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

City Water, Light & Power, City of Springfield
3620 Ridgely Road, Springfield, Sangamon, IL 62707

Illinois EPA ID Number: 167822ABG

Application Number: 98090001

Application Type: Renewal Permit

Start of Public Comment Period: July 25, 2014

Close of Public Comment Period: August 24, 2014

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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 of the 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.

Also of note, 35 IAC 201.149 (Operation During Malfunction, Breakdown or Startups) can only provide authorization to continue operation of a turbine, engine, etc. in violation of the applicable standards or limitations set forth in Title 35 Subtitle B Chapter I Subchapter c, not hourly emission limitations established for other purposes. Authorization to continue operation in violation of the established hourly emission limitations are derived from Title 1 limits established by a construction permit. Pursuant to 35 IAC 201.149:

> No person shall cause or allow the continued operation of an emission source during malfunction or breakdown of the emission source or related air pollution control equipment if such operation would cause a violation of *the standards or limitations set forth in Subchapter c of this Chapter* unless the current operating permit granted by the Agency provides for operation during a malfunction or breakdown.
>
> No person shall cause or allow violation of *the standards or limitations set forth in that Subchapter* during startup unless the current operating permit granted by the Agency provides for violation of such standards or limitations during startup.

II. GENERAL SOURCE DESCRIPTION

a. Nature of Source

City Water, Light & Power is located at 3620 Ridgely Road. The source utilizes one natural gas and distillate fuel oil fired turbine to generate electricity.

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, $PM_{2.5}$, PM_{10}, sulfur dioxide).

c. Major Source Status

1. The source requires a CAAPP permit as a major source of PM_{10}, NO_x, VOM, CO, greenhouse gas (GHG), SO_2 emissions.

2. The source also requires a CAAPP permit as an "affected source" for the purposes of Acid Deposition Control, Title IV of the Clean Air Act, pursuant to 40 CFR 70.3(a)(4).

3. The source is not major for Hazardous Air Pollutants (HAPs) as the source has potential HAP emissions less than major source levels, (10 tons or greater of a single HAP, 25 tons or greater for combined HAP). The source shall keep records to ensure they have not become a major source of HAPs in the previous calendar year. If in the previous calendar year, emissions of HAPs exceeded 80% of the major source threshold for individual or total HAPs (greater than 8 tons of a single HAP or greater than 20 tons of total HAPs), then testing for HAPs shall be conducted according to 40 CFR Part 63, Subpart YYYY, National Emissions Standards for Hazardous Air Pollutants for Stationary Combustion Turbines. The source is therefore not subject to 40 CFR Part 63, Subpart YYYY, National Emissions Standards for Hazardous Air Pollutants for Stationary Combustion Turbines, but would rely on the HAP testing procedures within that rule should minor source verification be required. These conditions reflect the periodic monitoring needed to ensure compliance.

4. Based on available data, this source is a major source of emissions for GHG, with potential emissions of GHG that are more than 100,000 tons per year (CO_2e). City Water, Light & Power submitted data in its application for which the Illinois EPA estimated the PTE of GHG emissions to be 987,712 tons per year. The emissions consist of 978,398 tons of CO_2, 2,324 tons of N_2O, and 2,324 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.

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.

	Annual Emissions (tons)			**Permitted Fees**
Pollutant	**2013**	**2012**	**2011**	
CO	4.60	6.30	8.90	N/A
NO_x	5.00	4.70	9.80	249.00
PM	2.20	2.30	4.40	99.49
SO_2	0.04	0.00	0.00	249.00
VOM	0.31	0.26	0.41	99.00
CO_{2E}	6,138.00	6,245.00	12,146.16	N/A
HAP (top)	0.00	0.00	0.01	0.00

e. Environmental Justice Discussions

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

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.

Program/Plan	**Applicable**
Emissions Reduction Market System (ERMS)	No
Acid Rain Program[1]	Yes
Clean Air Interstate Rule (CAIR) Program[2]	Yes
Compliance Assurance Monitoring (CAM) Plan	No
Fugitive Particulate Matter (PM) Operating Program	No
Risk Management Plan (RMP)	No
PM_{10} Contingency Measure Plan	No

1. The overall goal of the Acid Rain Program is to achieve significant environmental and public health benefits through reductions in emissions of sulfur dioxide (SO_2) and nitrogen oxides (NO_x), the primary causes of acid rain (Title IV of the federal Clean Air Act). To achieve this goal at the lowest cost to society, the program employs both traditional and innovative, market-based approaches for controlling air pollution. In addition, the program encourages energy efficiency and pollution prevention. If applicable, this program is further described in Section 6.0 of the draft permit, and does not relax other requirements for NO_x and SO_2 emissions.

2. Under Section 110 of the Clean Air Act (CAA), the USEPA adopted the Clean Air Interstate Rule or CAIR, 40 CFR Part 96, to reduce and permanently cap emissions of sulfur dioxide (SO_2), and nitrogen oxides (NO_x) from electric power plants that significantly contribute to fine particulate and ozone in the ambient air in the Eastern United States. To implement CAIR in Illinois, the Illinois EPA adopted 35 IAC Part 225 Subparts A, C, D and E.

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)

Emission Unit - Turbines	
Description	The turbines are process emission units used to generate electricity.
Date Constructed	June 1996
Emission Control Equipment	Water Injection System
Applicable Rules and Requirements	
Emission Standards	• 35 IAC 212.123 – Opacity restrictions • 35 IAC 214.301 – Sulfur dioxide restrictions • 40 CFR 60.332(a)(1) – NSPS nitrogen oxides restriction • 40 CFR 60.333 – NSPS sulfur dioxide restriction • 35 IAC 217.706(a) - Nitrogen oxides restriction • 40 CFR 76 - Acid Rain Program • Clean Air Interstate Rule (CAIR)
Title I Conditions	The draft permit contains limits on operation and emissions in Conditions 7.1.5 and 7.1.6. These limits were incorporated from Permit 94120058.
Non-Applicability	• 40 CFR Part 60, Subpart KKKK, Stationary Combustion Turbines because the affected turbines did not commence construction, modification, or reconstruction after February 18, 2005 pursuant to 40 CFR 60.4305(a), and are therefore subject to 40 CFR Part 60, Subpart GG for Stationary Gas Turbines. • 40 CFR Part 63, Subpart YYYY, Stationary Combustion Turbines: Because the affected turbines are not located at a major source of HAP emissions, pursuant to 40 CFR 63.6085.

Emission Unit - Turbines	
Non-applicability (Continued	• 40 CFR Part 63 Subpart UUUUU, Coal- and Oil-Fired Electric Utility Steam Generating Units: Because the emission units are turbines whose heat is derived from exhaust gases pursuant to 40 CFR 63.9983(c) and who are not electric utility steam generating units pursuant to 40 CFR 63.10042. • 35 IAC 212.321 or 212.322: Due to the unique nature of such units, a process weight rate cannot be set so that such rules cannot reasonably be applied, pursuant to 35 IAC 212.323. • 35 IAC 217 Subpart Q: because the affected turbines are not in the non-attainment areas designated by 35 IAC 217.386(a)(2).

Non-applicability (Continued)	• 35 IAC 217.141: Because the affected engines are not fuel combustion units, as defined by 35 IAC 211.2470.
	• 35 IAC 216.121: Because the affected engines are not fuel combustion units, as defined by 35 IAC 211.2470.
	• 40 CFR Part 64, Compliance Assurance Monitoring (CAM):
	  • For NO_x and SO_2, because the affected turbines are subject to a NSPS proposed after November 15, 1990, pursuant to 40 CFR 64.2(b)(1)(i).
	  • For PM, VOM, and CO because the affected turbines do not use an add-on control device to achieve compliance with an emission limitation or standard.

Periodic Monitoring (other than basic regulatory requirements)	

Emission Unit - Turbines	
Testing	• Compliance with the opacity limitation in the permit is assured through the use of Reference Method 9 which is an accurate test for opacity and visible emissions. Compliance with the sulfur dioxide limitation in the permit is assured through sampling of the fuel for the sulfur content which is a reliable surrogate parameter for such emissions from these sources. Additionally, emissions of SO_2 from natural gas-fired combustion are low because pipeline quality natural gas typically has sulfur levels of 0.25 grains of fuel sulfur per 100 scf or lower[1]. Pursuant to 40 CFR 72.2, to be considered pipeline quality natural gas it must contain 0.3 grains or less of H_2S per 100 standard cubic feet (less than 5 ppm[2] H_2S) and the H_2S must constitute at least 50% (by weight)of the total sulfur in the fuel. USEPA has stated that "....in general, any 'natural gas' with less than or equal to 1.0 gr of H_2S/100 scf will meet the requirement that H_2S constitute greater than or equal to 50% of the total sulfur in the fuel."[3] USEPA further states there is no useful purpose served for fuels that contain less than 2 gr of H_2S/scf when H_2S constitutes less than 50% of the total sulfur in the fuel and thus concluded that the adverse effects from firing gaseous fuels meeting these specifications on SO_2 are de minimus at best and would result in no increase in reported SO_2 emissions. Thus, it is reasonable to conclude that the resulting emissions of SO_2 will easily be less than the 2,000 ppm limit (@ 50% H2S and 100% conversion to SO_2 ~ 12 ppm SO_2). [1] Compilation of Air Pollutant Emission Factors, Volume I: Stationary Point and Area Sources, 5th Edition, January 1995, [2] 1 grain of H_2S/100 scf = 15 ppm H_2S, [3] See reference in the Preamble for revisions to 40 CFR Part 75, May 26, 1999 final rule. • Compliance with NO_x limitations is based on Method 20.
Emissions Monitoring	• Opacity observations at least every six months or when the turbine is exercised. The observation is not intended to be a USEPA Test Method 9 opacity test, nor does the observation require a USEPA Test Method 9 certified observer. It is intended to be performed by personnel familiar with the operation of the turbine who would be able to make a determination based from the observed opacity as to whether or not the turbine was running properly, and subsequently initiate a corrective action if necessary. • Fuel monitoring • Annual NO_x concentration monitoring via a portable NOx monitor utilizing method ASTM D6522-00
Operational Monitoring	Continuous monitoring system to track fuel usage.
Inspections	Periodic inspections of the turbine

Emission Unit - Turbines	
Recordkeeping	Numerous: fuel usage, hours of operation, sulfur contents, emissions, startup records, etc.
Other	• Regarding the Title 1 limits in Section 7.1.6(a), the likelihood of natural gas combustion violating NO_x, SO_2, PM, CO, or VOC standards/limits is unlikely given that pipeline quality natural gas has a reliable carbon to hydrogen composition (> 75% methane), stable distribution and firing system and since the standards/limits are typically based on worst-case operating conditions. Opacity is used as a surrogate for PM emissions and provides qualitative information on the operation and maintenance of the combustion equipment. In other words, data on the relationship between opacity and PM emissions suggests an indirect increase in opacity with an increase in PM. Pipeline quality natural gas has a very low ash content given the low carbon to hydrogen ratio and requirement on solids. In general, natural gas fired emission units do not produce significant amounts of PM. Emissions of PM are minimized by the use of clean fuels (inherent quality of natural gas). Emissions of SO_2 from natural gas-fired combustion are low because pipeline quality natural gas typically has sulfur levels of 0.25 grains of fuel sulfur per 100 scf or lower, as previously discussed under testing. The owner or operator of a gas-fired peaking unit or oil-fired peaking unit as defined in 40 CFR 72.2 may determine NO_x emissions in accordance with the emissions estimation protocol of 40 CFR 75, Subpart E. Lastly the compliance procedures of 7.1.12(e) provide for a methodology to quantify emission using emission factors developed from the most recent approved stack test (NO_x, CO, and PM) and appropriate emission factors (SO_2 and VOM). • The established periodic monitoring is sufficient based on the fact that the facility does not routinely operate, does not have a history of non-compliance, and because the likelihood of an exceedance is very low.

Emission Unit - Turbines	
Other (Continued)	• IEPA is reauthorizing the exceedance of the opacity emission rate and the hourly emission rates for periods of startup. The hourly emissions rate exceedance continues to be authorized by the underlying construction permit. Prior to issuing the construction permit, IEPA personnel considered the technology employed, manufacture's guarantees data, and other available data (e.g., prior experience and job knowledge, testing results, familiarity with the combustion process and control methods, etc.) prior to authorizing an exceedance to the hourly limits which would ensure minimal impact on the NAAQS. *T*he initial and renewal CAAPP permit establish various recordkeeping during startup, specifically whether an exceedance may have occurred. These records are then reported to the Bureau of Air Compliance Section who, if the situation warranted, would issue a violation notice for emissions in excess. Seeing no current or pending violation notice's indicates that historic emissions during startup have not been a great concern and have been in line with the criteria established under the original construction permit and test conditions established by that permit. • Terms are used in conjunction with conditions relating to testing: 1. "Qualified observer" is established in USEPA Test Method 9 (http://www.epa.gov/ttn/emc/promgate/m-09.pdf). 2. "Representative operation" is operation "serving as a typical or characteristic example". Therefore, to test under "representative conditions" the Permittee is obligated to perform the test: 1) in accordance with the manner in which the Permittee represented the process in the construction and operating permit applications, 2) in accordance to the criteria established in its permits, and 3) in accordance with a typical or characteristic example of the process in operation to properly represent the levels of emissions.
Reporting	
Prompt Reporting	See Attachment 3

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.

ATTACHMENT 4: Greenhouse Gas Provisions

On June 3, 2010, USEPA adopted rules for the initial permitting of major sources of emissions of greenhouse gases (GHG). *See*, 75 FR 31514-31608. Prompted by the earlier adoption of GHG emissions standards for motor vehicles under Title II of the CAA, the USEPA's rules implement a two-phased program for permitting major sources of GHG under Title V permit programs.[i] As Illinois EPA is planning to issue a permit to this source during the second phase of the rules, GHG emissions must be addressed during this CAAPP permitting action.[ii] Annual Emission Reports submitted to the Illinois EPA by this source and/or estimated GHG emissions by the Illinois EPA, which detail the source's actual annual emissions of GHG, provide the necessary data to appropriately address emissions of GHG in the Draft CAAPP Permit. The data in these reports clearly show the source is a major source for emissions of GHG.

The new federal rules also require subject Title V sources to comply with any applicable GHG-related requirements that arise from other CAA programs.[iii] However, there are currently no emission standards or other regulatory obligations relating to GHG that constitute "applicable requirements" for this source. For this reason, the Draft CAAPP Permit for this source does not contain any substantive requirements for GHG. At the federal level, the only venue that could potentially establish GHG-related requirements at this time is the PSD program. As of January 2, 2011, sources triggering PSD must evaluate GHG emissions resulting from projects that trigger the major source or major modification rules.[iv] This source has neither constructed such a project, nor received a permit authorizing such a project, since January 2, 2011, to the present, and therefore has not triggered any GHG-related requirements under the PSD program.

There are no other GHG-related requirements established under the CAA that are applicable to this source at this time. In particular, the mandatory reporting rule for GHG promulgated by USEPA in 2009 [*see generally*, 40 CFR Part 98] is not an applicable requirement and therefore would not be included in the Draft CAAPP Permit for this source. There are also no GHG-related requirements under the Illinois Environmental Protection Act or contained within Illinois' SIP that apply to the source at this time. Other state laws or regulations in Illinois relating to GHG, including efforts to reduce emissions of GHG under authority other that the Illinois Environmental Protection Act, do not constitute applicable requirements under the CAAPP.

ATTACHMENT 5: Emission Testing Results

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

ATTACHMENT 6: 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.

ATTACHMENT 7: Field Inspection Results

A review of the source’s latest field inspection report dated 05/25/11 demonstrates the source’s ability to comply with all applicable requirements.

ATTACHMENT 8: 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.

ATTACHMENT 9: 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.[v] 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.[vi]

The criteria that are mentioned in USEPA Administrator Petition Responses stress the importance of identifying, *with specificity*, the object of the incorporation.[vii] 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*[viii]. 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.[ix]

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.[x] 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.[xi]

Endnotes

[i] The new rules apply the first phase of permitting to sources already subject to Title V by virtue of their conventional, non-GHG pollutants. As noted above, these sources are expected to address GHG in their permitting applications and to comply with any substantive requirements for GHG that have been established through other CAA programs such as PSD. The second phase of permitting that begins July 1, 2011, essentially applies the same requirements to sources who will become subject to Title V based on their GHG emissions alone (i.e., existing or newly constructed sources with a potential to emit of equal to or greater than 100,000 tons per year of CO2*e* and 100 tons per year of GHG on a mass basis).

[ii] USEPA has stated that the first phase of its new rules requires existing Title V sources to address GHG in their Title V applications by citing to any pollutants for which the Title V source is major and to all regulated air pollutants. *See,* PSD and Title V Permitting Guidance for Greenhouse Gases, prepared by the Office of Air Quality Planning and Standards, page 51 (November 2010).

[iii] *See generally,* PSD and Title V Permitting Guidance for GHG at pages 53-56.

[iv] A major source subject to PSD based on potential emissions of a non-GHG pollutant and potential emissions of GHG equal or greater than 75,000 tons per year of CO_2e is required to address GHG emissions in evaluating control options and associated monitoring, reporting, etc., for any construction of a new major source or a major modification of an existing major source.

[v] 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.

[vi] 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").

[vii] 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.

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

[ix] 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).

[x] 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.

[xi] 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.