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

Saint-Gobain Containers, L.L.C.
1200 North Logan
Lincoln, Illinois 62656

Illinois EPA ID Number: 107035AAX

Application Number: 95090132

Application Type: Renewal Permit

Start of Public Comment Period: December 21, 2009

Close of Public Comment Period: January 20, 2010

Permit Engineer/Technical Contact: LeeAnne Kinsella, 217/782-2113

Community Relations/Comments Contact: Brad Frost, 217/782-7027

(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.

The raw material process is considered an insignificant activity. However, the Permittee addressed the applicability of 40 CFR 52.21 PSD to demonstrate that this activity and other projects combined are not major under PSD. The facility replaced their existing lehrs with two new Gas-Fired Annealing Lehrs. The facility also installed a new Diesel-Fired Electric Generator that is used to provide electricity during power outage. The facility also did a rebuild project on the glass furnace. This project did include replacing or reconfiguring numerous components including burners, batch delivery system, charger, melter bottom, doghouse, throat, electrodes, refiner/distributor, and instrumentation. Finally the facility installed an oxygen enriched air staging (OES) system in their existing furnace.

II. GENERAL SOURCE DESCRIPTION

a. Nature of source

The source Saint-Gobain Containers, L.L.C. is located at 1200 North Logan Street, Lincoln, Illinois. The source manufactures glass and forms it into bottles of various sizes and shapes.

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

The source requires a CAAPP permit as a major source of Nitrogen Oxides (NO_x) and Sulfur Dioxide (SO_2).

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)				
Pollutant	**2008**	**2007**	**2006**	**2005**	**2004**
CO	18.55	18.58	14.35	11.94	14.70
NO_x	420.89	446.97	399.20	351.12	440.45
PM	64.38	61.73	46.84	34.83	42.64
SO_2	74.62	90.36	110.24	105.04	131.25
VOM	14.63	14.76	1.53	1.31	1.59
Lead (top HAP)	0.24	0.24	0.22	0.19	0.11

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 establish new 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
Nitrogen Oxides (NO_x) Trading Program	No
Acid Rain Program	No
Compliance Assurance Monitoring (CAM) Plan	No
Fugitive Particulate Matter (PM) Operating Program	No
Risk Management Plan (RMP)	No
PM_{10} Contingency Measure Plan	No

ATTACHMENT 2: Summary of Requirements for Specific Emission Units

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

Table 1 (Section 7.1 of the draft permit)

Emission Unit - Glass Melting Furnace	
Description	65mmBtu/hr, Natural Gas-Fired and Electric Boost Power Furnace with oxygen enriched air staging (OEAS)
Date Constructed	02/2007
Emission Control Equipment	None
Applicable Rules and Requirements	
Emission Standards	• 40 CFR Part 60, Subpart CC for Opacity and PM; • 35 IAC 212.123(a) for Opacity; • 35 IAC 212.321(a) for PM; • 35 IAC 214.301 for SO_2; • 40 CFR 60.7 provisions for startup, shutdown or malfunction.
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 05020040 and 09010044. • This condition has been established in this permit pursuant to Sections 9(b) and 39(a) of the Act, as well as Section 39.5(7)(a) of the Act. This condition addresses the potential emissions from the glass furnace [T1N].
Non-applicability	• 40 CFR Part 61, Subpart N, National Emission Standard for Inorganic Arsenic Emissions From Glass Manufacturing Plants, because the affected furnace does not use commercial arsenic as a raw material; • 35 IAC 216.121 for CO emissions, because the affected furnace is not defined as a fuel combustion emission source pursuant to 35 IAC 211.2470; • 35 IAC 215, Subpart K for VOM emissions, because the affected furnace is not defined as a fuel combustion emission source pursuant to 35 IAC 211.2470 [35 IAC 215.303];

Emission Unit - Glass Melting Furnace	
Non-applicability	• This permit is issued based on the affected furnace not being subject to 35 IAC 217, Subpart B and Subpart C for NO_x emissions, because the affected furnace is not defined as fuel combustion emission sources pursuant to 35 IAC 211.2470; • This permit is issued based on the affected furnace not being subject to 35 IAC 215, Subpart K for VOM emissions, because the affected furnace is not defined as fuel combustion emission sources pursuant to 35 IAC 211.2470 [35 IAC 215.303]; • This permit is issued based on the affected furnace not being subject to 40 CFR Part 64, Compliance Assurance Monitoring (CAM) for Major Stationary Sources, because the affected furnace does not use an add-on control device to achieve compliance with an emission limitation or standard for VOM, PM/PM_{10}, NO_x, SO_x and CO.
Periodic Monitoring (other than basic regulatory requirements)	
Testing	To demonstrate compliance with Section 7.1.3, 7.1.5 and 7.1.6
Emissions Monitoring	NO_x, SO_x and Opacity continuous emission monitoring systems are used to demonstrate compliance with Section 7.1.3, 7.1.5 and 7.1.6.
Operational Monitoring	To demonstrate compliance with Section 7.1.5.
Inspections	The inspections are use to demonstrate compliance with Section 7.1.3, 7.1.5 and 7.1.6.
Recordkeeping	• Recordkeeping used to demonstrate compliance with: 40 CFR Part 60, Subpart CC for Opacity and PM; 35 IAC 212.123(a) for Opacity; 35 IAC 212.321(a) for PM; 35 IAC 214.301 for SO_2; 40 CFR 60.7 provisions for startup, shutdown or malfunction; 7.1.5 for Control and Work Practices; and 7.1.6 for limits that were incorporated from Permits 05020040 and 09010044.
Basis	Periodic Monitoring is sufficient for this emission unit because: • Presumed by rule as the source is subject to a standard promulgated after Nov. 1990. • Monitoring is consistent with other sources in this source category. •
Reporting	
Prompt Reporting	See Attachment 3 Semi-annual reporting required for all other reporting requirements.

Emission Unit - Glass Melting Furnace	
Other Reporting	
Other Information	
Footnotes	

Table 1 (Section 7.2 of the draft permit)

Emission Unit - Glass Forming Machines and Pusher System	
Description	Glass containers are formed from molten glass in metal molds. Each mold requires periodic lubrication to prevent the hot glass from sticking. The mold release agent is applied on the hot glass contact areas or cavities of the mold. The pusher system removes newly formed containers from the molds.
Date Constructed	03/2009 (Both)
Emission Control Equipment	None
Applicable Rules and Requirements	
Emission Standards	• 35 IAC 212.123(a) for Opacity; • 35 IAC 212.321(a) for PM; and • 35 IAC 215.301 for VOM.
Streamlining	
Title I Conditions	• N/A
Non-applicability	• This permit is issued based on the affected glass forming machines and pusher system not being subject to 40 CFR Part 64, Compliance Assurance Monitoring (CAM) for Major Stationary Sources, because the affected glass forming machines and pusher system do not use an add-on control device to achieve compliance with an emission limitation or standard for VOM, PM/PM_{10}, NO_x, SO_x and CO.
Periodic Monitoring (other than basic regulatory requirements)	
Testing	N/A
Emissions Monitoring	N/A
Operational Monitoring	To demonstrate compliance with Section 7.2.5.
Inspections	To demonstrate compliance with Section 7.2.3 and 7.2.5.
Recordkeeping	• Recordkeeping used to demonstrate compliance with: 35 IAC 212.123(a) for Opacity; 35 IAC 212.321(a) for PM; 35 IAC 215.301 for VOM; and 7.1.5 for Control and Work Practices.

Emission Unit - Glass Forming Machines and Pusher System	
Basis	Periodic Monitoring is sufficient for this emission unit because: • There is a small likelihood of an exceedance. • Emissions do not vary significantly under normal operation and/or vary slowly with time. • Monitoring is consistent with other sources in this source category. • Emissions are considered negligible
Reporting	
Prompt Reporting	See Attachment 3 Semi-annual reporting required for all other reporting requirements.
Other Reporting	
Other Information	
Footnotes	

Table 1 (Section 7.3 of the draft permit)

Emission Unit - Hot End Treatment Hoods	
Description	Newly formed glass containers are surface treated with an organotin compound to make them resistant to scratches and breakage. This surface coating is applied in the Forming Department while the containers move along on a conveyor passing through a specially designated hood. This hood is designed to be a closed-loop system which can deposit a thin uniform layer of a tin oxide over each container.
Date Constructed	Prior to 1972
Emission Control Equipment	None
Applicable Rules and Requirements	
Emission Standards	• 35 IAC 212.123(a) for Opacity; • 35 IAC 212.322(a) for PM; and • 35 IAC 215.301 for VOM.
Streamlining	
Title I Conditions	• N/A
Non-applicability	• 35 IAC Part 215, Subpart F: Coating Operations: because there is no specific limitation under 35 IAC 215.204 for the type of coating performed in the affected hot end treatment hoods; • This permit is issued based on the affected hot end treatment hoods not being subject to 40 CFR Part 64, Compliance Assurance Monitoring (CAM) for Major Stationary Sources, because the affected hot end treatment hoods do not use an add-on control device to achieve compliance with an emission limitation or standard for VOM, PM/PM_{10}, NO_x, SO_x and CO.
Periodic Monitoring (other than basic regulatory requirements)	
Testing	N/A
Emissions Monitoring	N/A
Operational Monitoring	N/A
Inspections	To demonstrate compliance with Section 7.3.3.
Recordkeeping	Recordkeeping used to demonstrate compliance with: 35 IAC 212.123(a) for Opacity; 35 IAC 212.322(a) for PM; 35 IAC 215.301 for VOM.

Emission Unit - Hot End Treatment Hoods	
Basis	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. • Emissions are considered negligible
Reporting	
Prompt Reporting	See Attachment 3 Semi-annual reporting required for all other reporting requirements.
Other Reporting	
Other Information	
Footnotes	

Table 1 (Section 7.4 of the draft permit)

Emission Unit - Gas-Fired Annealing Lehrs	
Description	After the glass container is formed and treated with the tin coating, it passes through an annealing lehr. This process reduces the strains and stresses from the forming process and makes the product ready for use. Emissions are from natural gas combustion.
Date Constructed	11/2005
Emission Control Equipment	None
Applicable Rules and Requirements	
Emission Standards	• 35 IAC 212.123(a) for Opacity; • 35 IAC 212.321(a) for PM; and • 35 IAC 215.301 for VOM; • 35 IAC 214.301 for SO_2.
Streamlining	
Title I Conditions	• The draft permit contains limits on emissions in Condition 7.4.6. These limits were incorporated from Permit 05020040.
Non-applicability	• This permit is issued based on the affected gas-fired annealing lehrs not being subject to 40 CFR Part 64, Compliance Assurance Monitoring (CAM) for Major Stationary Sources, because the affected gas-fired annealing lehrs do not use an add-on control device to achieve compliance with an emission limitation or standard for VOM, PM/PM_{10}, NO_x, SO_x and CO; • 35 IAC 216.121 for CO emissions, because the affected gas-fired annealing lehrs are not defined as a fuel combustion emission source pursuant to 35 IAC 211.2470; • This permit is issued based on the affected gas-fired annealing lehrs not being subject to 35 IAC 217, Subpart B and Subpart C for NO_x emissions, because the affected gas-fired annealing lehrs are not defined as fuel combustion emission sources pursuant to 35 IAC 211.2470.
Periodic Monitoring (other than basic regulatory requirements)	
Testing	**N/A**
Emissions Monitoring	**N/A**
Operational Monitoring	**N/A**
Inspections	To demonstrate compliance with Section 7.4.3 and 7.4.6.

Emission Unit - Gas-Fired Annealing Lehrs	
Recordkeeping	Recordkeeping used to demonstrate compliance with: 35 IAC 212.123(a) for Opacity; 35 IAC 212.321(a) for PM; 35 IAC 215.301 for VOM; and 7.4.6 for limits that were incorporated from Permit 05020040.
Basis	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. • Monitoring is consistent with other sources in this source category. • Emissions are considered negligible
Reporting	
Prompt Reporting	See Attachment 3 Semi-annual reporting required for all other reporting requirements.
Other Reporting	
Other Information	
Footnotes	

Table 1 (Section 7.5 of the draft permit)

Emission Unit - Raw Material Handling	
Description	The raw material process is comprised of unloading hoppers, storage silos, weighing and mixing equipment and distribution conveyors. Raw materials, including sand, soda ash, limestone, aplite, minor ingredients and cullet are received in bulk by rail and truck from suppliers, and unloaded into storage bins or silos. Raw materials are withdrawn from storage and conveyed into hopper scales for weighing. The proper amount of materials is then mechanically mixed and conveyed to storage bins above the glass melting furnace. Dust collectors are used to control emissions. Note: This raw material process is considered an insignificant activity. However, the Permittee addressed the applicability of 40 CFR 52.21 PSD to demonstrate that this activity and other projects combined are not major under PSD.
Date Constructed	Prior to 1972
Emission Control Equipment	Dust Collectors
Applicable Rules and Requirements	
Emission Standards	• 35 IAC 212.123(a) for Opacity; and • 35 IAC 212.322(a) for PM.
Streamlining	
Title I Conditions	• The draft permit contains limits on operation and emissions in Conditions 7.5.3, 7.5.5, and 5.3.2. These limits were incorporated from Permit 09010044.
Non-applicability	• This permit is issued based on the affected raw material process not being subject to 40 CFR Part 64, Compliance Assurance Monitoring (CAM) for Major Stationary Sources, because the affected raw material process does not use an add-on control device to achieve compliance with an emission limitation or standard for VOM, PM/PM_{10}, NO_x, SO_x and CO.
Periodic Monitoring (other than basic regulatory requirements)	
Testing	**N/A**
Emissions Monitoring	**N/A**
Operational Monitoring	To demonstrate compliance with Section 7.5.5.
Inspections	To demonstrate compliance with Section 7.5.3, 7.5.5 and 5.3.2.

Emission Unit - Raw Material Handling	
Recordkeeping	Recordkeeping used to demonstrate compliance with: 35 IAC 212.123(a) for Opacity; 35 IAC 212.322(a) for PM; and 7.5.5 for Control and Work Practices; and compliance with the PM emission limits in Conditions 7.5.3 and 7.5.6 and the opacity emission limits in Conditions 5.3.2 and 7.5.3. These limits were incorporated from Permit 09010044.
Basis	Periodic Monitoring is sufficient for this 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. • Monitoring is consistent with other sources in this source category. • Emissions are considered negligible
Reporting	
Prompt Reporting	See Attachment 3 Semi-annual reporting required for all other reporting requirements.
Other Reporting	
Other Information	
Footnotes	

Table 1 (Section 7.6 of the draft permit)

Emission Unit - Diesel-Fired Electric Emergency Generator	
Description	Diesel-Fired Electric Generator is used to provide electricity during power outage.
Date Constructed	09/2005
Emission Control Equipment	None
Applicable Rules and Requirements	
Emission Standards	• 35 IAC 212.123(a) for Opacity; • 35 IAC 214.301 for SO_2; • 35 IAC 215.301 for VOM.
Streamlining	
Title I Conditions	• The draft permit contains limits on operation and emissions in Condition 7.6.6. These limits were incorporated from Permit 05020040.
Non-applicability	• 35 IAC 212.321: due to the nature of such units, a process weight rate cannot be set so that such rules cannot reasonably be applied. • NESHAP, 40 CFR Part 63 Subpart ZZZZ: Stationary Reciprocating Internal Combustion Engines: because the source is not a major source of hazardous air pollutants; • The affected diesel generator is not subject to the Acid Rain Program, 40 CFR 72, because the affected diesel generator is non-utility units, as defined by 40 CFR 72.6(b)(8). Pursuant to 40 CFR 72.2, “utility unit” is defined as a unit owned or operated by a utility that serves a generator in any State that produces electricity for sale; • The affected diesel generator is not subject to 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; • The affected diesel is not subject to 35 IAC 216.121 because the affected diesel is not a fuel combustion unit, as defined by 35 IAC 211.2470; •

Emission Unit - Diesel-Fired Electric Emergency Generator	
Non-applicability (Continued)	i. The affected diesel generator is not subject to 35 IAC Part 217, Subpart Q: Stationary Reciprocating Internal Combustion Engines and Turbines, because the affected diesel generator is not a stationary reciprocating internal combustion engines listed in Appendix G of that Part, pursuant to 35 IAC 217.386. ii. The affected diesel generator is not subject to 35 IAC 217.141 because the affected diesel generator is not fuel combustion units, as defined by 35 IAC 211.2470; • The affected diesel generator is not subject to 40 CFR Part 64, Compliance Assurance Monitoring (CAM) for Major Stationary Sources, because the affected diesel generator does not use an add-on control device to achieve compliance with an emission limitation or standard for VOM, PM/PM_{10}, NO_x, SO_x and CO.
Periodic Monitoring (other than basic regulatory requirements)	
Testing	N/A
Emissions Monitoring	N/A
Operational Monitoring	N/A
Inspections	To demonstrate compliance with Section 7.6.3 and 7.6.6.
Recordkeeping	Recordkeeping used to demonstrate compliance with: 35 IAC 212.123(a) for Opacity; and 7.6.6 for limits that were incorporated from Permit 05020040.
Basis	Periodic Monitoring is sufficient for this emission unit because: • There is a small likelihood of an exceedance. • Emissions do not vary significantly under normal operation and/or vary slowly with time. • Monitoring is consistent with other sources in this source category. • Emissions are considered negligible
Reporting	
Prompt Reporting	See Attachment 3 Semi-annual reporting required for all other reporting requirements.
Other Reporting	
Other Information	
Footnotes	

ATTACHMENT 3: Prompt Reporting of Deviations

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

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

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

The USEPA has stated that, for purposes of administrative efficiency and clarity, it is acceptable to define prompt in each individual permit. 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: Periodic Monitoring Discussion

The Illinois EPA must evaluate whether sufficient monitoring is contained in each sources CAAPP permit to assure compliance with regulations developed to meet Clean Air Act requirements. Under the CAAPP permit program, periodic monitoring is required for each emission point at a source subject to Clean Air Act requirements. No emission points are categorically exempt from this requirement.

Significant benefits of Title V include compliance assurance and public access to data. Periodic monitoring provides data sources can use to promptly identify and correct compliance problems and to certify compliance. This data is also reported to the Illinois EPA and available to the USEPA and to the public. Periodic monitoring provides information and compliance tools to the public that may not otherwise always be available under state law.

USEPA has not mandated specific monitoring or protocols for developing monitoring to meet the above requirements. Periodic monitoring determinations are therefore made on a case-by-case basis. Because of the case-by-case nature of periodic monitoring determinations, it is important that the determinations are made consistent with Section 39.5 of the Act.

What is Periodic Monitoring?

In addition to gathering all requirements that apply to a source into one document, the CAAPP permit is meant to enable the public, USEPA, and the Illinois EPA to know whether the source can comply with those requirements. To achieve that goal, every CAAPP permit must include adequate "periodic monitoring." What this means is that the CAAPP permit must require the source to perform monitoring, recordkeeping and reporting so that it can assure the Illinois EPA, USEPA and the public that it is complying with its CAAPP permit or that it is identifying, reporting and addressing non-compliance. Ensuring that a CAAPP permit includes adequate periodic monitoring is the most important aspect of permit development.

Monitoring is a broad term that describes a source's ongoing activities to determine how it is operating in relation to its emission limitations and standards. Monitoring provisions must be set forth in the permit. The monitoring must be done at the source's initiative and a requirement to prepare or maintain a "monitoring plan" is not enough. Inspections by the Illinois EPA are also not sufficient.

The most obvious type of pollution monitoring is the direct measurement of smokestack emissions. Sometimes, a source is equipped with continuous emissions monitoring systems (CEMS) or continuous opacity monitoring systems (COMS). As their name implies, these systems are designed to directly measure smokestack emissions on a continuous basis. While continuous monitoring is one of the best ways to assure sources are in compliance with an emission limitation, installation of CEMS and COMS may be technically or economically infeasible compared to frequent manual monitoring. If a source has CEMS and COMS, these systems are identified in the sources CAAPP permit. If a source lacks CEMS and COMS, the source may be required to install these systems. However, the Illinois EPA may decide that some other type of monitoring is sufficient to assure the sources compliance with applicable requirements.

Periodic monitoring must be included with all types of permit conditions, not just those that directly limit pollution levels. For example, a CAAPP permit is likely to include conditions that require equipment maintenance and work practices. For these types of conditions, recordkeeping, and inspections is usually necessary to satisfy the periodic monitoring requirement. Monitoring includes activities such as:

- Continuous Emission Monitoring Systems (CEMS)
- Continuous Opacity Monitoring Systems (COMS)
- Parametric Emissions Monitoring (PEMS)
- Parametric Monitoring (continuous or at specified intervals)
- Periodic Source Testing
- Readings/Inspections
- Recordkeeping

Periodic Monitoring, a term used in 39.5(7)(d)(ii) of the Act, describes the combination of monitoring required by the applicable requirements and monitoring created in the CAAPP permit as necessary to meet the CAA requirement that the permit that assure compliance with the applicable requirements. Periodic monitoring is required because some applicable requirements do not contain adequate provisions for determining whether a source is in compliance with its emissions limitations or how this is to be accomplished.

In addition to the requirement for periodic monitoring, permits must contain "conditions as are necessary to assure compliance." This requirement is reflected in 39.5(7)(d)(ii) of the Act, which requires "monitoring sufficient to yield reliable data from the relevant time period that are representative of the sources compliance" and 39.5(7)(a) of the Act, which requires all CAAPP permits to contain "testing, monitoring, reporting, and recordkeeping requirements sufficient to assure compliance with the terms and conditions of the permit."

If the permit contains good periodic monitoring, the source can most certainly be held accountable if it violates applicable air quality requirements. Without adequate periodic monitoring, it may be more difficult for the Illinois EPA, USEPA and a member of the public to determine whether a source is violating an air quality requirement. Also, good periodic monitoring will provide the source with information necessary to identify and minimize compliance problems and assist the source with the annual certification of compliance.

When is Periodic Monitoring presumed in a Rule?

Sometimes, the underlying statute or regulation explicitly requires a source to perform a particular kind of monitoring. Any monitoring that is specifically required by statute or regulation must be included in the CAAPP permit. However, many air quality statutes and regulations do not identify a monitoring method. And, even when a monitoring method is specified, there is often no indication of how often the monitoring must be performed. Many statutes and regulations require a source to perform an initial test to demonstrate compliance, but never require any additional monitoring.

Periodic monitoring is not required unless the applicable requirement "requires no periodic testing, specifies no frequency, or requires only a one-time test." If the underlying State or federal standard requires a source to perform a specific type of testing or monitoring from time to time (yearly, monthly, weekly, daily, hourly), then this satisfies the periodic monitoring requirement of 40 CFR 70.6(a)(3)(i)(B). If an underlying requirement (1) has no periodic testing or monitoring, (2) does not mention how frequently testing or monitoring should be done, or (3) requires just a one-time test, then periodic monitoring is added to the CAAPP permit. The basic types of scenarios that are presumed to already contain sufficient monitoring requirements are those such as:

- NSPS and NESHAP promulgated after November 15, 1990
- When the Pollutant Specific Emission Unit is subject to a CAM Plan
- Federal or SIP standards specifying a continuous compliance determination method
- Acid Rain/CAIR/CAMR rules

What is the Process for Evaluating Periodic Monitoring?

In evaluating periodic monitoring, Illinois EPA determines whether a source's applicable requirements already contain adequate monitoring, and, if not, identifies additional necessary monitoring after consideration of certain factors. Review each applicable requirement emission limit or standard to determine what monitoring, recordkeeping and reporting (MRR) is associated with the emission limit. Note that periodic monitoring is only required if there is an applicable emission limit or standard. The term emission limit includes mass, rate and concentration limits, technology requirements, percent reduction requirements, work practice standards, process or control device parameters, and design, operational, or maintenance requirements. Determine whether the monitoring yields reliable data from the relevant time period that are representative of the source's compliance, and will assure compliance with the emissions limit or standard. Even if the MRR is not presumptively acceptable, it may still be acceptable. If the monitoring is not adequate to assure compliance, monitoring must be added to the permit. There are often various monitoring options that would satisfy the periodic monitoring requirement.

The frequency and averaging period of the emission limit of the monitoring must be made clear (periodic = e.g., hourly, daily, annual, etc.). When the emission limit has no time element (e.g., 0.5 grains/dscf), the relevant time period is the time needed to conduct an emission test. The relevant time period can be instantaneous as well (e.g., no holes or cracks in a lid for any amount of time). The data collected should provide for a reasonable assessment of the sources compliance status with permit emission limits.

Factors Considered in Evaluating Periodic Monitoring

- <u>Likelihood of violating</u> an applicable requirement. (Margin of compliance with the applicable requirement)
- <u>Presence of add-on controls</u> to comply with underlying rules. (If controls are required, consider whether the controls will assure

compliance with the emission limit. If so, the best option may be to monitor the control equipment for proper operation instead of or in addition to the process.)

- Variability of emission level over time. (Consider how close a unit's emissions are to the emission limits during normal and anticipated upset operations.)
- Consider how emissions may vary. (Emissions may vary day to day under normal operation, e.g., as a turbine or engine increases or decreases load emissions change. Emissions may vary slowly over time, e.g., SCR catalyst may degrade over time. Emissions may vary quickly due to malfunction, e.g., a baghouse bag may break.)
- Monitoring data already available. (The source often maintains monitoring, process, maintenance, or control equipment data of emission units even if not required under an applicable requirement. Consider whether these activities would assure compliance; if so, they may be the best fit monitoring option for that source.)
- Technical and economic feasibility
- Monitoring done for similar emission Units/Emissions. (Existing CAAPP and construction permits, Federal, State and Local rules, CAM Guidelines Document)
- Will the monitoring method yield reliable data with respect to the emission limit?
- Will the monitoring method provide data that can be related to the relevant time period over which compliance with the emission limit is determined?
- Will the monitoring data be collected at a frequency that will provide information that is representative of the sources compliance with the permit?
- Is the monitoring condition written in a way that is practically enforceable? (Practical Enforceability involves ensuring that the following items are present: Frequency of monitoring, Data averaging period, Procedures for checking data validity, Minimum period of data availability, Recordkeeping, Prompt deviation and summary reports)

What is the Periodic Monitoring Criterion?

Compliance Assurance Monitoring that assures compliance is designed to:

- Monitor key parameters which determine compliance
- Be done at a frequency consistent with the likely variability of emissions and margin of compliance
- Detect deviations within specific timeframes (provide information to operator to correct problems promptly)
- Provide information that the Illinois EPA, USEPA and the public could use for enforcement

Margin of compliance: Amount of monitoring varies based on how a unit is operating with respect to emission limits (x% of emission limit); less monitoring if there is a comfortable margin of compliance. In determining

margin of compliance, consider accuracy of emission estimation method – less monitoring if reliable emission factors exist. Consider reference method accuracy range. AP-42 or other emission factor accuracy, e.g., rating and range of emission factor.

Consider existence of control equipment and variability:

- Look at emissions over time under normal/upset conditions (within an individual unit)
- More variability more monitoring; less variability less monitoring. Variability within margin of compliance is acceptable.
- Also consider variability within a source category.
- Equipment failure or degradation.

Source size: Vary monitoring based on unit size as a lb/day or ton/year threshold based on potential uncontrolled emissions, e.g., more monitoring if uncontrolled emissions exceed major source threshold.

Burden/Cost to Permittee: Cost of equipment, personnel (training, time spent on job, etc), administrative costs (e.g., time and expense of MRR), burden on agency (i.e., inspections, record review), reasonableness (does it make sense?), time to implement condition, technical feasibility of monitoring and test methods (e.g., stack testing of fugitive emissions), existing burden for monitoring.

Consistency: Consistency means monitoring may be different but consistently meets the established criteria. Consistency is important between similar or identical sources, e.g., with regard to size, source emission unit category, types of emissions and emission limits.

Historical capability to demonstrate compliance: A source that has a history of violating emission limitations is likely to be required more frequent monitoring than a source that has a strong record of compliance.

Step Description

Preliminary investigation. The first step toward establishing appropriate monitoring is to identify the need for additional monitoring for the emitting processes or applicable requirements at this point.

Brainstorm possible MRR types. Next, brainstorm potential monitoring proposals. Ideas for monitoring proposals may come from experience, from the source, be developed by applying technologies used for similar source categories, or they may be innovative.

Choose MRR method and frequency. Choose the most appropriate monitoring method and frequency. Some of the criteria, such as technical feasibility and data necessary to determine compliance on an ongoing basis will be mandatory. A monitoring method that is not technologically feasible, or that will not provide necessary data cannot be chosen. For other criteria such as cost and consistency, there is not the mandatory element. The relative merits of each option with respect the criteria must be considered. Keep in mind that periodic monitoring can include a mix of monitoring techniques. For example, a

sources permit might require daily or weekly inspections of pollution control equipment in addition to a stack test every few months or years.

Also, instead of requiring a source to monitor emissions coming from its smokestack, a permit might allow a source to monitor some other aspect of its operations instead. This type of monitoring is called “surrogate” (e.g., substitute) monitoring. Surrogate monitoring is allowed when (1) monitoring of actual emissions is technically or economically infeasible and/or impractical, and (2) surrogate monitoring is adequate to assure compliance with the underlying applicable requirement. The CAA “does not prohibit the use of an appropriate surrogate pollutant for individual species to confirm compliance. “A surrogate may be used to regulate pollutants if it is ‘reasonable’ to do so. “A surrogate may attribute characteristics of a subclass of substances to an entire class of substances if doing so is scientifically reasonable”; (NRDC v. EPA, 822 F.2d 104, 125 (D.C. Cir. 1987))

A three part analysis is generally used for determining whether the use of a surrogate is reasonable: (1) “the emissions are invariably present or characterized by the surrogate (i.e., demonstrate and quantify a consistent correlation between PM stack emissions and their HAP metal content),”, (2) “the control technology indiscriminately captures the target pollutant along with the surrogate or characterizes the effect on the target pollutant;” and (3) “the only means by which facilities ‘achieve’ reductions in the target pollutant.” If these criteria are satisfied then the surrogate may be considered given the potential impact upon emissions.” A surrogate is not a reasonable surrogate where other factors (for instance, the HAP content of a raw material affects HAP metal emissions.)” play a role in the reduction of emissions in the target pollutant (for instance, “PM might not be an appropriate surrogate for HAP metals if switching fuels would decrease HAP metal emissions without causing a corresponding reduction in total PM emissions.)” The use of a surrogate "eliminates the cost of performance testing to comply with numerous standards for individual species." 64 Fed. Reg. at 31,916/3.

Conclusions

Where the periodic monitoring does not fall within one of the below categories for the basic periodic monitoring established in the majority of the permits, further explanation is provided in the emission unit specific section of this Statement of Basis (Project Summary). Each emission unit specific section in this Project Summary has a section that is identified as “Justification for Periodic Monitoring” that will give the basis for the type of periodic monitoring described in the tables. Based upon the information provided in the above discussion and analysis that is performed to evaluate periodic monitoring, the results generally fall into a set of specific categories as follows:

1. Work practice standards are generally assured through the use of periodic inspections and the frequency is established based on the emission unit size, capability to comply, historical compliance and margin of compliance.

2. Production limits are generally assured through the use of recordkeeping for the specific raw material or finished product.

3. Emission limits are generally assured by means of a couple different methodologies (the choice of methodology is based on the evaluation of the factors described above):

   a. Performance testing on a set frequency based on the factors identified above,

   b. Emission factors/engineering calculations based on specific recordkeeping requirements that are representative of the scientific units for which the emission factor/calculation is based,

   c. Surrogate monitoring such as fuel sampling or raw material testing.

4. Control requirements are generally assured through the use of establishing operating parameters to be monitored that ensure proper functioning of the control device and are representative of the operation.

The mechanism by which the data is collected is also generally established such as a specific reference method (i.e., Method 9 or Method 311) or generally accepted test procedure such as an ASTM or ANSI test method. It also generally will identify the type of monitoring such as pressure sensor, thermocouple or flow gauge. The relevant timeframe is generally established by looking to the likelihood of an exceedance, the margin of compliance and historical capability to comply with a particular standard. These timeframes generally fall into specific slots when a CEM or COM is not available and can be hourly, daily, weekly, monthly or annual. The averaging periods are generally a rolling average commensurate with the monitoring frequency and the established limit.

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