Statement of Basis

for the DRAFT CAAPP Permit for:

Source Name:

Nicor Gas – Station #40

Statement of Basis No.: 95120019-1205

I.D. No.: 113816AAA

Permit No.: 95120019

Date Prepared: May 11, 2012

Permitting Authority:

Illinois Environmental Protection Agency
Bureau of Air, Permit Section
217/785-1705

This Statement of Basis is being provided to USEPA and any interested parties as required by Section 39.5(8)(b) of the Illinois Environmental Protection Act.

Table of Contents

PREFACE

INTRODUCTION

CHAPTER I – LEGAL BASIS FOR THE PERMIT AND PERMIT CONDITIONS

1.1 Legal Basis for Program

1.2 Legal Basis for Issuance of CAAPP Permit

a. Application Status
b. Compliance Status
c. Payment of Fees
d. Additional Information Status

1.3 Legal Basis for Conditions in the CAAPP Permit

a. Applicable Federal Regulations
b. Applicable SIP Regulations
c. Other Applicable Requirements

CHAPTER II – FACTUAL BASIS FOR THE PERMIT AND PERMIT CONDITIONS

2.1 Source History

2.2 Source Description

2.3 Single Source Status

2.4 Ambient Air Quality Status

2.5 Source Status

2.6 Annual Emissions

2.7 Fee Schedule

2.8 SIP Permit Facts

CHAPTER III – SUPPLEMENTAL INFORMATION REGARDING THE PERMIT AND CONDITIONS

3.1 Environmental Justice

3.2 Emission Testing Results

3.3 Compliance Reports

3.4 Field Inspection Results

3.5 Historical Non-Compliance

3.6 Source Wide Justifications and Rationale

3.7 Emission Unit Justifications and Rationale

a. Natural Gas Fired Engines
b. Natural Gas Fired Pipeline Heaters
c. TEG Dehydration Units
d. Storage Tanks

3.8 Insignificant Activities Discussion

3.9 Prompt Reporting Discussion

3.10 Start-Up/Shutdown/Malfunction Breakdown

3.11 Incorporation by Reference Discussion

3.12 Periodic Monitoring General Discussions

CHAPTER IV - DESCRIPTION OF THE CHANGES FROM PREVIOUSLY ISSUED CAAPP PERMITS

4.1 Major Changes Summary

4.2 Specific Permit Condition Changes

ENDNOTES

PREFACE

Reason For This Document

This document is a requirement of the permitting authority in accordance with 502(a) of the Clean Air Act, 40 CFR 70.7(a)(5), and Section 39.5(8)(b) of the Illinois Environmental Protection Act. Section 39.5(8)(b) of the Illinois Environmental Protection Act states the following:

> "The Agency shall prepare a …… statement that sets forth the legal and factual basis for the Draft CAAPP permit conditions, including references to the applicable statutory or regulatory provisions."

Purpose Of This Document

The purpose of this Statement of Basis is to provide discussion regarding the development of this Draft CAAPP Permit. This document would also provide the permitting authority, the public, the source, and the USEPA with the applicability and technical matters that form the basis of the Draft CAAPP Permit.

Summary Of Historical Actions Leading Up To Today's Permitting Action

Since the last New CAAPP Permit issued on April 16, 2002, the source has not been issued any modifications or amendments.

Limitations

This Statement of Basis is not enforceable and only sets forth the legal and factual basis for the Draft CAAPP Permit Conditions (Chapters I and II). Chapter III contains supplemental material that would assist in educating interested parties about this source and the Draft CAAPP Permit. The Statement of Basis does not shield the source from enforcement actions or its responsibility to comply with existing or future applicable regulations. Nor does the Statement of Basis constitute a defense to a violation of the Federal Clean Air Act or the Illinois Environmental Protection Act including implementing regulations.

This document does not purport to establish policy or guidance.

INTRODUCTION

The Clean Air Act Permit Program (CAAPP) is the operating permit program established in Illinois for major stationary sources as required by Title V of the federal Clean Air Act and Section 39.5 of the Illinois Environmental Protection Act. The Title V Permit Program (CAAPP) is the primary mechanism to apply the various air pollution control requirements established by the Clean Air Act to major sources, defined in accordance with Title V of the Clean Air Act. The Draft CAAPP Permit contains conditions identifying the state and federal applicable requirements that apply to the source. The Draft CAAPP Permit also establishes the necessary monitoring and compliance demonstrations. The source must implement this monitoring to demonstrate that the source is operating in accordance with the applicable requirements of the permit. The Draft CAAPP Permit identifies all applicable requirements for the various emission units as well as establishes detailed provisions for testing, monitoring, recordkeeping, and reporting to demonstrate compliance with the Clean Air Act. Further explanations of the specific provisions of the Draft CAAPP Permit are contained in the following Chapters of this Statement of Basis.

In addition, the Illinois EPA has committed substantial resources and effort in the development of an acceptable Statement of Basis (this document) that would meet the expectations of USEPA, Region 5. As a result, this document contains discussions that address applicability determinations, periodic monitoring, streamlining, prompt reporting, and SSM authorizations (as necessary). These discussions involve, where necessary, a brief description and justification for the resulting conditions and terms in this Draft CAAPP Permit. This document begins by discussing the legal basis for the contents of the Draft CAAPP Permit, moves into the factual description of the permit, and ends with supplemental information that has been provided to further assist with the understanding of the background and genesis of the permit content.

It is Illinois EPA’s preliminary determination that this source’s Permit Application meets the standards for issuance of a “Final” CAAPP Permit as stipulated in Section 39.5(10)(a) of the Illinois Environmental Protection Act (see Chapter I – Section 1.2 of this document). The Illinois EPA is therefore initiating the necessary procedural requirements to issue a Final CAAPP Permit. The Illinois EPA has posted the Draft CAAPP permit and this Statement of Basis on USEPA website:

http://www.epa.gov/reg5oair/permits/ilonline.html

CHAPTER I – LEGAL BASIS FOR THE PERMIT AND PERMIT CONDITIONS

1.1 Legal Basis for Program

The Illinois EPA's state operating permit program for major sources established to meet the requirements of 40 CFR Part 70 are found at Section 39.5 of the Illinois Environmental Protection Act [415 ILCS 5/39.5]. The program is called the Clean Air Act Permitting Program (CAAPP). The underlying statutory authority is found in the Illinois Environmental Protection Act at 415 ILCS 5/39.5. The CAAPP was given final full approval by USEPA on December 4, 2001 (see 66 FR 62946).

1.2 Legal Basis for Issuance of CAAPP Permit

In accordance with Section 39.5(10)(a) of the Illinois Environmental Protection Act, the Illinois EPA may only issue a CAAPP Permit if all of the following standards for issuance have been met:

- The applicant has submitted a complete and certified application for a permit, permit modification, or permit renewal consistent with Sections 39.5(5) and (14) of the Illinois Environmental Protection Act, as applicable, and applicable regulations (Section a. below);

- The applicant has submitted with its complete application an approvable compliance plan, including a schedule for achieving compliance, consistent with Section 39.5(5) of the Illinois Environmental Protection Act and applicable regulations (Section b. below);

- The applicant has timely paid the fees required pursuant to Section 39.5(18) of the Illinois Environmental Protection Act and applicable regulations (Section c. below); and

- The applicant has provided any additional information as requested by the Illinois EPA (Section d. below).

a. Application Status

The source submitted an application for a Renewal CAAPP Permit on July 17, 2006. The source is currently operating under an application shield resultant from a timely and complete renewal application submittal. This Draft CAAPP Permit addresses application content and necessary revisions to meet the requirements for issuance of the permit.

b. Present Compliance Status

At the time of this Draft CAAPP Permit, there were no pending State or Federal enforcement actions against the source; therefore, a Compliance Schedule is not required for this source. The source submitted an approvable Compliance Plan as part of its Certified Permit Application. The source has certified compliance with all applicable rules and regulations. In addition, the draft permit requires the source to certify its compliance status on an annual basis.

c. Payment of Fees

The source is current on payment of all fees associated with operation of the emission units.

d. Additional Information

The source provided all the necessary additional application material as requested by the Illinois EPA.

1.3 Legal Basis for Conditions in the CAAPP Permit

This industrial source is subject to a variety of Federal and SIP regulations, which are the legal basis for the conditions in this permit (see Sections a. and b. below). Also, the CAAPP provides the legal basis for additional requirements such as periodic monitoring, reporting, and recordkeeping. The following list summarizes those regulations that form the legal basis for the conditions in this Draft CAAPP Permit and are provided in the permit itself as the origin and authority.

a. Applicable Federal Regulations

This source operates emission units that are subject to the following Federal regulations.

40 CFR Part 63 – Subpart ZZZZ, Reciprocating Internal Combustion Engines

b. Applicable SIP Regulations

This source operates emission units that are subject to the following SIP regulations:

35 IAC Part 201 - Permits And General Provisions
35 IAC Part 212 – Visible And Particulate Matter Emissions
35 IAC Part 214 – Sulfur Limitations
35 IAC Part 215 - Organic Material Emission Standards And Limitations
35 IAC Part 216 – Carbon Monoxide Emissions
35 IAC Part 217 – Nitrogen Oxides Emissions
35 IAC Part 244 – Episodes
35 IAC Part 254 – Annual Emissions Report
35 IAC Part 266 - Interpretation Of The Definition Of Process Weight Rate

c. Other Applicable Requirements

There are no other applicable requirements for this source.

CHAPTER II – FACTUAL BASIS FOR THE PERMIT AND PERMIT CONDITIONS

2.1 Source History

There is no significant source history warranting discussion for this source.

2.2 Description of Source

SIC Code: 4924, Natural Gas Distribution
County: Mclean

The source's primary function is to transmit natural gas to and from high-pressure underground storage fields. Natural gas is injected into the storage fields during low demand periods and withdrawn from storage during high demand periods. Natural gas fired compressors are used to inject the natural gas pressure into the underground storage fields. When the natural gas is withdrawn from storage, and prior to delivery to the distribution pipeline system, water is removed from the natural gas by triethylene glycol dehydration units.

The source contains the following processes:

Emission Units	*Description*
Natural Gas Fired Engine	One (1) 4,000 Hp Natural Gas Fired Engine (EC21) with NO_x Control System
Natural Gas Fired Engine	One (1) 4,000 Hp Natural Gas Fired Engine (CC31)
Natural Gas Fired Engine	One (1) 1,320 Hp Natural Gas Fired Engine (IC11)
Natural Gas Fired Pipeline Heater	One (1) 10.5 mmBtu/hr Natural Gas Fired Pipeline Heater (PH2)
Natural Gas Fired Pipeline Heater	One (1) 7.0 mmBtu/hr Natural Gas Fired Pipeline Heater (PH1)
TEG Dehydration Units	One (1) Triethylene Glycol (TEG) Dehydration Units (VV1)
TEG Dehydration Units	One (1) Triethylene Glycol (TEG) Dehydration Units (VV2)
Storage Tank	One (1) 10,000 Gallon Methanol Tank (M1)
Storage Tanks	Thirty-Two (32) 300 Gallon Methanol Tanks

2.3 Single Source Status

This source does not have any collocated facilities that would be considered a single source with this facility based on information found in the certified application.

2.4 Ambient Air Quality Status for the Area

The source is located in an area that as of the date of permit issuance designated attainment or unclassifiable for the National Ambient Air Quality Standards for all criteria pollutants (carbon monoxide, lead, nitrogen dioxide, ozone, $PM_{2.5}$, PM_{10}, sulfur dioxide). (See 40 CFR Part 81 - Designation of Areas for Air Quality Planning Purposes)

2.5 Source Status

The source requires a CAAPP permit because this source is considered major (based on its PTE) for the following regulated pollutants: nitrogen oxides (NO_x) and volatile organic material (VOM).

This source maintains synthetic minor limits (see Condition(s) 3.4 and 4.1.4(b)) for the following regulated pollutants: hazardous air pollutant (HAP).

This source is considered a natural minor for the following regulated pollutants: PM_{10}, $PM_{2.5}$, carbon monoxide (CO), and sulfur dioxide (SO_2)

Based on available data, this source is not a major source of emissions for GHG, because the estimated potential emissions of GHG that are less than 100 ton per year (mass) and 100,000 tons per year (CO_2e). The source submitted data in its application for which the Illinois EPA estimated the PTE of GHG emissions to be 50,027 tons per year. The emissions consist of 49,978 tons of CO_2, 0.09 tons of N_2O, and 0.94 tons of methane.

This source is not currently subject to any "applicable requirements," as defined by Section 39.5(1) of the Act, for emissions of greenhouse gases (GHG) as defined by 40 CFR 86.1818-12(a), as referenced by 40 CFR 52.21(b)(49)(i). There are no GHG-related requirements under the Illinois Environmental Protection Act, Illinois' State Implementation Plan, or the Clean Air Act that apply to this facility, including terms or conditions in a Construction Permit addressing emissions of GHG or BACT for emissions of GHG from a major project at this facility under the PSD rules. In particular, the USEPA's Mandatory Reporting Rule for GHG emissions, 40 CFR Part 98, does not constitute an "applicable requirement" because it was adopted under the authority of Sections 114(a)(1) and 208 of the Clean Air Act. This permit also does not relieve the Permittee from the legal obligation to comply with the relevant provisions of the Mandatory Reporting Rule for this facility.

2.6 Annual Emissions

The following table lists annual emissions (tons) of criteria pollutants for this source, as reported in the Annual Emission Reports (AER) sent to the Illinois EPA:

Pollutant	*2009*	*2010*	*2011*
CO	16.44	23.52	16.09
NO_x	18.87	24.53	16.55
PM	0.65	0.52	0.56
SO_2	0.02	0.02	0.02
VOM	9.55	10.77	9.45
CO_{2E}	2,966.98	1,689.12	5,061.00
HAP (Form.)	0.75	1.44	0.78

2.7 Fee Schedule

The following table lists the approved annual fee schedule (tons) submitted in the Source's permit application:

Pollutant	*Tons/Year*
Volatile Organic Material (VOM)	45.65

Pollutant		*Tons/Year*
Sulfur Dioxide	(SO_2)	0.10
Particulate Matter	(PM)	2.04
Nitrogen Oxides	(NO_x)	150.00
HAP, not included in VOM or	(HAP)	---
Total		287.79

2.8 SIP Permit Facts (T1 Limits)

CAAPP Permits must address all "applicable requirements," which includes the terms and conditions of preconstruction permits issued under regulations approved by USEPA in accordance with Title I of the CAA (*See* definition of applicable requirements in Section 39.5(1) of the Illinois Environmental Protection Act). Preconstruction permits, commonly referred to in Illinois as Construction Permits, derive from the New Source Review ("NSR") permit programs required by Title I of the CAA. These programs include the two major NSR permit programs: (1) the Prevention of Significant Deterioration ("PSD") program[1] and (2) the nonattainment NSR program.[2] These programs also encompass state construction permit programs for projects that are not major.

In the CAAPP or Illinois's Title V permit program, the Illinois EPA's practice is to identify requirements that are carried over from an earlier Title I permit into a New or Renewed CAAPP Permit as "TI" conditions (i.e., Title I conditions). Title I Conditions that are revised as part of their incorporation into a CAAPP Permit are further designated as "TIR." Title I Conditions that are newly established through a CAAPP Permit are designated as "TIN." It is important that Title I Conditions be identified in a CAAPP Permit because these conditions will not expire when the CAAPP Permit expires. Because the underlying authority for Title I Conditions comes from Title I of the CAA and their initial establishment in Title I Permits, the effectiveness of T1 Conditions derives from Title I of the CAA rather than being linked to Title V of the A. For "changes" to be made to Title I Conditions, they must either cease to be applicable based on obvious circumstances, e.g., the subject emission unit is permanently shut down, or appropriate Title I procedures must be followed to change the conditions.

- Previously Incorporated Construction Permits:

Permit No.	*Date Issued*	*Subject*
01060015	8/10/01	Flare

- Newly Issued Construction Permits:

Permit No.	*Date Issued*	*Subject*
04080017	10/2/04	New Reboiler Burner
07040063	6/14/07	Management of Emissions of Hazardous Air Pollutants
08040031	6/26/08	NOx Control System for Engine EC-21

- Newly Issued Construction Permits For Projects Not Yet Constructed:[3]

Permit No.	*Date Issued*	*Subject*
11120009	1/3/2012	Installation of Oxidation Catalyst Systems

- The Illinois EPA has not established any T1R or T1N Limits in this Draft CAAPP permit.

- There are no extraneous or obsolete T1 conditions for the source.

CHAPTER III – SUPPLEMENTAL DISCUSSIONS REGARDING THE PERMIT

The information provided in this Chapter of the Statement of Basis is being provided to assist interested parties in understanding what additional information may have been relied on to support this draft CAAPP permit.

3.1 Environmental Justice Discussions

This location has not been identified as a potential concern for Environmental Justice consideration.

3.2 Emission Testing Results

The source, at the time of this draft permit, has not been required to perform any emissions testing.

3.3 Compliance Reports (Annual Certifications, Semiannual Monitoring, NESHAP, etc.)

A review of the source's compliance reports demonstrates the sources ability to comply with all applicable requirements.

3.4 Field Inspection Results

A review of the source's latest field inspection report demonstrates the source's ability to comply with all applicable requirements.

3.5 Historical Non-Compliance

There is no historical non-compliance for this source.

3.6 Source Wide Justifications and Rationale

Applicable Requirements Summary		
Applicable Requirement	Type	Location
Fugitive Particulate Matter (35 IAC 212.301 and 35 IAC 212.314)	Applicable Standard	See the Permit, Condition 3.1(a)
Synthetic Minor Requirement	Applicable Limitation	See the Permit, Condition 3.4(a)

Particulate Matter Emission

✓ Monitoring as follows (Condition 3.1(a)(ii))
- o If required, daily observations for a week for PM emissions.

Rationale and Justification for Periodic Monitoring

Periodic Monitoring is sufficient because:

- There is a small likelihood of an exceedance.
- Source has not exhibited a history of non-compliance.
- Monitoring is consistent with other sources in this source category.

Synthetic Minor Requirement (HAP Emissions)

✓ Recordkeeping as follows (Conditions 3.4(a)(ii)(A) and 3.4(b)(ii)(A)):
- o Monthly and annual records of individual and total HAP emissions
- o Records of the hours of operation from the engines in Section 4.1

- o Records of the total heat content of the fuel fired in the engines in Section 4.1

✓ Reporting as follows (Condition 3.5):
- o Prompt reporting within 30 days

Rationale and Justification for Periodic Monitoring

Periodic Monitoring is sufficient for this source because:

- There is a small likelihood of an exceedance.
- Emissions do not vary significantly under normal operation and/or vary slowly with time.
- Source has not exhibited a history of non-compliance.
- Monitoring is consistent with other sources in this source category.
- Restricting the total heat content of fuel fired in the engines in Section 4.1 limits HAP emissions from the source to levels that make them an area source of HAPs. For purposes of individual HAPs, calculations of emissions are determined by emission factors from AP-42. Use of these emission factors is acceptable. The emission factors for natural gas fired engines are rated "A" for formaldehyde, which is the largest individual HAP from natural gas combustion in engines. The total heat content restriction (315,500 mmBtu/year) of the fuel fired in the engines in Section 4.1 contributes 8.71 tons/year of formaldehyde which is a conservative estimate because it was calculated using the highest emission factor for formaldehyde of any of the engine types. All the other emission units that contribute to formaldehyde are categorized as insignificant activities and their total potential emissions when operating at 8,760 hours per year contributes 0.378 tons/year of formaldehyde. For purposes of total combined HAPS, total combined HAPs from all the natural gas sources consist of small amounts of at least 42 individual HAPs, therefore by restricting formaldehyde, the total combined HAP emissions from the natural gas combustion is restricted to 13.31 tons from the 42 individual HAPs. Emission calculations for TEG units are determined by the use of GRI-GLYCalcTM (version 3.0 or higher), the GLYCalcTM manual, and GLYCalcTM procedures, as referenced in the Proposed CAAPP Permit. This is the same preferred method NESHAP HHH uses to calculate emissions. It should also be noted, the source status is an area source of HAPs, and therefore the engines are subject to the NESHAP ZZZZ and all the control and monitoring requirements of the NESHAP. If the engines were located at a major source the engines would be exempt from the NESHAP ZZZZ and all the control and monitoring requirements of the NESHAP. Since the source is subject to the NESHAP ZZZZ, when the engines are required to comply with the NESHAP emissions from the engines will be substantially lower than the emission levels discussed above. Therefore, by restricting the total heat content of the fuel fired in the engines in Section 4.1, the Proposed CAAPP Permit does truly make the source status an area source.

Streamlining Discussion

The source requested and has been granted streamlining of applicable rules.

Prompt Reporting Discussion

Prompt reporting of deviations for source wide emission units has been established as 30 days. See rationale in Chapter III Section 3.9.

3.7 Emission Unit Justifications and Rationale

a. Natural Gas Fired Engines		
Applicable Requirements Summary		
Applicable Requirement	Type	Location
Opacity Requirement (35 IAC 212.123(a))	Applicable Standard	See the Permit, Condition 4.1.2(a)
SO_2 Requirement (35 IAC 214.301)	Applicable Standard	See the Permit, Condition 4.1.2(b)
HAP Requirement (40 CFR 63 Subpart ZZZZ)	Applicable Standard	See the Permit, Condition 4.1.2(c)
Operational and Production Requirements	Applicable Limitation	See the Permit, Condition 4.1.2(d)
Work Practice Requirements	Applicable Work Practice	See the Permit, Condition 4.1.2(e)

Visible Emissions (i.e., Opacity)

✓ Monitoring as follows (Conditions 4.1.2(a)(ii)(A) and 4.1.2(e)(ii)(A))
- o Annual Method 22 observations
- o If required, Method 9 measurements
- o Quarterly Inspections

✓ Recordkeeping as follows (Conditions 4.1.2(a)(ii)(B) and (C), 4.1.2(d)(ii)(A), and 4.1.2(e)(ii)(B)):
- o Records of each Method 22 observation
- o If required, records of each Method 9 measurement
- o Type of fuel used
- o Records of each inspection

✓ Reporting as follows (Condition 4.1.5):
- o Prompt reporting within 30 days

Rationale and Justification for Periodic Monitoring

Periodic Monitoring is sufficient for these emission units because:

- There is a small likelihood of an exceedance.
- Emissions do not vary significantly under normal operation and/or vary slowly with time.
- Source has not exhibited a history of non-compliance.
- Monitoring is consistent with other sources in this source category.
- Annual observations of opacity, including records of these observations, are sufficient to verify compliance with the 30% opacity limit for engines that combust natural gas. The likelihood of natural gas engines violating opacity is small. It should also be noted that the source is also required to maintain the type of fuel used, maintain inspection records, and maintain maintenance and repair logs of the natural gas engines. These records would help the Illinois EPA determine if the natural gas engines are being operated properly and therefore would result in opacity being minimized. Because these engines use pipeline quality natural gas that contains low PM content and coupled with quarterly inspections, engine efficiency is maintained reducing the likelihood of visible emissions.

Sulfur Emissions

✓ Monitoring as follows (Condition 4.1.2(e)(ii)(A)):
- o Quarterly Inspections

✓ Recordkeeping as follows (Conditions 4.1.2(d)(ii)(A) and 4.1.2(e)(ii)(B)):
- o Type of fuel used
- o Records of each inspection

✓ Reporting as follows (Condition 4.1.5):
- o Prompt reporting within 30 days

Rationale and Justification for Periodic Monitoring

Periodic Monitoring is sufficient for these emission units because:

- There is a small likelihood of an exceedance.
- Emissions do not vary significantly under normal operation and/or vary slowly with time.
- Source has not exhibited a history of non-compliance.
- Monitoring is consistent with other sources in this source category.
- The likelihood of natural gas engines violating the sulfur limit is unlikely. Pipeline quality natural gas has sulfur content limited to levels that would result in SO_2 emissions less than the limit. Pursuant to 40 CFR 72.2 to be considered pipeline quality natural gas it must contain 0.5 grains or less of total sulfur per 100 standard cubic feet (less than 1.0 ppm) thus resulting in SO_2 emissions less than the 2,000 ppm limit. It should also be noted that the source is also required to maintain the type of fuel used, maintain inspection records, and maintain maintenance and repair logs of the natural gas engines. These records would help the Illinois EPA determine if the natural gas engines are being operated properly and therefore would result in SO_2 being minimized.

National Emission Standards for Hazardous Air Pollutants (NESHAP)

- Presumed by rule as the source is subject to a standard promulgated after Nov. 1990.
- There is a small likelihood of an exceedance.
- Emissions do not vary significantly under normal operation and/or vary slowly with time.
- Source has not exhibited a history of non-compliance.
- Monitoring is consistent with other sources in this source category.

Title I Requirements

✓ Monitoring as follows (Condition 4.1.2(e)(ii)(A)):
- o Quarterly Inspection

✓ Recordkeeping as follows (Conditions 4.1.2(a)(ii)(A) and (B)):
- o Records of each inspection
- o Records of hours of operation
- o Records of NO_x, CO, and VOM emissions

✓ Reporting as follows (Condition 4.1.5):
- o Prompt reporting within 30 days

Rationale and Justification for Periodic Monitoring

Periodic Monitoring is sufficient for these emission units because:

- There is a small likelihood of an exceedance.
- Emissions do not vary significantly under normal operation and/or vary slowly with time.

- Source has not exhibited a history of non-compliance.
- Monitoring is consistent with other sources in this source category.
- The likelihood of natural gas engines violating the NOx, CO, and VOM emissions is small. The requirement for the source to keep records of the hours of operation of the engines and to determine emissions on a monthly and annual basis is sufficient to determine compliance with the emission limits. Standard emission factors for engines do vary based on the type of engines but by requiring the source to maintain the type of fuel used, maintain inspection records, and maintain maintenance and repair logs of the natural gas engines, then the natural gas engines are being operated properly and therefore would result in emissions being minimized. Because these engines use pipeline quality natural gas coupled with quarterly inspections, engine efficiency is maintained reducing the likelihood of excess emissions.

Non-Applicability Discussion

Complex non-applicability determinations were not made for this emission unit. All non-applicability discussions can be found in the Draft CAAPP Permit.

Prompt Reporting Discussion

Prompt reporting of deviations has been established as 30 days. See rationale in Chapter III Section 8.

b. Natural Gas Fired Pipeline Heater		
Applicable Requirements Summary		
Applicable Requirement	Type	Location
Opacity Requirement (35 IAC 212.123(a))	Applicable Standard	See the Permit, Condition 4.2.2(a)
CO Requirement (35 IAC 216.121)	Applicable Standard	See the Permit, Condition 4.2.2(b)
Operational and Production Requirements	Applicable Limitation	See the Permit, Condition 4.2.2(c)
Work Practice Requirements	Applicable Work Practice	See the Permit, Condition 4.2.2(d)
Title I Requirements	Applicable Limit	See the Permit, Condition 4.2.4(a)

Visible Emissions (i.e., Opacity)

✓ Monitoring as follows (Conditions 4.2.2(a)(ii)(A) and 4.2.2(d)(ii)(A)):
- o Annual Method 22 observations
- o If required, Method 9 measurements
- o Quarterly Inspections

✓ Recordkeeping as follows (Condition 4.2.2(a)(ii)(B) and (C), 4.2.2(c)(ii)(A), and 4.2.2(d)(ii)(B)):
- o Records of each Method 22 observation
- o If required, records of each Method 9 measurement
- o Type of fuel used
- o Records of each inspection

✓ Reporting as follows (Condition 4.2.5):
- o Prompt reporting within 30 days

Rationale and Justification for Periodic Monitoring

Periodic Monitoring is sufficient for these emission units because:

- There is a small likelihood of an exceedance.
- Emissions do not vary significantly under normal operation and/or vary slowly with time.
- Source has not exhibited a history of non-compliance.
- Monitoring is consistent with other sources in this source category.
- Annual observations of opacity, including records of these observations, are sufficient to verify compliance with the 30% opacity limit for heaters that combust natural gas. The likelihood of natural gas heaters violating opacity is small. It should also be noted that the source is also required to maintain the type of fuel used, maintain inspection records, and maintain maintenance and repair logs of the natural gas heaters. These records would help the Illinois EPA determine if the natural gas heaters are being operated properly and therefore would result in opacity being minimized. Because these heaters use pipeline quality natural gas that contains low PM content and coupled with quarterly inspections, heater efficiency is maintained reducing the likelihood of visible emissions.

Carbon Monoxide Emissions

✓ Monitoring as follows (Condition 4.2.2(d)(ii)(A)):
  - o Quarterly Inspections

✓ Recordkeeping as follows (Conditions 4.2.2(c)(ii)(A) and 4.2.2(d)(ii)(B)):
  - o Type of fuel used
  - o Records of each inspection

✓ Reporting as follows (Condition 4.2.5):
  - o Prompt reporting within 30 days

Rationale and Justification for Periodic Monitoring

Periodic Monitoring is sufficient for these emission units because:

- There is a small likelihood of an exceedance.
- Emissions do not vary significantly under normal operation and/or vary slowly with time.
- Source has not exhibited a history of non-compliance.
- Monitoring is consistent with other sources in this source category.
- Pipeline quality natural gas has reliable composition and a low level of interruption.
- The likelihood of natural gas heaters violating the CO limit is unlikely. The use of pipeline quality natural gas is sufficient to demonstrate compliance. It should also be noted that the source is also required to maintain the type of fuel used, maintain inspection records, and maintain maintenance and repair logs of the natural gas heaters. Tune up requirements also maintain boiler efficiency reducing the likelihood of CO emissions. These records would help the Illinois EPA determine if the natural gas heaters are being operated properly and therefore would result in opacity being minimized.

Non-Applicability Discussion

Complex non-applicability determinations were not made for this emission unit. All non-applicability discussions can be found in the Draft CAAPP Permit.

Prompt Reporting Discussion

Prompt reporting of deviations has been established as 30 days. See rationale in Chapter III Section 8.

c. TEG Dehydration Units		
Applicable Requirements Summary		
Applicable Requirement	Type	Location
Opacity Requirement (35 IAC 212.123(a))	Applicable Standard	See the Permit, Condition 4.3.2(a)
VOM Requirement (35 IAC 215.301)	Applicable Standard	See the Permit, Condition 4.3.2(b)
Work Practice Requirements	Applicable Work Practice	See the Permit, Condition 4.3.2(c)
Title I Requirements	Applicable Limit	See the Permit, Condition 4.3.4(a)

Visible Emissions (i.e., Opacity)

✓ Monitoring as follows (Conditions 4.3.2(a)(ii)(A) and 4.3.2(c)(ii)(A)):
- o Annual Method 22 observations
- o If required, Method 9 measurements
- o Quarterly Inspections

✓ Recordkeeping as follows (Conditions 4.3.2(a)(ii)(B) and (C) and 4.3.2(c)(ii)(B)):
- o Records of each Method 22 observation
- o If required, records of each Method 9 measurement
- o Records of each inspection

✓ Reporting as follows (Condition 4.3.5):
- o Prompt reporting within 30 days

Rationale and Justification for Periodic Monitoring

Periodic Monitoring is sufficient for these emission units because:

- There is a small likelihood of an exceedance.
- Emissions do not vary significantly under normal operation and/or vary slowly with time.
- Source has not exhibited a history of non-compliance.
- Monitoring is consistent with other sources in this source category.
- Annual observations of opacity, including records of these observations, are sufficient to verify compliance with the 30% opacity limit for TEG units that combust natural gas. The likelihood of the TEG units violating opacity is small. It should also be noted that the source is also required to maintain the type of fuel used, maintain inspection records, and maintain maintenance and repair logs of the TEG units. These records would help the Illinois EPA determine if the TEG units are being operated properly and therefore would result in opacity being minimized. Because these TEG units use pipeline quality natural gas that contains low PM content and coupled with quarterly inspections, TEG efficiency is maintained reducing the likelihood of visible emissions.

Organic Material Emission

✓ Monitoring as follows (Conditions 4.3.2(c)(ii)(A) and 4.3.4(a)(ii)(A)):
- o Emission calculations using GRI-GLYCalcTM

- o Quarterly inspections

✓ Recordkeeping as follows (Conditions 4.3.2(c)(ii)(B) and 4.3.4(a)(ii)(B)):
- o Records of each calculation of emissions performed
- o Records of operation
- o Records of each inspection

✓ Reporting as follows (Condition 4.3.5):
- o Prompt reporting within 30 days

Rationale and Justification for Periodic Monitoring

Periodic Monitoring is sufficient for these emission units because:

- There is a small likelihood of an exceedance.
- Emissions do not vary significantly under normal operation and/or vary slowly with time.
- Source has not exhibited a history of non-compliance.
- Monitoring is consistent with other sources in this source category.
- Annual calculations of emissions, including records of these calculations, are sufficient to verify compliance with the 8 lbs/hr limit. The use of GRI-GLYCalc™ is a valid and acceptable method of determining VOM emission where the USEPA has determined that the emissions calculated either are accurate or over estimate the emissions (GRI-GLYCalc™ is even a method used in 40 CFR 63 Subpart HHH). It should also be noted that the source is also required to maintain inspection records, and maintain maintenance and repair logs of the triethylene glycol dehydration plant. These records would help the Illinois EPA determine if the triethylene glycol dehydration plant is being operated properly and therefore would result in emissions being minimized.

Title I Requirements

✓ Monitoring as follows (Conditions 4.3.2(c)(ii)(A) and 4.3.4(a)(ii)(A)):
- o Determine emission calculations using GRI-GLYCalc™
- o Quarterly inspections

✓ Recordkeeping as follows (Conditions 4.3.2(c)(ii)(B) and 4.3.4(a)(ii)(B) and (C)):
- o Records of the emission calculations using GRI-GLYCalc™
- o Records of each inspection

✓ Reporting as follows (Condition 4.3.5):
- o Prompt reporting within 30 days

Rationale and Justification for Periodic Monitoring

Periodic Monitoring is sufficient for these emission units because:

- There is a small likelihood of an exceedance.
- Emissions do not vary significantly under normal operation and/or vary slowly with time.
- Source has not exhibited a history of non-compliance.
- Monitoring is consistent with other sources in this source category.
- Annual calculations of emissions, including records of these calculations, are sufficient to verify compliance with the 8 lbs/hr limit. The use of GRI-GLYCalc™ is a valid and acceptable method of determining VOM emission where the USEPA has determined that the

emissions calculated either are accurate or over estimate the emissions (GRI-GLYCalc™ is even a method used in 40 CFR 63 Subpart HHH). It should also be noted that the source is also required to maintain inspection records, and maintain maintenance and repair logs of the triethylene glycol dehydration plant. These records would help the Illinois EPA determine if the triethylene glycol dehydration plant is being operated properly and therefore would result in emissions being minimized.

Non-Applicability Discussion

Complex non-applicability determinations were not made for this emission unit. All non-applicability discussions can be found in the Draft CAAPP Permit.

Startup/Shutdown/Malfunction Breakdown Discussion

The source requested and has been granted Malfunction Breakdown exceptions, see Chapter III Section 5.0.

Prompt Reporting Discussion

Prompt reporting of deviations has been established as 30 days. See rationale in Chapter III Section 8.

d. Storage Tanks		
Applicable Requirements Summary		
Applicable Requirement	Type	Location
VOM Requirement 35 IAC 215.122(b) 35 IAC 215.583(a)(1)	Applicable Standard	See the Permit, Condition 4.4.2(a)
Work Practice Requirement	Applicable Work Practice	See the Permit, Condition 4.4.2(b)

Organic Material Emission

✓ Monitoring as follows (Condition 4.4.2(b)(ii)(A))
- o Annual inspections of the tanks.

✓ Recordkeeping as follows (Conditions 4.4.2(a)(ii)(A) and 4.4.2(b)(ii)(B)):
- o Records of the presence of the submerged loading pipe or submerged fill.
- o Records of the tank inspections.

✓ Reporting as follows (Condition 4.4.5):
- o Prompt reporting within 30 days

Rationale and Justification for Periodic Monitoring

Periodic Monitoring is sufficient for these emission units because:

- There is a small likelihood of an exceedance.
- Source has not exhibited a history of non-compliance.
- Monitoring is consistent with other sources in this source category.

Non-Applicability Discussion

Complex non-applicability determinations were not made for this emission unit. All non-applicability discussions can be found in the Draft CAAPP Permit.

Prompt Reporting Discussion

Prompt reporting of deviations has been established as 30 days. See rationale in Chapter III Section 8.

3.8 Insignificant Activities Discussion

Applicable Requirements Summary		
Applicable Requirement	Type	Location
NESHAP Requirement (40 CFR 63 Subpart ZZZZ)	Applicable Standard	See the Permit, Condition 6.1(a)(i)(A)

National Emission Standards for Hazardous Air Pollutants (NESHAP)

- Presumed by rule as the source is subject to a standard promulgated after Nov. 1990.
- There is a small likelihood of an exceedance.
- Emissions do not vary significantly under normal operation and/or vary slowly with time.
- Source has not exhibited a history of non-compliance.
- Monitoring is consistent with other sources in this source category.

3.9 Prompt Reporting Discussion

Among other terms and conditions, CAAPP Permits contain reporting obligations to assure compliance with applicable requirements. These reporting obligations are generally four-fold. More specifically, each CAAPP Permit sets forth any reporting requirements specified by state or federal law or regulation, requires prompt reports of deviations from applicable requirements, requires reports of deviations from required monitoring and requires a report certifying the status of compliance with terms and conditions of the CAAPP Permit over the calendar year.

The number and frequency of reporting obligations in any CAAPP Permit is source-specific. That is, the reporting obligations are directly related to factors, including the number and type of emission units and applicable requirements, the complexity of the source and the compliance status. This four-fold approach to reporting is common to virtually all CAAPP Permits as described below. Moreover, this is the approach established in the Draft CAAPP Permit for this source.

Regulatory Reports

Many state and federal environmental regulations establish reporting obligations. These obligations vary from rule-to-rule and thus from CAAPP source to CAAPP source and from CAAPP Permit to CAAPP Permit. The variation is found in the report triggering events, reporting period, reporting frequency and reporting content. Regardless, the CAAPP makes clear that all reports established under applicable regulations shall be carried forward into the CAAPP Permit as stated in Section 39.5(7)(b) of the Illinois Environmental Protection Act. Generally, where sufficiently detailed to meet the exacting standards of the CAAPP, the regulatory reporting requirements are simply restated in the CAAPP Permit. Depending on the regulatory obligations, these regulatory reports may also constitute a deviation report as described below.

The Draft CAAPP Permit for this source would embody all regulatory reporting as promulgated under federal and state regulations under the Clean Air Act and the

Illinois Environmental Protection Act. Depending on the frequency of the report, the regulatory report may also satisfy the prompt reporting obligations discussed below. These reports must be certified by a responsible official.

These reports are generally found in the reporting sections for each emission unit group. The various regulatory reporting requirements are summarized in the table at the end of this Reporting Section.

Deviation Reports (Prompt Reporting)

Section 39.5(7)(f)(ii) of the Illinois Environmental Protection Act mandates that each CAAPP Permit require prompt reporting of deviations from the permit requirements.

Neither the CAAPP nor the federal rules upon which the CAAPP is based and was approved by USEPA define the term “prompt”. Rather, 40 CFR Part 70.6(a)(3)(iii)(B) intended that the term have flexibility in application. The USEPA has acknowledged for purposes of administrative efficiency and clarity that 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 at a particular source. The Illinois EPA follows this approach and defines prompt reporting on a permit-by-permit basis. In instances where the underlying applicable requirement contains “prompt” reporting, the Illinois EPA typically incorporates the pre-established timeframe in the CAAPP permit (e.g. a NESHAP or NSPS deviation report). Where the underlying applicable requirement fails to explicitly set forth the timeframe for reporting deviations, the Illinois EPA generally uses a timeframe of 30 days to define prompt reporting of deviations.

This approach to prompt reporting of deviations as discussed herein is consistent with the requirements of Section 39.5(7)(f)(ii) of the Illinois Environmental Protection Act as well as 40 CFR Part 70 and the CAA. The reporting arrangement is designed so that the source will appropriately notify the Illinois EPA of those events that might warrant 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 developing preventive measures, to reduce the likelihood of similar events, all of which must be addressed in the notification for the deviation, while at the same time affording regulatory authority and the public timely and relevant information. The approach also affords the Illinois EPA and USEPA an opportunity to direct investigation and follow-up activities, and to make compliance and enforcement decisions in a timely fashion.

The Draft CAAPP Permit for this source would require prompt reporting as required by the Illinois Environmental Protection Act in the fashion described in this subsection. In addition, pursuant to Section 39.5(7)(f)(i) of the Illinois Environmental Protection Act, this Draft CAAPP Permit would also require the source to provide a summary of all deviations with the Semi-Annual Monitoring Report. These reports must be certified by a responsible official, and are generally found in the reporting sections for each emission unit group.

Semi-Annual Monitoring Reports

Section 39.5(7)(f)(i) of the Illinois Environmental Protection Act mandates that each CAAPP Permit require a report relative to monitoring obligations as set forth in the permit. Depending upon the monitoring obligation at issue,

the semi-annual monitoring report may also constitute a deviation report as previously discussed. This monitoring at issue includes instrumental and non-instrumental emissions monitoring, emissions analyses, and emissions testing established by state or federal laws or regulations or as established in the CAAPP Permit. This monitoring also includes recordkeeping. Each deviation from each monitoring requirement must be identified in the relevant semi-annual report. These reports provide a timely opportunity to assess for compliance patterns of concern. The semi-annual reports shall be submitted regardless of any deviation events. Reporting periods for semi-annual monitoring reports are January 1 through June 30 and July 1 through December 31 of each calendar year. Each semi-annual report is due within 30 days after the close of reporting period. The reports shall be certified by a responsible official. The Draft CAAPP Permit for this source would require such reports at Condition 3.5(b).

Annual Compliance Certifications

Section 39.5(7)(p)(v) of the Illinois Environmental Protection Act mandates that each CAAPP Permit require a source to submit a certification of its compliance status with each term and condition of its CAAPP Permit. The reports afford a broad assessment of a CAAPP sources compliance status. The CAAPP requires that this report be submitted, regardless of compliance status, on an annual basis. Each CAAPP Permit requires this annual certification be submitted by May 1 of the year immediately following the calendar year reporting period. The report shall be certified by a responsible official. The Daft CAAPP Permit for this source would require such a report at Condition 2.6(a).

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 source to measure compliance and to direct investigation and follow-up activities. Prompt reporting is evidence of the source’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 Draft 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 a deviation from an emission limitation or standard or the like, as necessary and appropriate.

As a result, the Illinois EPA’s approach to prompt reporting of deviations as discussed herein is consistent with the requirements of Section 39.5(7)(f)(ii) of the Illinois Environmental Protection 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.

3.10 Start-up/Shutdown/Malfunction Breakdown Discussion

- **SIP Start-up/Malfunction-Breakdown Authorization Discussion**

The Illinois EPA does not provide for "automatic exemptions" within CAAPP Permits for operation with excess emissions during malfunction/breakdown or startups. The permits and the language regarding such exemptions are consistent with the Illinois SIP and federal guidance on the topic. An explanation of Illinois' SIP and its permitting practice is provided below.

Illinois' SIP at 35 IAC 201.149 prohibits continued operation of an emission unit during malfunction or breakdown of the unit or associated air pollution control equipment, or startup of an emission unit or associated air pollution control equipment, if such operation would cause a violation of applicable emission standards or limitations absent express permit authorization (emphasis added). Further provisions pertaining to such permit authorization are set forth in 35 IAC Part 201, Subpart I. These provisions make clear that the process in Illinois for addressing malfunction/breakdown and startup is in two steps. The first step, as set forth at 35 IAC 201.261, consists of seeking authorization by means of an application for permit to prospectively make a claim of malfunction/breakdown or startup. Pursuant to the provisions for malfunction/breakdown, the application shall include an explanation of why continued operation is necessary; the anticipated nature, quantity and duration of emissions; and measures that will be taken to minimize the quantity and duration of emissions. Pursuant to the applicable regulation, for startup, the application shall include a description of the startup procedure, duration, and frequencies of startups, type, and quantity of emissions during startups and efforts to minimize emissions, duration, and frequency. These regulatory requirements are acknowledged by the CAAPP, pursuant to Section 39.5(5)(s) of the Illinois Environmental Protection Act. Absent a request for authorization in an application for a CAAPP Permit that satisfies both the requirements for application content and the standards for granting, and, after Illinois EPA review, an express grant of such authorization in a CAAPP Permit issued by the Illinois EPA, a CAAPP source cannot make a claim of malfunction/breakdown or startup under Illinois regulations.

The second phase of Illinois' process for operation with excess emissions during malfunction/breakdown or startup, as set forth at 35 IAC 201.262, addresses the showing that must be made in order to make a viable claim of malfunction/breakdown or startup. Pursuant to the regulations for malfunction/breakdown, this showing consists of a demonstration that operation was necessary to prevent injury to persons or severe damage to equipment, or was required to provide essential services. There are two elements to the required showing, "need" and "function". For startup, it shall consist of a demonstration that all reasonable efforts have been made to minimize emissions from the startup event, to minimize the duration of the event, and to minimize the frequency of such events. To a certain extent, this showing may be evaluated on past practice. However, this showing is also prospective, like the showing for malfunction/breakdown, as it relates to future events, which and whose exact circumstances are not known, and which, in fact, may or may not occur.

The approach taken by Illinois' regulation can be distinguished from and contrasted with that of the federal NESHAP regulations, under 40 CFR Part 63. These federal regulations address excess emissions during malfunction (and shutdown) or startup without the initial step required by Illinois' rules. This is because all sources are able to claim exclusion from an otherwise

applicable standard during a malfunction or startup event. The validity of the claims is then subject to scrutiny by USEPA and the state enforcement authority, as to the acceptability of a source's claim that an incident should qualify for an exemption. That is, that the excess emissions could not be readily prevented and were not contrary to good air pollution control practices. In fact, this case-by-case scrutiny is the second step provided for in Illinois' regulations. This "federal approach" is set forth in the planned revised CAAPP Permit for select emission units that are subject to certain NESHAPs. Violations of applicable NESHAP emission limits are governed by the "federal approach." Violations of emissions standards found in state air pollution control regulations at 35 IAC Subtitle B Chapter I Subchapter c are governed by the SIP approach.

For those units for which this source seeks malfunction/breakdown or startup authorization under Illinois' SIP, the draft CAAPP Permit application contains complete Forms 204-CAAPP and 203-CAAPP, respectively entitled Request To Continue To Operate During Malfunction and Breakdown and Request To Operate During Startup of Equipment. These forms seek the specific information required by the relevant state regulation. Again, that information is an explanation of why continued operation is necessary; the anticipated nature, quantity and duration of emissions; and measures that will be taken to minimize the quantity and duration of emissions for malfunctions and breakdowns. It is a description of the startup procedure, duration and frequencies of startups, type and quantity of emissions during startups, and efforts to minimize emissions, duration and frequency for start-up. Accordingly, this source seeks malfunction/breakdown as well as startup authorization in accordance with applicable Illinois regulation. Illinois EPA thoroughly reviewed this information against the SIP. Based on its review, the Draft CAAPP Permit would grant authorization to the facility to make a claim of malfunction/breakdown or startup. That the Draft CAAPP Permit affords such authorization, does not equate to an "automatic exemption." The grant of such initial authorization is fully consistent with long standing practice in Illinois permitting and enforcement. Due to the size and complexity of the source and the inability to simply shutdown equipment or the level of hazards associated with improper start-up or shutdown, the source may experience excess emissions due to events that cannot be readily anticipated or reasonably avoided. However, the facility is also fully aware that it may be held accountable for any excess emissions that occur regardless of any such authorization.

Neither the provisions in the SIP nor the provisions in the CAAPP Permit delineating the elements for a viable claim of malfunction/breakdown or startup translate into any advanced determination on excess emissions. Rather, together the regulations and the CAAPP Permit simply provide a framework whereby a source may have an opportunity to make a claim of malfunction/ breakdown or startup, with the viability of such claim subject to specific review against the requisite requirements. Indeed, 35 IAC 201.265 clearly states that violating an applicable state standard even if consistent with any expression of authority regarding a malfunction/breakdown or startup set forth in a permit shall only constitute a prima facie defense to an enforcement action for violation of said regulation. The malfunction/breakdown or startup authorization provided in the Draft CAAPP Permit does not provide shields from state emission standards that may be violated during said events. Rather, the source is subject to the applicable limitations or standards on any malfunction/breakdown or startup authorization included within the permit. As a result, any excess emissions during these events would constitute violations potentially subject to enforcement action.

For any source that receives such authorization, the type of authorization (i.e., malfunction/breakdown or startup), the emission units for which authorization has been received, and the conditions under, and manner in which such authorization may be utilized are clearly set forth in the CAAPP Permit. The origin of these authorizations is 35 IAC 201.149.

3.11 Incorporation by Reference Discussion

Based on guidance found in White Paper 2 and past petition responses by the Administrator, it is recognized that Title V permit authorities may, within their discretion, incorporate plans by reference. As recognized in the *White Paper 2,* permit authorities can effectively streamline the contents of a Title V permit, avoiding the inevitable clutter of restated text and preventing unnecessary delays where, as here, permit issuance is subject to a decision deadline.[4] However, it is also recognized that the benefits of incorporation of plans must be carefully balanced by a permit authority with its duty to issue permits in a way that is "clear and meaningful" to the Permittee and the public.[5]

The criteria that are mentioned in USEPA Administrator Petition Responses stress the importance of identifying, *with specificity*, the object of the incorporation.[6] The Illinois EPA agrees that such emphasis is generally consistent with USEPA's pronouncements in previous guidance.

For each condition incorporating a plan, the Illinois EPA is also briefly describing the general manner in which the plan applies to the source. Identifying the nature of the source activity, the regulatory requirements or the nature of the equipment associated with the plan is a recommendation of the *White Paper 2*[7]. The Illinois EPA has stopped short of enumerating the actual contents of a plan, as restating them in the permit would plainly defeat the purpose of incorporating the document by reference and be contrary to USEPA guidance on the subject.[8]

Plans may need to be revised from time to time, as occasionally required by circumstance or by underlying rule or permit requirement. Except where expressly precluded by the relevant rules, this Draft CAAPP Permit allows the Permittee to make future changes to a plan without undergoing formal permit revision procedures. This approach will allow flexibility to make required changes to a plan without separately applying for a revised permit and, similarly, will lessen the impacts that could result for the Illinois EPA if every change to a plan's contents required a permitting transaction.[9] Changes to the incorporated plans during the permit term are automatically incorporated into the Draft CAAPP Permit unless the Illinois EPA expresses a written objection.

The Draft CAAPP Permit incorporates by reference the following plans: Episode Action Plan.[10]

3.12 Periodic Monitoring General Discussions

Pursuant to Section 504(c) of the Clean Air Act, a Title V permit must set forth monitoring requirements, commonly referred to as "Periodic Monitoring," to assure compliance with the terms and conditions of the permit. A general discussion of Periodic Monitoring is provided below. The Periodic Monitoring that is proposed for specific operations and emission units and at this source is discussed in Chapter III of this Statement of Basis. Chapter III provides a narrative discussion of and justification for the elements of Periodic

Monitoring that would apply to the different emission units and types of emission units at the facility.

As a general matter, the required content of a CAAPP Permit with respect to such Periodic Monitoring is addressed in Section 39.5(7) of the Illinois Environmental Protection Act.[11] Section 39.5(7)(b) of the Illinois Environmental Protection Act[12] provides that in a CAAPP Permit:

> The Agency shall include among such conditions applicable monitoring, reporting, record keeping and compliance certification requirements, as authorized by paragraphs d, e, and f of this subsection, that the Agency deems necessary to assure compliance with the Clean Air Act, the regulations promulgated thereunder, this Act, and applicable Board regulations. When monitoring, reporting, record keeping and compliance certification requirements are specified within the Clean Air Act, regulations promulgated thereunder, this Act, or applicable regulations, such requirements shall be included within the CAAPP Permit.

Section 39.5(7)(d)(ii) of the Illinois Environmental Protection Act further provides that a CAAPP Permit shall:

> Where the applicable requirement does not require periodic testing or instrumental or noninstrumental monitoring (which may consist of recordkeeping designed to serve as monitoring), require Periodic Monitoring sufficient to yield reliable data from the relevant time period that is representative of the source's compliance with the permit …

Accordingly, the scope of the Periodic Monitoring that must be included in a CAAPP Permit is not restricted to monitoring requirements that were adopted through rulemaking or imposed through permitting. When applicable regulatory emission standards and control requirements or limits and control requirement in relevant Title 1 permits are not accompanied by compliance procedures, it is necessary for Monitoring for these standards, requirements or limits to be established in a CAAPP Permit.[13, 14] Monitoring requirements must also be established when standards and control requirement are accompanied by compliance procedures but those procedures are not adequate to assure compliance with the applicable standards or requirements.[15, 16] For this purpose, the requirements for Periodic Monitoring in a CAAPP Permit may include requirements for emission testing, emissions monitoring, operational monitoring, non-instrumental monitoring, and recordkeeping for each emission unit or group of similar units at a facility, as required by rule or permit, as appropriate or as needed to assure compliance with the applicable substantive requirements. Various combinations of monitoring measures will be appropriate for different emission units depending on their circumstances, including the substantive emission standards, limitations and control requirements to which they are subject.

What constitutes sufficient Periodic Monitoring for particular emission units, including the timing or frequency associated with such Monitoring requirements, must be determined by the permitting authority based on its knowledge, experience and judgment.[17] For example, as Periodic Monitoring must collect representative data, the timing of Monitoring requirements need not match the averaging time or compliance period of the associated substantive requirements, as set by the relevant regulations and permit provisions. The timing of the various requirements making up the Periodic Monitoring for an emission unit is something that must be considered when those Monitoring requirements are being

established. For this purpose, Periodic Monitoring often consists of requirements that apply on a regular basis, such as routine recordkeeping for the operation of control devices or the implementation of the control practices for an emission unit. For certain units, this regular monitoring may entail “continuous” monitoring of emissions, opacity or key operating parameters of a process or its associated control equipment, with direct measurement and automatic recording of the selected parameter(s). As it is infeasible or impractical to require emissions monitoring for most emission units, instrumental monitoring is more commonly conducted for the operating parameters of an emission unit or its associated control equipment. Monitoring for operating parameter(s) serves to confirm proper operation of equipment, consistent with operation to comply with applicable emission standards and limits. In certain cases, an applicable rule may directly specify that a particular level of an operating parameter be maintained, consistent with the manner in which a unit was being operated during emission testing. Periodic Monitoring may also consist of requirements that apply on a periodic basis, such as inspections to verify the proper functioning of an emission unit and its associated controls.

The Periodic Monitoring for an emission unit may also include measures, such as emission testing, that would only be required once or only upon specific request by the Illinois EPA. These requirements would always be accompanied by Monitoring requirements would apply on a regular basis. When emission testing or other measure is only required upon request by the Illinois EPA, it is included as part of the Periodic Monitoring for an emission unit to facilitate a response by the Illinois EPA to circumstances that were not contemplated when Monitoring was being established, such as the handling of a new material or a new mode of operation. Such Monitoring would also serve to provide further verification of compliance, along with other potentially useful information. As emission testing provides a quantitative determination of compliance, it would also provide a determination of the margin of compliance with the applicable limit(s) and serve to confirm that the Monitoring required for an emission unit on a regular basis is reliable and appropriate. Such testing might also identify specific values of operating parameters of a unit or its associated control equipment that accompany compliance and can be relied upon as part of regular Monitoring.

There are a number of considerations or factors that are or may be relevant when evaluating the need to establish new monitoring requirements as part of the Periodic Monitoring for an emission unit. These factors include: (1) The nature of the emission unit or process and its emissions; (2) The variability in the operation and the emissions of the unit or process over time; (3) The use of add-on air pollution control equipment or other practices to control emissions and comply with the applicable substantive requirement(s); (4) The nature of that control equipment or those control practices and the potential for variability in their effectiveness; (5) The nature of the applicable substantive requirement(s) for which Periodic Monitoring is needed; (6) The nature of the compliance procedures that specifically accompany the applicable requirements; (7) The type of data that would already be available for the unit; (8) The effort needed to comply with the applicable requirements and the expected margin of compliance; (9) The likelihood of a violation of applicable requirements; (10) The nature of the Periodic Monitoring that may be readily implemented for the emission unit; (11) The extent to which such Periodic Monitoring would directly address the applicable requirements; (12) The nature of Periodic Monitoring commonly required for similar emission units at other facilities and in similar circumstances; (13) The interaction or relationship between the different measures in the Periodic Monitoring for an emission unit;

and (14) The feasibility and reasonableness of requiring additional measures in the Periodic Monitoring for an emission unit in light of other relevant considerations.[18]

CHAPTER IV - CHANGES FROM PREVIOUSLY ISSUED CAAPP PERMITS

4.1 Major Changes Summary

This renewal CAAPP draft is presented in a new format. The new format is the result of recommendations by the USEPA, comments made by sources, and interactions with the public.

	Previous CAAPP Permit Layout	*New CAAPP Permit Layout*
Section 1	Source Identification	Source Information
Section 2	List Of Abbreviations/Acronyms	General Permit Requirements
Section 3	Insignificant Activities	Source Requirements
Section 4	Significant Emission Units	Emission Unit Requirements
Section 5	Overall Source Conditions	Title I Requirements
Section 6	Emission Control Programs	Insignificant Activities
Section 7	Unit Specific Conditions	Other Requirements
Section 8	General Permit Conditions	State Only Requirements
Section 9	Standard Permit Conditions	---
Section 10	Attachments	Attachments

4.2 Specific Permit Condition Changes

- Section 3 – Source Requirements

  1. Asbestos demolition and renovation requirements added (Condition 3.1(c)).
  2. Enhanced Synthetic Minor Requirements for HAPs (Condition 3.4(a))

- Section 4 – Emission Unit Requirements

  1. Future NESHAP Standards of 40 CFR 63 Subpart ZZZZ added (Condition 4.1.2(c)).

- Sections 5 and 7 – Additional Title I Requirements and Other Requirements

  1. Include Construction Permit #11120008 for equipment not yet constructed.

- Section 6 – Insignificant Activities Requirements

  1. Future NESHAP standards of 40 CFR 63 Subpart ZZZZ added (Condition 6.1(a)(i)(A)).

Endnotes

[1] The federal PSD program, 40 CFR 52.21, applies in Illinois. The Illinois EPA administers PSD permitting for major projects in Illinois pursuant to a delegation agreement with USEPA.

[2] Illinois has a state nonattainment NSR program, pursuant to state rules, Major Stationary Sources Construction and Modification ("MSSCM"), 35 IAC Part 203, which have been approved by USEPA as part of the State Implementation Plan for Illinois.

[3] In Petition Response V-2009-03, USEPA considered whether conditions from certain construction permits issued to a source constitute applicable requirements even though the construction or modification has not yet begun, been completed and/or the project was not yet operational. USEPA found that those construction permits for "pending projects," like construction permits for projects that are complete and operational, also establish applicable requirements for this facility. Accordingly the Title I conditions from those construction permits have been carried over into the draft CAAPP permit for this facility.

[4] Among other things, USEPA observed that the stream-lining benefits can consist of "reduced cost and administrative complexity, and continued compliance flexibility…". *White Paper 2,* page 41.

[5] See, In the Matter of Tesoro Refining and Marketing, Petition No. IX-2004-6, Order Denying in Part and Granting in Part Petition for Objection to Permit, at page 8 (March 15, 2005); see also, White Paper 2 at page 39 ("reference must be detailed enough that the manner in which any referenced materials applies to a facility is clear and is not reasonably subject to misinterpretation").

[6] The Order provides that permit authorities must ensure the following: "(1) referenced documents be specifically identified; (2) descriptive information such as the title or number of the document and the date of the document be included so that there is no ambiguity as to which version of the document is being referenced; and (3) citations, cross references, and incorporations by reference are detailed enough that the manner in which any referenced material applies to a facility is clear and is not reasonably subject to misinterpretation." See, Petition Response at page 43, citing White Paper 2 at page 37.

[7] See, White Paper 2 at page 39.

[8] Nothing in USEPA guidance, including the White Paper 2 or previous orders responding to public petitions, supports the notion that permit authorities incorporating a document by reference must also restate contents of a given plan in the body of the Title V permit. Such an interpretation contradicts USEPA recognition that permit authorities need not restate or recite an incorporated document so long as the document is sufficiently described. White Paper 2 at page 39; see also, In the matter of Consolidated Edison Co. of New York, Inc., 74th St. Station, Petition No. II-2001-02, Order Granting in Part and Denying in Part Petition for Objection to Permit at page 16 (February 19, 2003).

[9] This approach is consistent with USEPA guidance, which has previously embraced a similar approach to certain SSM plans. *See,* Letter and Enclosures, dated May 20, 1999, from John Seitz, Director of Office of Air Quality Planning and Standards, to Robert Hodanbosi and Charles Lagges, STAPPA/ALAPCO, pages 9-10 of Enclosure B.

[10] Each incorporated plan addressed by this Section of the Statement of Basis is part of the source's permit file. As such, these plans are available to any person interested in viewing the contents of a given plan may do so at the public repository during the comment period or, alternatively, may request a copy of the same from the Illinois EPA under the Freedom of Information Act. See also 71 FR 20447.

[11] The provisions of the Act for Periodic Monitoring in CAAPP permits reflect parallel requirements in the federal guidelines for State Operating Permit Programs, 40 CFR 70.6(a)(3)(i)(A), (a)(3)(i)(B), and (c)(1).

[12] Section 39.5(7)(p)(i) of the Act also provides that a CAAPP permit shall contain "Compliance certification, testing, monitoring, reporting and record keeping requirements sufficient to assure compliance with the terms and conditions of the permit."

[13] The classic example of regulatory standards for which Periodic Monitoring requirements must be established in a CAAPP permit are state emission standards that pre-date the 1990 Clean Air Act Amendments that were adopted without any associated compliance procedures. Periodic Monitoring must also be established in a CAAPP permit when standards and limits are accompanied by compliance procedures but those procedures are determined to be inadequate to assure compliance with the applicable standards or limits.

[14] Another example of emission standards for which requirements must be established as part of Periodic Monitoring is certain NSPS standards that require initial performance testing but do not require periodic testing or other measures to address compliance with the applicable limits on a continuing basis.

[15] The need to establish Monitoring requirements as part of Periodic Monitoring when existing compliance procedures are determined to be inadequate, as well as when they are absent, was confirmed by the federal appeals court in Sierra Club v. Environmental Protection Agency, 536 f. 3d 673, 383 U.S. App. D.C. 109.

[16] The need to establish Monitoring requirements as part of Periodic Monitoring is also confirmed in USEPA's Petition Response. USEPA explains that "…if there is periodic monitoring in the applicable requirements, but that monitoring is not sufficient to assure compliance with permit terms and conditions, permitting authorities must supplement monitoring to assure such compliance." Petition Response, page 6.

[17] The test for the adequacy of "Periodic Monitoring" is a context-specific determination, particularly whether the provisions in a Title V permit reasonably address compliance with relevant substantive permit conditions. 40 CFR 70.6(c)(1); *see also* 40 CFR 70.6(a)(3)(i)(B); *see also, In the Matter of CITGO Refinery and Chemicals Company L.P.,* Petition VI-2007-01 (May 28, 2009); *see also, In the Matter of Waste Management of LA. L.L.C. Woodside Sanitary*

Landfill & Recycling Center, Walker, Livingston Parish, Louisiana, Petition VI-2009-01 (May 27, 2010); *see also, In the Matter of Wisconsin Public Service Corporation's JP Pulliam Power Plant,* Petition V-2009-01 (June 28, 2010).

[18] A number of these factors are specifically listed by USEPA in its Petition Response. USEPA also observes that the specific factors that it identifies in its Petition Response with respect to Periodic Monitoring provide "…the permitting authority with a starting point for its analysis of the adequacy of the monitoring; the permitting authority also may consider other site-specific factors." Petition Response, page 7.