. These programs are addressed in Sections 5 and 6 of the draft permit.

<b>Program/Plan</b>	<b>Applicable</b>
Emissions Reduction Market System (ERMS)	NO
Nitrogen Oxides (NO <sub>x</sub> ) Trading Program	NO
Acid Rain Program	NO
Compliance Assurance Monitoring (CAM) Plan	NO
Fugitive Particulate Matter (PM) Operating Program	NO
Risk Management Plan (RMP)	NO
PM <sub>10</sub> Contingency Measure Plan	NO

ATTACHMENT 2: Summary of Requirements for Specific Emission Units

The following tables include information on the requirements that apply to significant emission units at this source. The requirements are found in Section 7 of the draft permit, which is further divided into subsection, i.e., Section 7.1, 7.2, etc., for the different categories of units at the source. A separate table is provided for each subsection in Section 7 of the draft permit. An explanation of acronyms and abbreviations is contained in Section 2 of the draft permit.

Table 1 (Section 7.1 of the draft permit)

<b>Emission Unit - Natural Gas Fired Engines</b>	
Description	These engines are used for natural gas compression and powering station generators.
Date Constructed	1972
Emission Control Equipment	NSCR for engines 07 thru 10 NSCR for 01-AUX and 02-AUX
<b>Applicable Rules and Requirements</b>	
Emission Standards	<ul style="list-style-type: none"> <li>• 35 IAC 214.301</li> <li>• 35 IAC 215.301</li> <li>• 35 IAC 212.123(a)</li> <li>• 40 CFR 63, Subpart ZZZZ (engines 7-10 and Aux 1&amp; 2)</li> </ul>
Streamlining	NO
Title I Conditions	NO
Non-applicability	<ul style="list-style-type: none"> <li>• <b>See Condition 7.1.4 of the draft permit</b></li> </ul>
<b>Periodic Monitoring (other than basic regulatory requirements)</b>	
Testing	Annual Method 9 not subject because the engines are natural gas fired
Emissions Monitoring	
Operational Monitoring	
Inspections	

<b>Emission Unit - Natural Gas Fired Engines</b>	
Recordkeeping	<ul style="list-style-type: none"> <li>i. The hours of operation of the affected engines.</li> <li>ii. The amount of natural gas used by the affected engines, in mmscf/mo and mmscf/yr.</li> <li>iii. The number of startups totaled per month and per year for each affected engine.</li> <li>iv. The load of operation for the affected engine in % load.</li> <li>v. The emissions of CO, NO<sub>x</sub> and VOM for the affected engine in, ton/mo and ton/yr (12 month running total).</li> <li>vi. The annual emissions of VOM, PM, NO<sub>x</sub> and SO<sub>2</sub> from the affected engine, in ton/yr.</li> <li>vii. Startup procedures.</li> </ul>
Other	<ul style="list-style-type: none"> <li>- Exceedance of the limits in conditions 7.1.3, 7.1.5</li> <li>- Start-up of the affected engines</li> </ul>
<b>Reporting</b>	
Prompt Reporting	<ul style="list-style-type: none"> <li>- Deviations for engines not subject to 40 CFR 63, Subpart ZZZZ</li> <li>- 40 CFR 63.6650 for engines subject to 40 CFR 63, Subpart ZZZZ</li> <li>- See Attachment 3</li> </ul>
Other Reporting	Startup reporting
<b>Other Information</b>	
Footnotes	

Table 2 (Section 7.2 of the draft permit)

<b>Emission Unit - Three Natural Gas Fired Turbines</b>	
Description	The turbines are used to provide power to the compressor units at the source. The turbines do not utilize any control equipment.
Date Constructed	Before 1972
Emission Control Equipment	None
<b>Applicable Rules and Requirements</b>	
Emission Standards	<ul style="list-style-type: none"> <li>• 35 IAC 214.301</li> <li>• 35 IAC 215.301</li> <li>• 35 IAC 212.123(a)</li> </ul>
Streamlining	NO
Title I Conditions	NO
Non-applicability	<ul style="list-style-type: none"> <li>• <b>See Condition 7.2.4 of the draft permit</b></li> </ul>
<b>Periodic Monitoring (other than basic regulatory requirements)</b>	
Testing	
Emissions Monitoring	
Operational Monitoring	
Inspections	
Recordkeeping	<ul style="list-style-type: none"> <li>i. The hours of operation of the affected engines.</li> <li>ii. The amount of natural gas used by the affected engines, in mmscf/mo and mmscf/yr.</li> <li>iii. The number of startups totaled per month and per year for the affected engines.</li> <li>iv. The load of operation for affected engines 12, 13, 14 in % load.</li> <li>v. The emissions of CO, NO<sub>x</sub> and VOM for affected engines 12, 13, 14 in ton/mo and ton/yr (12 month running total).</li> <li>vi. The annual emissions of VOM, PM, NO<sub>x</sub> and SO<sub>2</sub> from the affected engines, in ton/yr.</li> </ul>

<b>Emission Unit - Three Natural Gas Fired Turbines</b>	
Other	
<b>Reporting</b>	
Prompt Reporting	See Attachment 3
Other Reporting	
<b>Other Information</b>	
Footnotes	

Table 3 (Section 7.3 of the draft permit)

<b>Emission Unit - Gas Fired Boilers</b>	
Description	The boilers are used to produce steam for heating at the source.
Date Constructed	01-BOL & 02-BOL Before 1972 04-BOL 1999
Emission Control Equipment	NO
<b>Applicable Rules and Requirements</b>	
Emission Standards	<ul style="list-style-type: none"> <li>• See Condition 7.3.4 of the draft permit</li> </ul>
Streamlining	NO
Title I Conditions	Yes
Non-applicability	<ul style="list-style-type: none"> <li>• <b>See Condition 7.3.4 of the draft permit</b></li> </ul>
<b>Periodic Monitoring (other than basic regulatory requirements)</b>	
Testing	
Emissions Monitoring	
Operational Monitoring	
Inspections	
Recordkeeping	<ol style="list-style-type: none"> <li>1. Total usage of natural gas (mmft<sup>3</sup>/yr)</li> <li>2. Emissions of NO<sub>x</sub>, VOM, SO<sub>2</sub> and PM (ton/yr)</li> <li>3. Daily usage of fuel for boiler (04-BOL)</li> </ol>
Other	NO
<b>Reporting</b>	
Prompt Reporting	Deviations of limits (NO <sub>x</sub> , SO <sub>2</sub> , and PM) See Attachment 3
Other Reporting	
<b>Other Information</b>	
Footnotes	

Table 4 (Section 7.4 of the draft permit)

<b>Emission Unit - Glycol Dehydration Unit (01-DHY)</b>	
Description	The glycol dehydration unit is associated with the underground natural gas storage fields at the station. This is used to remove water from natural gas prior to returning to the pipeline for shipment. The water in the natural gas is removed from the natural gas using a glycol solution. The glycol solution is continually recycled, using a reboiler to heat the glycol to remove the water. Once the water is removed from the glycol it is stored in the new storage tank. As part of this process, trace levels of organic compounds are also removed from the natural gas with the water. When the glycol solution is heated, the organic compounds are volatilized and emitted at the dehydration unit still column. The emission of dehydration unit still column is controlled by the flare.
Date Constructed	Before 1982
Emission Control Equipment	Condenser (02-CND) and Flare (02-FLR)
<b>Applicable Rules and Requirements</b>	
Emission Standards	<ul style="list-style-type: none"> <li>• 35 IAC 214.301</li> <li>• 40 CFR 63 Subpart HHH</li> </ul>
Streamlining	NO
Title I Conditions	<ul style="list-style-type: none"> <li>• The draft permit contains limits on operation and emissions in Conditions 7.1.5 and 7.1.6. These limits were incorporated from Permit # 01080018</li> </ul>
Non-applicability	<ul style="list-style-type: none"> <li>• See Condition 7.4.4 of the draft permit</li> </ul>
<b>Periodic Monitoring (other than basic regulatory requirements)</b>	
Testing	
Emissions Monitoring	
Operational Monitoring	The Permittee shall monitor the presence of a flame in the flare as if the flare were subject to 40 CFR 63.11 and 63.1283(d) (3) (i) (c).
Inspections	

<b>Emission Unit - Glycol Dehydration Unit (01-DHY)</b>	
Recordkeeping	<p>a. The Permittee shall keep the following design records:</p> <ul style="list-style-type: none"> <li>i. Maximum design capacity of the flare in million Btu/hour heat input from both waste gas and pilot flame fuel.</li> <li>ii. Maximum firing rate of the reboiler in the dehydration unit in million Btu/hr.</li> </ul> <p>b. The Permittee shall keep the following operating records for the unit:</p> <ul style="list-style-type: none"> <li>i. Glycol circulation rate in the dehydration unit (gallons/minutes)</li> <li>ii. Amount of natural gas processed by the glycol dehydration unit (million scf/yr)</li> </ul>
Other	NO
<b>Reporting</b>	
Prompt Reporting	See Attachment 3
Other Reporting	
<b>Other Information</b>	
Footnotes	

Table 5 (Section 7.5 of the draft permit)

<b>Emission Unit - Backup Flare (01-FLR)</b>	
Description	Natural gas production occurs incidentally when water is removed from the natural gas storage facility. Typically, this natural gas is reclaimed using the recovery compressor (RECOVERY-1) and reinjected in to the pipeline. When the recovery compressor is out of service, this natural gas stream is combusted in the backup flare device until the compressor is back on line.
Date Constructed	Before 1982
Emission Control Equipment	Condenser and Flare
<b>Applicable Rules and Requirements</b>	
Emission Standards	<ul style="list-style-type: none"> <li>• 35 IAC 215.301</li> </ul>
Streamlining	NO
Title I Conditions	NO
Non-applicability	<ul style="list-style-type: none"> <li>• See Condition 7.5.4 of the draft permit</li> </ul>
<b>Periodic Monitoring (other than basic regulatory requirements)</b>	
Testing	
Emissions Monitoring	
Operational Monitoring	
Inspections	
Recordkeeping	a. Annual hours of operation of the flare (hours/year) b. Calculations which demonstrate that photochemically reactive material emissions do not exceed the limit in 7.5.3 (b) .
Other	NO
<b>Reporting</b>	
Prompt Reporting	See Attachment 3

<b>Emission Unit - Backup Flare (01-FLR)</b>	
Other Reporting	
<b>Other Information</b>	
Footnotes	

Table 6 (Section 7.6 of the draft permit)

<b>Emission Unit - Storage Tanks</b>	
Description	One 1,000 gal gasoline tank and two 20,000 gal methanol tanks.
Date Constructed	No date
Emission Control Equipment	Submerged loading pipe
<b>Applicable Rules and Requirements</b>	
Emission Standards	<ul style="list-style-type: none"> <li>• 35 IAC 215.122 (b)</li> <li>• 35 IAC 215.583(a) (1)</li> </ul>
Streamlining	NO
Title I Conditions	NO
Non-applicability	<ul style="list-style-type: none"> <li>• <b>See Condition 7.6.4 of the draft permit</b></li> </ul>
<b>Periodic Monitoring (other than basic regulatory requirements)</b>	
Testing	
Emissions Monitoring	
Operational Monitoring	
Inspections	On an annual basis, the Permittee shall conduct an inspection of the affected storage tank to review its physical condition and ability to comply with the applicable equipment requirements.
Recordkeeping	<ul style="list-style-type: none"> <li>a. Design information for the tank showing the presence of a submerged loading pipe or submerged fill.</li> <li>b. Maintenance and repair records for the tank, as related to the repair or replacement of the loading pipe, if applicable.</li> </ul>
Other	NO

**Emission Unit - Storage Tanks**

**Reporting**

Prompt Reporting

- i. Any loading of gasoline or other VOL into an affected tank that was not in compliance with Condition 7.5.6, e.g., no "submerged loading pipe or submerged fill" 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 taken to avoid future noncompliance.
  
- ii. Any storage of gasoline or other VOL in an affected tank that is out of compliance with the control requirements (Condition 7.5.6) 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.

See attachment 3

Other Reporting

**Other Information**

Footnotes

### ATTACHMENT 3: Prompt Reporting of Deviations

Prompt reporting of deviations is critical in order to have timely notice of deviations and the opportunity to respond, if necessary. The effectiveness of the permit depends upon, among other important elements, timely and accurate reporting. The Illinois EPA, USEPA and the public rely on timely and accurate reports submitted by the permittee to measure compliance and to direct investigation and follow-up activities. Prompt reporting is evidence of a permittee's good faith in disclosing deviations and describing the steps taken to return to compliance and prevent similar incidents.

Any occurrence that results in an excursion from any emission limitation, operating condition, or work practice standard as specified in this CAAPP permit is a deviation subject to prompt reporting. Additionally, any failure to comply with any permit term or condition is a deviation of that permit term or condition and must be reported to the Illinois EPA as a permit deviation. The deviation may or may not be a violation of an emission limitation or standard. A permit deviation can exist even though other indicators of compliance suggest that no emissions violation or exceedance has occurred. Reporting permit deviations does not necessarily result in enforcement action. The Illinois EPA has the discretion to take enforcement action for permit deviations that may or may not constitute an emission limitation or standard or the like, as necessary and appropriate.

Section 39.5(7)(f)(ii) of the Illinois Environmental Protection Act, which mirrors 40 CFR 70.6(a)(3)(iii)(B), requires prompt reporting of deviations from the permit requirements. The permitting authority (in this case, Illinois EPA) has the discretion to define "prompt" in relation to the degree and type of deviation likely to occur. Furthermore, Section 39.5(7)(f)(i) of the Illinois Environmental Protection Act, which mirrors 40 CFR 70.6(a)(3)(iii)(A) requires that monitoring reports must be submitted at least every 6 months. Therefore, USEPA generally considers anything less than 6 months to be "prompt" as long as the selected time frame is justified appropriately (60 Fed. Reg. 36083, 36086 (July 13, 1995)).

The USEPA has stated that, for purposes of administrative efficiency and clarity, it is acceptable to define prompt in each individual permit. *Id.* The Illinois EPA has elected to follow this approach and defines prompt reporting on a permit by permit basis. In instances where the underlying applicable requirement contains "prompt" reporting, this frequency or a shorter frequency of reporting is the required timeframe used in this permit. Where the underlying applicable requirement fails to explicitly set forth the timeframe for reporting deviations, the Illinois EPA has developed a structured manner to determine the reporting approach used in this permit.

The Illinois EPA generally uses a time frame of 30 days to define prompt reporting of most deviations. Also, for certain permit conditions in individual permits, the Illinois EPA may require an alternate timeframe that is less than 30 days if the permit requirement justifies a shorter reporting time period. Under certain circumstances, EPA may establish a deviation reporting period longer than 30 days, but, in no event exceeding 6 months. Where it has established a deviation reporting period other than 30 days in an individual permit (specifically Section 7.x.10), the Illinois EPA has explained the reason for the alternative timeframe. (See Attachment 2 of this Project Summary.)

The timing for certain deviation reporting may be different when a source or emission unit at a source warrants reporting to address operation, independent of the occurrence

of any deviations. This is the case for a source that is required to perform continuous monitoring for the emission unit, for which quarterly or semi-annual "monitoring" reports are appropriate. Where appropriate, reporting of deviations has generally been combined in, or coordinated with these quarterly or semi-annual reports, so that the overall performance of the plant can be reviewed in a comprehensive fashion. This will allow a more effective and efficient review of the overall performance of the source by the Illinois EPA and other interested parties, as well as by the source itself.

At the same time, there are certain deviations for which quicker reporting is appropriate. These are deviations for which individual attention or concern may be warranted by the Illinois EPA, USEPA, and other interested parties. Under this scenario, emphasis has been placed primarily on deviations that could represent substantial violations of applicable emission standards or lapses in control measures at the source. For these purposes, depending on the deviation, immediate notification may be required and preceded by a follow-up report submitted within 15 days, during which time the source may further assess the deviation and prepare its detailed plan of corrective action.

In determining the timeframe for prompt reporting, the Illinois EPA assesses a variety of criteria such as:

- historical ability to remain in continued compliance,
- level of public interest in a specific pollutant and/or source,
- seriousness of the deviation and potential to cause harm,
- importance of applicable requirement to achieving environmental goals,
- designation of the area (i.e., non-attainment or attainment),
- consistency among industry type and category,
- frequency of required continuous monitoring reports (i.e., quarterly),
- type of monitoring (inspection, emissions, operational, etc.), and
- air pollution control device type and operation

These prompt reporting decisions reflect the Illinois EPA's consideration of the possible nature of deviations by different emission units and the responses that might be required or taken for those different types of deviations. As a consequence, the conditions for different emission units may identify types of deviations which include but are not limited to: 1) Immediate (or very quick) notification; 2) Notification within 30 days as the standard; or 3) Notification with regular quarterly or semi-annual monitoring reports.

The Illinois EPA's decision to use the above stated prompt reporting approach for deviations as it pertains to establishing a shorter timeframe in certain circumstances reflects the criteria discussed as well as USEPA guidance on the topic.

- 40 CFR 71.6(a)(3)(iii)(B) specifies that certain potentially serious deviations must be reported within 24 or 48 hours, but provides for semi-annual reporting of other deviations. (Serious or severe consequences)
- FR Vol. 60, No. 134, July 13, 1995, pg. 36086 states that prompt should generally be defined as requiring reporting within two to ten days of the deviation, but longer time periods may be acceptable for a source with a low level of excess emissions. (intermediate consequences)

- Policy Statement typically referred to as the "Audit Policy" published by the USEPA defines prompt disclosure to be within 21 days of discovery. (Standard for most "pollutant limiting" related conditions)
- Responses to various States by USEPA regarding other States' definition of prompt.

As a result, the Illinois EPA's approach to prompt reporting for deviations as discussed herein is consistent with the requirements of 39.5(7)(f)(ii) of the Act as well as 40 CFR part 70 and the CAA. This reporting arrangement is designed so that the source will appropriately notify the Illinois EPA of those events that might warrant individual attention. The timing for these event-specific notifications is necessary and appropriate as it gives the source enough time to conduct a thorough investigation into the causes of an event, collecting any necessary data, and to develop preventative measures, to reduce the likelihood of similar events, all of which must be addressed in the notification for the deviation.

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