

# ***Statement of Basis***

for the DRAFT CAAPP Permit for:

**Source Name:**

**Rain CII Carbon LLC**

Statement of Basis No.: 95120092-1212

I.D. No.: 033025AAJ

Permit No.: 95120092

Date Prepared: June 12, 2013

Permitting Authority:

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

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

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## **PREFACE**

### **Reason For This Document**

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

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

### **Purpose Of This Document**

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

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

Since the last Renewal CAAPP Permit issued on September 4, 2003, the source has also been issued the following: A minor modification that was issued on May 8, 2006 that consisted of incorporating language from Construction Permit 04080044, Kiln #2 - Increase in Hourly Operating Rate and Construction Permit 04040026, Energy Recovery Boiler.

Note: Construction Permit 04040026 was never constructed and is now obsolete.

### **Limitations**

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

This document does not purport to establish policy or guidance.

## INTRODUCTION

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

The Illinois EPA has focused in on key elements of the permit that relate to the requirements of the CAAPP Program:

- Emission units:
  - Petroleum Coke Calcining Line 1
  - Petroleum Coke Calcining Line 2
  - The testing frequencies for pollutants such as PM, SO<sub>2</sub>, and VOM have been enhanced. Frequent testing for these pollutants from these units will provide data and information that can be used to determine the ongoing compliance status of these emission units in regard to the applicable emission limitations/regulations.
  - The monitoring for these units, specifically with regard to opacity, has been enhanced to ensure proper visible emission observations are being performed on these units on a daily basis. The daily Method 9 based observations for these units will provide data and information that can be used to verify the compliance status of these emission units.
- The area surrounding Rain CII Carbon LLC has the potential for environmental justice ("EJ") concerns. Therefore the Illinois EPA has taken a careful review of the monitoring in the DRAFT CAAPP permit and has provided for public input. Given the nature of the source to be a petroleum coke calcining facility, the Draft CAAPP permit's monitoring requirements can be found in Section 3.7 of this Statement of Basis and a discussion for Environmental Justice can be found in Section 3.1.

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

supplemental information that has been provided to further assist with the understanding of the background and genesis of the permit content.

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

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

## **CHAPTER I - LEGAL BASIS FOR THE PERMIT AND PERMIT CONDITIONS**

### **1.1 Legal Basis for Program**

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

### **1.2 Legal Basis for Issuance of CAAPP Permit**

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

- The applicant has submitted a complete and certified application for a permit, permit modification, or permit renewal consistent with Sections 39.5(5) and (14) of the Illinois Environmental Protection Act, as applicable, and applicable regulations (Section a. below);
- The applicant has submitted with its complete application an approvable compliance plan, including a schedule for achieving compliance, consistent with Section 39.5(5) of the Illinois Environmental Protection Act and applicable regulations (Section b. below);
- The applicant has timely paid the fees required pursuant to Section 39.5(18) of the Illinois Environmental Protection Act and applicable regulations (Section c. below); and
- The applicant has provided any additional information as requested by the Illinois EPA (Section d. below).

#### **a. Application Status**

The source submitted an application for a Renewal CAAPP Permit on December 6, 2007. The source is currently operating under an application shield resultant from a timely and complete renewal application submittal. This Draft CAAPP Permit addresses application content and necessary revisions to meet the requirements for issuance of the permit.

#### **b. Present Compliance Status**

At the time of this Draft CAAPP Permit, there is a pending State case against the source.

##### 1. State Case PCB No. 04-137

Background Information of State Case PCB No. 04-137:

The IEPA referred CII Carbon to the Attorney General's Office for this facility's alleged recalcitrance in violations pertaining to: 1) its operating permit, 2) its CAAPP permit, 3) and failure to keep the necessary records to show compliance with its CAAPP

permit. The Attorney General's Office has filed a Complaint -PCB No. 04-137, against this facility. As a result of these violations a penalty is being negotiated and Rain CII Carbon has requested appropriate changes to the CAAPP.

The initial filing of State Case PCB No. 04-137 occurred on 2/2/2004 and the basis of the complaint were the following:

- COUNT I: Air Pollution - Allegation: Respondent operated kiln #2 and the #2 cooler in such a manner so as to exceed the particulate standard in violation of Sections 201.141 and 212.321 of the Board's Air Pollution Regulations, 35 Ill. Adm. Code 201.141 and 212.321 and Section 9(a) of the Act, 415 ILCS 5/9(a)(2002).
- COUNT II: PERMIT CONDITION VIOLATIONS - Allegation: Robinson Carbon, Inc., operated its #2 kiln while its baghouse was broken down, and commencing on or before June 8, 1999, and continuing to on or after July 10, 1999, Respondent operated its #2 kiln with a large hole in the archway of the pyro-scrubber, which was in violation of Standard Condition #7, 9 and 9(a) of Respondent's Operating Permit #7511042 and Section 9(b) of the Act, 415 ILCS 5/9(a) (2002).

Further, on 1/20/2006, the Board granted People's motion for leave to file first amended complaint and accepts amended complaint, which contributed to:

- COUNT III: Complainant realleges and incorporates herein by reference paragraphs 1 through 11 of Count II as paragraphs 1 through 11 of this Count III. Allegations: Commencing in January 2003 and continuing to July 13, 2003 and October 31 through December 12, 2003, Respondent did not maintain a cooler gas diversion log sheet, in violation of Condition 7.2.10 of its CAAPP permit 95120092 and Section 39.5(6)(a) of the Act, 415 ILCS 5/39.5(6)(a) (2004) . Commencing on some date prior to and continuing to December 17, 2003, known to the Respondent, Respondent did not check the cooler baghouses and pyroscrubber vents for visible opacity emission using method 22 nor opacity observers trained in method 22; and improper forms were used to record readings, all in violation of Condition 7.2.5 of its CAAPP permit 95120092 and Section 39.5(6)(a) of the Act, 415 ILCS 5/39.5(6)(a) (2004). Commencing on some date known to the Respondent and continuing until December 18, 2003, Respondent failed to keep the required records, in violation of Condition 7.1.9 a-b., 7 .2 .9 c-d., and 7.3.9 a-c. of Respondent's CAAPP permit 95120092 and Section 39.5(6)(a) of the Act, 415 ILCS 5/39.5(6)(a) (2004). On December 18, 2003, Respondent did not have the records required in Conditions 7.1.9 a-b., 7.2.9 c-d., and 7.3.9 a-c. available, in violation of Section 5.6.6 a. of Respondent's CAAPP permit 95120092 and Section 39.5(6)(a) of the Act, 415 ILCS 5/39.5(6)(a) (2004).

- COUNT IV: Complainant realleges and incorporates paragraphs 1 through 12 of Count II as paragraphs 1 through 12 of this Count IV. Allegations: Commencing on some date before February 4, 2004, and continuing thereafter to some date known to the respondent, Respondent did not properly maintain the No. 2 dust collector exhaust fan as required by condition 9.2.2 of Respondent's CAAPP permit 95120092 and in violation of Section 39.5(6)(a) of the Act, 415 ILCS 5/39.5(6)(a) (2004). On February 8, 2004, and continuing to 1030 hours on February 10, 2004, Respondent caused or allowed the operation of Kiln #1 at a feed rate of 21 tons/hour during the failure of the #1 dust collector fan, in violation of special condition 7.2.3 g.iii. of Respondent's CAAPP permit 95120092 and Section 39.5(6)(a) of the Act, 415 ILCS 5/39.5(6)(a) (2004). On February 10, 2004, Respondent failed to submit the initial telephone notification for the incident of repairing of exhaust fan housing on #1 dust collector fan, in violation of condition 7.2.10 of Respondent's CAAPP permit 95120092 and Section 39.5(6)(a) of the Act, 415 ILCS 5/39.5(6)(a) (2004).
- COUNT V: Complainant realleges and incorporates by reference paragraphs 1 through 10 of Count II as paragraphs I through 19 of this Count V and Complainant realleges and incorporates by reference paragraphs 12, 13, 15 and 18 of Count III as paragraphs 11 through 14 of this Count V. Allegations: Commencing on some date prior to February 17, 2005 and continuing thereafter to some date known to the Respondent, Respondent failed to maintain records of total annual emissions on a calendar year basis, in violation of conditions 5.6.1 and 5.6.6 of Respondent's CAAPP permit 95120092 and in violation of Section 39.5(6)(a) of the Act, 415 ILCS 39.5(6)(a)(2004). Commencing on some date prior to February 17, 2005 and continuing thereafter to some date known to Respondent, Respondent failed to maintain records of the process weight rate (tons/hr) and the operating hours per year for the green coke receiving and storage and the crushing, screening, stocking and conveying operations in violation of conditions 7.1.9 and 5.6.6 of Respondent's CAAPP permit 95120092 and Section 39.5(6)(a) of the Act, 415 ILCS 5/39.5(6)(a) (2004). Commencing on some date prior to February 17, 2005 and continuing to some date thereafter known to Respondent, Respondent failed to maintain all of the required records in the correct format, in violation of conditions 7.2.9 and 5.6.6 of Respondent's CAAPP permit 95120092 and in violation of Section 39.5(6)(a) of the Act, 415 ILCS 5/39.5(6)(a) (2004). Commencing on some date prior to February 17, 2005 and continuing thereafter to some date known to the Respondent, Respondent failed to maintain records for the storage tank in the required format, in violation of conditions 7.4.9 and 5.6.6 of Respondent's CAAPP permit 95120092 and in violation of Section 39.5(6)(1) of the Act, 415 ILCS 5/39.5(6)(a) (2004). Commencing on some date prior to February 17, 2005 and continuing thereafter to some date known to Respondent, Respondent failed to maintain adequate

records demonstrating that all air pollution equipment covered under the CAAPP permit was properly maintained, in violation of condition 9.6.1 of Respondent's CAAPP permit 95120092 and Section 39.5(6)(a) of the Act, 415 ILCS 5/39.5(6)(a) (2004).

It is Illinois EPA's preliminary decision to wait until the enforcement case is resolved and/or adjudicated (if at all) before including any necessary compliance schedule in the permit as stipulated in any order that may result. In the meantime, Condition 2.7(c) has been included in the permit, which provides a safeguard to ensure that any permit shield or the permit itself may not be used as a defense during any enforcement proceedings and that the requirements of compliance schedule will be complied with at the appropriate time. For an explanation and rationale of this decision, see Chapter III Section 3.10, Inclusion of Compliance Schedules.

**c. Payment of Fees**

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

**d. Additional Information**

The source provided all the necessary additional application material as requested by the Illinois EPA. Specifically, for the Start-up and Malfunction/Breakdown, the following information was provided:

- Further explanation justifying the duration and the variance in durations of typical startup times. The source fully explained the need for this provision.
- Further explanation for the need for malfunction/breakdown was provided. The source provided full justification for the need for this provision.
- The source explained that there are significant differences between a "cold" start and a "warm" start of the Coke Calcining systems. Due to the unique physical characteristics of the system, specifically the kiln and pyroscrubber refractory linings, the temperature increases and decreases of the kilns and pyroscrubbers must maintain a steady gradient in general accordance with the manufacture's guidelines. Because of the high operating temperatures of the system, it can be concluded that the timeframes can significantly be altered by the initial temperature at which the system begins the startup. As well, an immediate shutdown of the system in which the kilns were to stop turning could result in the kilns bowing and eventually collapsing. Failure to follow adequate procedures for heating and cooling the system may result in failure (cracking) of the refractory linings as well as the overall premature failure of the system.

**1.3 Legal Basis for Conditions in the CAAPP Permit**

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

**a. Applicable Federal Regulations**

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

40 CFR Part 64 - Compliance Assurance Monitoring (CAM)

**b. Applicable SIP Regulations**

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

35 IAC Part 201 - Permits And General Provisions  
35 IAC Part 212 - Visible And Particulate Matter Emissions  
35 IAC Part 214 - Sulfur Limitations  
35 IAC Part 215 - Organic Material Emission Standards And Limitations  
35 IAC Part 228 - Asbestos  
35 IAC Part 244 - Episodes  
35 IAC Part 254 - Annual Emissions Report

**c. Other Applicable Requirements**

The source also has several applicable requirements that are based on SIP approved permits, which are listed and identified in Chapter II Section 2.8.

## CHAPTER II - FACTUAL BASIS FOR THE PERMIT AND PERMIT CONDITIONS

### 2.1 Source History

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

### 2.2 Description of Source

SIC Code: 2999  
County: Crawford

The source produces calcined coke from green petroleum coke.

The source contains the following processes:

<i>Emission Units</i>	<i>Description</i>
Green Coke Screening	The coke passes the green coke screening operation when it is unloaded and prior to entering the green coke crusher.
Green Coke Crushing	Green coke crushing uses a single roller crusher to reduce the size of the oversized coke, or the coke that is larger than 4 inches. The crusher is used to prepare the oversized coke for the kilns.
Green Coke Stacking	Green coke stacking uses an enclosed conveyor to transport excess properly sized coke to storage piles, where the stockpiled green coke is eventually reclaimed and conveyed to the green coke storage bins. The conveyor essentially "stacks" or piles the green coke.
Green Coke Conveying	Green coke conveying uses an enclosed conveyor to transport the green coke from the green coke crusher or the stockpiles to the green coke feed bins.
Green Coke Feed Bins	The green coke feed bins are the final storage place for green coke that is prepared and ready to enter the kilns.
Calcined Coke Conveying	Calcined coke exits one of the rotary coolers and is transferred using an oscillating covered conveyor to an elevator. The elevators take the calcined coke that was conveyed from the rotary cooler, and they load it into one of four overhead calcined coke storage bins.
Calcined Coke Storage Bins	There are four overhead calcined coke storage bins at the source. Two of the bins use bin vent filters to reduce PM emissions. All of the bins use good operating practices to minimize emissions. The overhead storage bins hold the finished product to eventually be unloaded.
Calcined Coke Railcar Load-out	The calcined coke leaves the overhead calcined coke storage bins via load-out spouts. The finished product is loaded into railcars for distribution to commercial markets. The calcined coke railcar load-out uses a heavy naphthlenic petroleum distillate, referred to as dedust oil, to control the PM emissions during railcar loading.
Petroleum Coke Calcining Line 1 and Petroleum Coke Calcining Line 2	Petroleum Coke Calcining Lines 1 and 2 each consist of a rotary kiln, a pyroscrubber, a rotary cooler, and a baghouse. The kiln for each line can process 28 T/hr of green coke feed. The calcining process reduces VOM and moisture content of the green petroleum coke and chemically reforms the carbon content of the material to produce a final product, referred to as calcined coke. Calcined coke is a high-purity carbon compound used primarily by the aluminum and steel industries. Natural gas is used during startup of the kilns to reach optimum

	operating temperature (about 2,400°F) and simultaneously during operation to maintain the optimum operation temperature. The combustion of VOM from the green coke feed and the consumption of green coke provide the primary source of heat for the calcining process. The heating process consumes approximately 20% of the green coke feed, with the remaining material forming the final product, calcined coke.
Fugitive Dust	Emissions caused by moving vehicles that creates particulate matter (road dust) emissions on paved and unpaved roadways. Particulate Matter is also emitted from loading/unloading operations and storage piles at the source. Emissions of fugitive dust from storage piles at the facility are controlled by the quality and moisture content of materials as received and application of dust suppressants if needed to prevent emissions.
Gasoline Storage Tank	The gasoline storage tank is a 250 gallon tank used to store gasoline for onsite vehicle fueling at the source.
Dedust Oil Storage Tank	The dedust oil storage tank is a 15,000 gallon tank used to store a desust oil used at the source to limit PM emissions associated with the calcined coke load-out operation.

### **2.3 Single Source Status**

At the time of issuance of this permit, this source does not have any collocated facilities that would be considered a single source with this facility based on information found in the certified application.

Additionally, this single source status determination for this facility is also aided by a decision that was reached by the Agency on July 12, 2004. On May 5, 2004 the Agency sent a request for additional information to the source, which among other things requested the following details, "Explain why the existing CII Carbon facility [...] should not be considered a single source with the Marathon Ashland Petroleum Refinery, in Robinson. [...]. Include copies of relevant contracts between Marathon Ashland Petroleum and CII Carbon with respect to [...] operations to address whether the facilities should be considered separate sources." Once receiving the requested information, the Agency made a determination contained within Construction Permit 04040026 Condition 9 that stated that Construction Permit 04040026 was issued based on the following, "the Permittee continuing to be a separate source from the adjacent Marathon Ashland Petroleum Refinery". It is apparent that a detailed single source determination was made for the source at this time, and it was not deemed as a single source with the given facility. Since the time that this determination was made, Rain CII has not implemented any construction or modifications to the facility that would have alter the single source status of the facility.

### **2.4 Ambient Air Quality Status for the Area**

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

## 2.5 Source Status

### Major Source Pollutants

The source requires a CAAPP permit because this source is considered major (based on its PTE) for the following regulated pollutants: PM<sub>10</sub>, PM<sub>2.5</sub>, nitrogen oxides (NO<sub>x</sub>), volatile organic material (VOM), sulfur dioxide (SO<sub>2</sub>), hazardous air pollutant (HAP), and green house gas (GHG).

### Natural Minor Source Pollutants

This source is considered a natural minor for the following regulated pollutants: carbon monoxide (CO).

### Greenhouse Gases (GHG)

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<sub>2</sub>e). Rain CII Carbon LLC submitted data in its application for which the Illinois EPA estimated the PTE of GHG emissions. The estimated emissions exceeded the threshold for a major source of GHG emissions.

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. (See Chapter III, Section 3.12)

## 2.6 Annual Emissions

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

<i>Pollutant</i>	<i>2012</i>	<i>2011</i>	<i>2010</i>	<i>2009</i>	<i>2008</i>
CO	5.90	6.42	6.50	6.17	6.48
NO <sub>x</sub>	335.69	365.01	369.55	351.11	368.61
PM	162.08	169.68	172.62	164.64	174.67
SO <sub>2</sub>	5,027.96	5,467.09	5,535.13	5,258.99	5,520.97
VOM	1.03	1.12	1.17	1.11	1.18
CO <sub>2E</sub>	-	-	-	-	-
HAP	-	-	-	-	-

## 2.7 Fee Schedule

An annual fee schedule (tons) is not set for this source for the purpose of permit fees as the source is paying the maximum fee at the time of issuance of the permit.

## 2.8 SIP Permit Facts (T1 Limits)

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

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

- Previously Incorporated Construction Permits:

<i>Permit No.</i>	<i>Date Issued</i>	<i>Subject</i>
04080044	10-14-2004	Kiln #2
00110038	6-27-2001	Pyroscrubber No. 2
96050103	1-22-1997	#1 Baghouse Control for Coolers

Note for Condition 4.2.2(e)(i)(B): The limitation established by this Condition for Kiln #2 was established in Permit 04080044, pursuant to 35 IAC Part 203. These limits ensured that the construction and/or modification addressed in the aforementioned permit does not constitute a new major source or major modification pursuant to Title I of the CAA, specifically 35 IAC Part 203. In addition, This condition was revised from the original from State Permit 75110042 for Kiln #2. Specifically, the maximum green coke feed rate for Kiln # 2 was increased in Permit 04080044.

- Newly Issued Construction Permits:

<i>Permit No.</i>	<i>Date Issued</i>	<i>Subject</i>
08040046	7-15-2008	Increase Quench Water Use for Cooler #1 and #2

- There are no newly issued Construction Permits for projects not yet constructed for this source.
- The Illinois EPA has not established any T1R or T1N Limits in this Draft CAAPP permit.

- Extraneous or Obsolete T1 Conditions:<sup>3</sup>

*Construction  
Permit No.*

*Condition Number*

*Subject*

<i>Construction Permit No.</i>	<i>Condition Number</i>	<i>Subject</i>
10010030	-	Heat Recovery Steam Generators - NOT CONSTRUCTED
04040026	-	Energy Recovery Boiler - NOT CONSTRUCTED

## **CHAPTER III - SUPPLEMENTAL DISCUSSIONS REGARDING THE PERMIT**

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

### **3.1 Environmental Justice Discussions**

While the Illinois EPA is sensitive to the location of this facility in a potential EJ community, Title V does not provide for substantive emission control requirements beyond those arising under currently applicable regulations. Thus, when issuing a CAAPP Permit for this facility, the Illinois EPA does not have the authority to impose additional emission control requirements to reduce emissions beyond the levels provided for by applicable state and federal regulations. At the same time, CAAPP Permits do not allow for additional emissions.

Having a facility subject to a CAAPP Permit provides benefits for air quality, the public and the environment generally. CAAPP Permits require more reporting on a facility's compliance status than is required by underlying state operating permits. For example, the requirements for semi-annual reports for all monitoring and annual compliance certifications only become applicable upon the effectiveness of a CAAPP Permit. In addition, CAAPP Permits generally provide clarity and awareness of applicable regulations and the mechanisms by which sources must comply with these regulations. CAAPP Permits add to the compliance checks put on facilities. Where a facility has outstanding compliance deficiencies, CAAPP Permits may establish compliance schedules and other additional conditions for monitoring and reporting.

With this Statement of Basis, the Illinois EPA has made very clear the applicable emission limitations, standards, and other enforceable terms and conditions, as well as attendant monitoring, reporting, recordkeeping, and certifications to assure compliance. The Illinois EPA has provided an explanation of same, as well as a justification for why the conditions that assure compliance are appropriate. The level of detail in the Statement of Basis is atypically involved and is in recognition of the public interest in the permitting of this complex facility in a potential EJ community. The Statement of Basis has been provided to the USEPA for its review. The extremely detailed explanation of the requirements, particularly Periodic Monitoring, applicable to this source is intended to further meaningful public participation.

### **3.2 Emission Testing Results**

The source has performed the following emission testing:

<i>Emission Unit</i>	<i>Date</i>	<i>Pollutant</i>	<i>Results of Run #1</i>	<i>Results of Run #2</i>	<i>Results of Run #3</i>	<i>Average of All Runs</i>	<i>Compliance Margin %</i>
Coke Kiln 2	4/13/2004	PM	21.0 lb/hr	8.3 lb/hr	14.3 lb/hr	14.0 lb/hr	4 %
Coke Kiln 2	8/20/2002	PM	7.69 lb/hr	3.39 lb/hr	3.32 lb/hr	4.80 lb/hr	67 %
Coke Kiln 2	8/20/2002	Opacity	0 %	0 %	0 %	0 %	100 %
Coke Kiln 2	5/29/2002	PM	4.66 lb/hr	5.09 lb/hr	-	4.88 lb/hr	66 %
Coke Kiln	5/29/2002	SO <sub>2</sub>	1,178 ppm	1,335 ppm	-	1,256 ppm	37 %

2							
Coke Kiln 1	9/24 - 9/26/1996	PM	13.6 lb/hr	16.0 lb/hr	11.7 lb/hr	13.5 lb/hr	7 %
Coke Kiln 1	9/24 - 9/26/1996	SO <sub>2</sub>	1,889 ppm	1,244 ppm	1,224 ppm	1,404 ppm	30 %
Rotary Cooler 1	9/24 - 9/26/1996	PM	2.6 lb/hr	1.9 lb/hr	1.1 lb/hr	1.8 lb/hr	88 %
The Testing Below was Provided to the Agency on June 13, 2013 via E-Mail:							
Kiln 1 (K1)	9/25/1996	PM				16.1 lb/hr	-
		SO <sub>2</sub>				907 ppm	-
Kiln 2 (K2)	5/12/1998	PM				29.9 lb/hr	-
		SO <sub>2</sub>				771 ppm	-
Kiln 2 (K2)	10/7/1999	PM				18.8 lb/hr	-
		SO <sub>2</sub>				2097 ppm	-

Upon review of the testing results, periodic monitoring has been supplemented for the following reasons:

- The PM emission tests for kilns 1 & 2 were shown to have a small compliance margin for the Process Weight Rate (PWR), 35 IAC 212.322, via the testing performed on 4/13/2004 for kiln 2 and on 9/24 - 9/26/1996 for kiln 1. Because of the relatively small margin of compliance, PM testing for the kilns has been added in Condition 4.2.2(b)(ii)(C) of the Permit. This testing requirement will further demonstrate the sources ability to comply with the PWR requirement on an ongoing basis.
- The SO<sub>2</sub> emission tests for kilns 1 & 2 have been added to ensure ongoing compliance with the 2000 ppm standards set forth by 35 IAC 214.301. The historic emission testing shows that substantial deviations in the sulfur concentration in the exhaust stream can occur. One reading that was recorded during the testing showed a concentration of as high as 1889 ppm SO<sub>2</sub> concentration for kiln 1. This testing will allow for a direct measurement of the SO<sub>2</sub> emissions to determine to compliance status of the source on an ongoing basis.
- VOM emission testing has been added for the pyroscrubbers. The applicable standard (35 IAC 215.302) requires at least an 85% destruction efficiency of VOM emissions. This testing is provided to ensure that this minimum destruction efficiency is achieved on an ongoing basis.
- The testing provided on June 13, 2013 via e-mail was provided by the source in an attempt to justify on-going compliance during the venting of coolers to the pyroscrubbers and to demonstrate that an emission(s) increase would not result from operation outside of what is considered "normal". From this testing and information provided in the application the following permit decision and conclusions were made by the Agency:

The Agency has made a decision regarding the Malfunction/Breakdown and Operational Flexibility for the source. It is clear that "normal" operation with "normal" control (assuming everything is happening as routinely occurs at the source) occurs when each individual kiln is vented to its own respective pyroscrubber and each individual cooler is vented to its own respective baghouse.

Operational Flexibility for operation outside this "normal mode" of operation may be provided via operational flexibility, but only if the source has absolutely ascertained that no emission violation would occur as a result of another "mode" of operational control. After consideration, we believe that the only other "mode" of operational control in which the source has and can adequately

demonstrate to the Agency that this can be assured is as follows (see Condition 4.2.4(b)(i)(A) of the Permit):

"If only one kiln is operating, and the cooler baghouse for the other kiln is in working condition, the cooler vent may be rerouted to the other baghouse (e.g., cooler 1 emissions may be vented to the baghouse for cooler 2 emissions provided that Petroleum Coke Calcining Unit 2 is not in operation at such time, and vice versa)."

Since the baghouses typically can control their own respective cooler, which has the same flowrate as the alternate cooler. It can be determined that if one cooler is non-operational and its' baghouse is needed for control of the other cooler adequate control of PM emissions could be maintained by controlling Cooler 1/2 with Baghouse 2/1. Provided that either baghouse would only receive emissions from only one cooler at a time. As noted in the application ("neither baghouse was designed to handle flue gases from both rotary coolers concurrently").

Further, the venting of the coolers through the pyroscrubbers would greatly reduce the destruction efficiency that can be achieved by the control device. Therefore, operational control in this manner will only be permitted and shall only occur as a means to minimize overall emissions as a result of a Malfunction/Breakdown, as provided by the Malfunction/Breakdown Section (Sect. 7.4) of the Permit. Also, the testing that was provided to the Agency to demonstrate compliance during this "mode" of operational control (both kiln and cooler to pyroscrubber) only provides data for up to 21 T/hr of operational rate. The source is permitted to operate to up to 28 T/hr. It is shown by the data that the concentration of PM emissions in the exhaust greatly increase as the operational rate increase in this "mode" (e.g., K2 at 20 T/hr results in PM concentration of only 0.0575 gr/dscf and/or 18.77 lb/hr and K2 at 21 T/hr results in PM emissions of 0.079 gr/dscf and/or 29.95 T/hr). It can only be assumed, but operation at 28 T/hr in these "other" modes may result in emissions that could exceed the Process Weight Rate standard.

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

Upon review of the compliance reports, periodic monitoring has been supplemented for the following reasons:

- The monitoring associated with opacity from the kilns and rotary coolers has been supplemented after reviewing the compliance reports from the facility. Past history shows that the source continuously failed to meet the opacity monitoring requirements under the CAAPP and other former operating permits. The source previously was required to perform twice daily Method 22 observations for this equipment. Upon the issuance of this renewal CAAPP, the source will now be required to perform Method 9 type readings once per operating day for the kilns and coolers.

### **3.4 Field Inspection Results**

Upon review of the field inspection report dated 11/10/2009, periodic monitoring has been supplemented for the following reasons:

- In conclusion of the inspection, it is noted that violations were noted. The violations noted in the inspection report were:
  - Section 39.5(6)(a) of the Act and Condition 7.2.5(a) of the CAAPP permit 95120092, issued on September 4, 2003: RAIN CII Carbon LLC failed to conduct the twice daily visible emissions readings on 14 various dates during 2009. (See Chapter I, Section 1.2(b) as well).

### **3.5 Historical Non-Compliance**

Upon review of the source's historical compliance, periodic monitoring has been supplemented for the following reasons:

- The source currently operates with VN's still pending resolution; these VN's have been referred to and are currently being processed by the Attorney General's Office (AGO), which are part of the pending State Case PCB No. 04-137, addressed in Section 1.2(b) of this Statement of Basis. These pending VN's are as follows:
  - VN# A-2012-00057: Alleged violation(s) included the following: Source failed to submit AER for 2011, failed to report deviations from CAAPP permit, failed to conduct Method 22 visible emission opacity readings twice per day on 10/23/10, 02/04/11 and 03/02-05/12, and failed to submit accurate ACC for 2010 and 2011
  - VN# A-2009-00187: Alleged violation(s) included the following: Source failed to properly perform USEPA method 22 visible emissions readings, failed to observe visible emissions for minimum if 6 minutes and maintain record of visual observations that contains all required information.
  - VN# A-2008-00086: Alleged violation(s) included the following: Source failed to notify IEPA of deviations, failed to maintain records of the baghouse trips, failed to minimize emissions during temporary shutdown of kiln, failed to keep records of twice daily visible emissions readings that contain information required by Method 22, and exceeded process weight rate limits for cooler #1 and #2.
  - VN# A-2005-00107: Alleged violation(s) included the following: Source failed to maintain records of the total annual emissions, failed to maintain records of the process weight rate and the operating hours per year, failed to maintain all of the records required and in the correct format, failed to maintain records for the storage tank in the format required, and failed to maintain adequate records demonstrating that all air pollution equipment covered under the CAAPP is properly maintained.

- o VN# A-2004-00110: Alleged violation(s) included the following:  
Source did not properly maintain #2 dust collector exhaust fan, failed to submit initial telephone notice of 2/10/04 incident, and kiln #1 operated at feed rate of 21 tons/hr during failure of #1 dust collector fan.
- o VN# A-2004-00093: Alleged violation(s) included the following:  
Source did not keep required records, did not maintain cooler gas diversion log sheet, and did not check cooler baghouses and vents for visible emission opacity twice per day
- o VN# A-1999-00491: Alleged violation(S) included the following:  
#2 kiln and #2 cooler operated in violation of particulate emission limit per testing results.
- o VN# A-1999-00298: Alleged violation(s) against source.
- o VN# A-1998-00230: Alleged violation(s) included the following:  
Source exceeded particulate standard during stack test, exceeded SO2 concentration standards, and failed to route emissions from #2 baghouse to #1 baghouse.

The permit and the monitoring within the permit have been enhanced as a result of the VN's, as listed above. Such enhancements include the replacement of twice daily Method 22 observations with once daily Method 9 measurements. Also, the allowable "operational flexibility" (Condition 4.2.4(b)) and the malfunction/breakdown provisions have been addressed in the manner provided by the permit as a result of the listed VN's (above).

### **3.6 Source Wide Justifications and Rationale**

<b>Applicable Requirements Summary</b>		
<b>Applicable Requirement</b>	<b>Type</b>	<b>Location</b>
Fugitive Particulate Matter (35 IAC 212.301 and 35 IAC 212.314)	Applicable Standard	See the Permit, Condition 3.1(a)

#### **Particulate Matter Emission**

- ✓ Monitoring as follows (Condition 3.1(a))
  - o Daily visible observations shall be performed for a week at least annually, or at such time as requested by the IEPA.
- ✓ Recordkeeping as follows (Condition 3.1(a)):
  - o Records of these observations.
- ✓ Reporting as follows (Condition 3.5(a)(i)):
  - o Report to IEPA any deviation within 30 days.

#### **Rationale and Justification for Periodic Monitoring**

Periodic Monitoring is sufficient for the source because:

- Emissions do not vary significantly under normal operation and/or vary slowly with time.
- Source has not exhibited a history of non-compliance with respect to the applicable standard.

#### **Non-Applicability Discussion**

Complex source-wide non-applicability determinations were not made for this source.

**Prompt Reporting Discussion**

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

**3.7 Emission Unit Justifications and Rationale**

<b>1. Material Handling and Process Operations</b>		
<b>Applicable Requirements Summary</b>		
Applicable Requirement	Type	Location
Opacity Requirement (35 IAC 212.123)	Applicable Standard	See the Permit, Condition 4.1.2(a)(i)(A)
PM Requirement (35 IAC 212.322)	Applicable Standard	See the Permit, Condition 4.1.2(b)(i)(A)
Work Practice Requirement	Applicable Work Practice	See the Permit, Condition 4.1.2(c)(i)(A)

**Visible Emissions (i.e., Opacity)**

- ✓ Monitoring as follows (Condition 4.1.2(a)(ii)(A) & (B)):
  - o Monthly visible emission observations by using Method 22 for the Green Coke Screening, Green Coke Crushing, Green Coke Stacking, Green Coke Conveying, Green Coke Feed Bins, Calcined Coke Conveying, Calcined Coke Storage Bins 3 & 4, and Calcined Coke Railcar Load-out.
  - o Weekly visible emission observations by using Method 22 for Calcined Coke Storage Bins 1 & 2
  - o If required, Method 9 measurements
  
- ✓ Recordkeeping as follows (Condition 4.1.2(a)(ii)(C) & (D)):
  - o Records for each Method 22 observation
  - o If required, records for each Method 9 measurement
  
- ✓ Reporting as follows (Condition 4.1.5(a)):
  - o Prompt reporting of deviations within 30 days to the IEPA.

**Rationale and Justification for Periodic Monitoring**

Periodic Monitoring is sufficient for these emission units because:

- Emissions do not vary significantly under normal operation and/or vary slowly with time.
- Source has not exhibited a history of non-compliance with the opacity standard for this equipment.
- Monitoring is consistent with other sources in this source category.
- As specified in the permit, observations for the presence of visible emissions once per month, followed by Method 9 measurements if visible emissions are present, is sufficient to demonstrate compliance with the applicable opacity standard. It should be noted that the frequency for the Calcined Coke Storage Bins 1 & 2 will occur on a weekly basis instead of monthly. This is because Bins 1 & 2, due to unique operation (during normal operation these Bins are in continuous operation), may only be inspected during major turnarounds (at least once every 2 years) compared to the other equipment, which may be inspected more frequently (See Section 4.1.2(b) of the Permit, which differentiates between physical inspection frequencies of this equipment).

- It should also be noted that monthly inspections of the equipment which does not have physical control measures are required under Work Practices to ensure that this equipment is working properly, therefore minimizing overall emissions associated with this equipment. These inspections help to demonstrate compliance with the opacity standards for the equipment by ensuring that the equipment is properly maintained/repaired if such maintenance/repair is needed at the time of inspections.
- For the equipment with physical control measures, the fact that such measures are in place will help to minimize the visible emissions from the equipment (e.g., typically visible emissions will not be observed from an enclosed emission unit).
- Also, the relatively high and consistent moisture content of the green coke prior to entering the kiln will also help to minimize any opacity from the equipment handling the green coke by minimizing the dust (PM) concentrations leaving the equipment associated with the green coke.

#### Particulate Matter Emission

- ✓ Monitoring as follows (Condition 4.1.2(a)(ii)(A) & (B))
  - o Monthly external inspections of the control measures (i.e., enclosures, conveyors, bin vent filters, and dedust oil operation) to verifying that these control measures are in place and being properly implemented.
  - o Internal inspection of bins 1 & 2 to inspect the bin vent conditions at the time of major turnarounds, but at least once every two years.
- ✓ Recordkeeping as follows (Condition 4.1.2(a)(ii)(C - E)):
  - o Records of the hours of operation for each emission unit, hr/mo and hr/yr.
  - o Records of the emissions of PM from each emission unit, lb/hr and ton/yr (12 month rolling average), with supporting calculations and the documentation used to calculate PM emissions.
  - o Records of the condition of each filter that is in place.
  - o Records of whether a filter was replaced at time of inspection, or rationale explaining why the filter did not need to be replaced at the time of an inspection.
  - o Records demonstrating the usage of Dedust oil used.
- ✓ Reporting as follows (Condition 4.1.5(a)):
  - o Prompt reporting of deviations within 30 days to the IEPA.

#### Rationale and Justification for Periodic Monitoring

Periodic Monitoring is sufficient for these emission units because:

- Emissions do not vary significantly under normal operation and/or vary slowly with time.
- Source has not exhibited a history of non-compliance.
- Monitoring is consistent with other sources in this source category.
- The control measures associated with the equipment as well as the moisture content of the green coke prior to entering the kilns will minimize PM emissions from these emission units. Enclosures and bin vent filters will ensure that excessive PM emissions are not allowed to escape from the associated equipment. A dedust oil spray is also used to minimize the PM emission from the calcined coke operations.
- Records for the amount of Dedust oil used will assure that the proper dust suppression techniques are being implemented on the Calcined Coke Railcar Load-out system in order to minimize PM emissions.

- Inspections of physical control measures associated with green coke stacking, green coke conveying, calcined coke conveying, and the calcined coke railcar load-out at least monthly will verify that the proper control measures are being implemented on this equipment. As long as measures, such as enclosures, are in place PM emissions will be reduced because the PM will not be likely to escape the enclosure system.
- Inspections of physical control measures associated with Calcined Coke Storage Bins 1 & 2 at least every two years will verify that the proper control measures are being implemented on this equipment and are in proper working order. In general these bins vent filters maintain integrity for at least three years. However, to ensure that these bin vent filters continue to operate as intended, the Permittee will inspect and/or replace these measures on a frequency that is more often than what may actually be needed.
- The records that are required (i.e., the hours of operation for each emission unit (hr/mo and hr/yr) and the emissions of PM from each emission unit (T/mo and T/yr) are sufficient to demonstrate compliance with the process weight rate (PWR) standards for the equipment. The emissions do not vary significantly from the emission units. Therefore the emission limit of lb/hr can be determined from the monthly records of the hours of operation and the emissions of PM.

**Non-Applicability Discussion**

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

**Prompt Reporting Discussion**

Prompt reporting of deviations has been established as 30 days. See rationale in Chapter III Section 3.9.

<b>2. Petroleum Coke Calcining Operations (Kilns and Coolers)</b>		
<b>Applicable Requirements Summary</b>		
Applicable Requirement	Type	Location
Opacity Requirement (35 IAC 212.123)	Applicable Standard	See the Permit, Condition 4.2.2(a)(i)(A)
PM Requirement (35 IAC 212.322)	Applicable Standard	See the Permit, Condition 4.2.2(b)(i)(A)
SO <sub>2</sub> Requirement (35 IAC 214.301)	Applicable Standard	See the Permit, Condition 4.2.2(c)(i)(A)
VOM Requirement (35 IAC 215.302)	Applicable Standard	See the Permit, Condition 4.2.2(d)(i)(A)
Operational and Production Requirement	Applicable Fuel Limitation	See the Permit, Condition 4.2.2(e)(i)(A)
Operational and Production Requirement	Applicable Limit	See the Permit, Condition 4.2.2(e)(i)(B)
Operational and Production Requirement	Applicable Limit	See the Permit, Condition 4.2.2(e)(i)(C)
Work Practice Requirement	Applicable Work Practice	See the Permit, Condition 4.2.2(f)(i)(A)

**Visible Emissions (i.e., Opacity)**

- ✓ Monitoring as follows (Condition 4.2.2(a)(ii)(A)):
  - o Method 9 like measurements made once per operating day. If weather conditions allow for such observations to occur.
- ✓ Recordkeeping as follows (Condition 4.2.2(a)(ii)(B)):

- o Records for each Method 9 like measurement, which shall specifically note any days the Method 9 did not occur and the reason why (e.g., weather was inadequate per Method 9, etc.)
- ✓ Reporting as follows (Condition 4.2.5(a)):
  - o Prompt reporting of deviations within 30 days to the IEPA.

Rationale and Justification for Periodic Monitoring

Periodic Monitoring is sufficient for these emission units because:

- Emissions do not vary significantly under normal operation and/or vary slowly with time.
- Monitoring is consistent with other sources in this source category.
- Measurements of opacity once per operating day are sufficient to demonstrate compliance with the applicable opacity standard. The kilns and coolers generally run at or near the same operating parameters except during times of startups and malfunction-breakdowns, which are separately covered in the permit. The nearly identical feed at all times to these units, and the fact that these emission units are started and shutdown infrequently (i.e., continuously running) contributes to visible emissions being relatively consistent at all times of operation. The measurements that are made once per day during operation shall be representative of all times of normal operation. Therefore continuous compliance will be assured.
- From testing that was performed on Kiln 2 on 8/20/2002, it can be determined that there is a significant margin of compliance with the opacity standard for Kiln 2.
- The source has requested a daily Method 9 approach, instead of Method 22's, to demonstrate compliance with the applicable opacity standard.

Particulate Matter Emission

Compliance with applicable PM standards, for the kilns and coolers, is demonstrated by the CAM Plan for the source. (Conditions 4.2.2(b)(ii)(A & B))

Furthermore, for the kilns with associated pyroscrubbers, PM testing is being required to demonstrate compliance with 35 IAC 212.322(a). (Condition 4.2.2(b)(ii)(C))

Rationale and Justification for Periodic Monitoring

Periodic Monitoring is sufficient for these emission units because:

- Presumed as the source is subject to CAM. The CAM Plan for the pyroscrubbers requires a minimum temperature of the pyroscrubber(s) to be maintained to ensure adequate control of the PM emissions from the kilns. The PM is "destroyed" by the extremely high temperatures of the pyroscrubber(s). The CAM Plan for the baghouses, which control the PM emissions from the coolers, requires the pressure drop across the baghouse(s) to be monitored. Pressure drop is a valid and widely used indicator for baghouses to ensure that they are in proper operation and therefore adequately controlling PM emissions that could otherwise be emitted.
- Historic emission testing by the source demonstrates the sources ability to comply with the applicable standards, as shown in Section 3.2 of this Statement of Basis (above).

Sulfur Emissions

- ✓ Monitoring as follows (Condition 4.2.2(c)(ii)(A)):

- o Determination of the maximum sulfur content (%) of the green coke fed into the kilns on a weekly basis.
- ✓ Testing as follows (Condition 4.2.2(c)(ii)(B)):
  - o Testing of the SO<sub>2</sub> emissions from the kilns within one year of the effective date of the Condition with ongoing compliance further demonstrated by testing at least once every two years.
- ✓ Recordkeeping as follows (Condition 4.2.2(c)(ii)(C-E)):
  - o Records of the sulfur content of the feed.
  - o Records of the amount of feed received and the supplier.
  - o Further, records that are required by operational and production requirements for both coke and natural gas.
- ✓ Reporting as follows (Condition 4.2.5(a)):
  - o Prompt reporting of deviations within 30 days to the IEPA.

Rationale and Justification for Periodic Monitoring

Periodic Monitoring is sufficient for these emission units because:

- Emissions do not vary significantly under normal operation and/or vary slowly with time.
- Monitoring is consistent with other sources in this source category.
- Testing required shall physically demonstrate initial and ongoing compliance with the applicable SO<sub>2</sub> standard for the kilns.
- Testing for Kiln 2 performed on 5/29/2002 shows a margin (37 % margin) of compliance with the applicable SO<sub>2</sub> standard for Kiln 2.
- Testing for Kiln 1 performed on 9/24-26/1996 shows a margin (30 % margin) of compliance with the applicable SO<sub>2</sub> standard for Kiln 1.
- In addition to the testing, the sulfur content (%) of the feed (i.e., green coke) will be determined on a weekly basis. The general ability to associate/correlate the sulfur content of the fuel (i.e., green coke) to the emissions of SO<sub>2</sub> can be made. Analysis of the sulfur content can be used as a conservative indicator of compliance with the SO<sub>2</sub> standard because it provides a maximum measure of how much sulfur the feed contains that could technically be combusted and turned into SO<sub>2</sub> emissions.

Organic Material Emission

Compliance with applicable VOM standards is demonstrated by the CAM Plan for the source. (Condition 4.2.2(d)(ii)(A))

Furthermore, for the kilns with associated pyroscrubbers, VOM testing is being required to demonstrate compliance with Condition 4.2.2(d)(i)(A). (Condition 4.2.2(d)(ii)(B))

Rationale and Justification for Periodic Monitoring

Periodic Monitoring is sufficient for these emission units because:

- Presumed as the source is subject to CAM. Presumed as the source is subject to CAM. The CAM Plan requires a minimum temperature of the pyroscrubber(s) to be maintained to ensure adequate control of the VOM emissions from these units. The VOM is "destroyed" or burned off by the extremely high temperatures of the pyroscrubber(s) resulting in lower VOM emissions vented to the atmosphere.
- It should be noted during all normal operating scenarios (e.g., emissions during a malfunction-breakdown scenario may not be) VOM emissions from the

kilns are directed to the pyroscrubbers. The source will comply with VOM standards by meeting 85% reduction of VOM (35 IAC 215.302). VOM emissions from the source are related to the firing of coke and natural gas within the kilns. When operating the kilns, the CAM Plan for VOM emissions from the kilns will apply. Via the CAM Plan, the temperature of the pyroscrubber(s) will be monitored using thermocouples to ensure the minimum operating temperature is maintained within the pyroscrubber(s), which in turn will allow ongoing compliance with the applicable standard to be demonstrated. Furthermore, testing of VOM destruction efficiencies once every 5 years will provide verification that the required destruction efficiencies are being met and actual destruction efficiency that the control system is achieving.

#### Operational and Production Requirements

- ✓ Recordkeeping as follows (Condition 4.2.2(e)(ii)(A-C)):
  - o Records of the type(s) of fuel used.
  - o Records of hours of operations of equipment.
  - o Records of the throughput of green coke and the green coke feed rate to each kiln.
  
- ✓ Reporting as follows (Condition 4.2.5(a)):
  - o Prompt reporting of deviations within 30 days to the IEPA.

#### Rationale and Justification for Periodic Monitoring

Periodic Monitoring is sufficient for these emission units because:

- Monitoring is consistent with other sources in this source category.
- The records required are sufficient to demonstrate compliance the the applicable limits and conditions in the "Operational and Production Requirements".

#### Work Practice Requirements

- ✓ Monitoring as follows (Condition 4.2.2(f)(ii)(A & B)):
  - o Weekly external inspections of the equipment to ensure proper working conditions are maintained.
  - o Internal inspections of the equipment at least once every two years to ensure that the equipment is in proper condition to minimize emissions. Except for the baghouses, which will be inspected internally once per year.
  
- ✓ Recordkeeping as follows (Condition 4.2.2(f)(ii)(C)):
  - o Detailed records of the inspections.
  
- ✓ Reporting as follows (Condition 4.2.5(a)):
  - o Prompt reporting of deviations within 30 days to the IEPA.

#### Rationale and Justification for Periodic Monitoring

Periodic Monitoring is sufficient for these emission units because:

- Monitoring is consistent with other sources in this source category.
- Internal inspections of the equipment, besides the baghouses, at least once every two years to ensure that the equipment is in proper condition to minimize emissions. The frequency of these internal inspections has been set at two years. The reason for this "extended" frequency is the equipment to be inspected generally operates continuously, and at extremely high temperatures, due to this, internal inspections during operation are not possible. Shutting down the equipment for more frequent inspection purposes is impracticable, and it would actually result in an increase in emissions. This is because the control efficiency of the pyroscrubbers is directly a

result of the temperature at which they operate (generally, higher temperatures mean better destruction efficiency). If shutdowns and "cold" startups occur more often than necessary, the pyroscrubbers may not continuously maintain adequate destruction efficiencies, which therefore would result in greater overall emissions. Historically, the source has completed "major turnarounds" on the systems at least once every two years to complete any scheduled maintenance that is needed on the calcining system. Therefore, since this "full" shutdown will occur at such time, during this planned shutdown the source will now have to inspect and make a record of the findings of these inspections every two years to ensure that the equipment is operating in manner consistent with good air pollution control practices for minimizing emissions.

- Internal inspections of the baghouses at least once every year to ensure that the equipment is in proper condition to minimize emissions. The frequency of these internal inspections has been set at one year. The reason for this "extended" frequency is the equipment to be inspected generally operates continuously, and at extremely high temperatures, due to this, internal inspections during operation are not possible. Shutting down the equipment for more frequent inspection purposes is impracticable, and it would actually result in an increase in emissions (as described above). Historically, the source has completed shutdown the baghouses at least once per year (while one baghouse is shutdown, emissions that are generally vented to that baghouse are controlled as described by Condition 4.2.4(b) of the Permit) to inspect the integrity of the bag filters contained inside the baghouse(s). This inspection will ensure that the baghouse is operating in manner consistent with good air pollution control practices for minimizing emissions by ensuring that the control device stays in proper working order. Note that the source also must perform observations of visible emissions on these units weekly. These inspections will further ensure that the baghouses are functioning properly.

#### **Non-Applicability Discussion**

Complex non-applicability determinations were made for these emission units (i.e., Kilns 1 & 2), as follows, it has been determined that the Kilns are not subject to the requirements of 40 CFR Part 63 Subpart DDDDD (NESHAP 5D). An explanation of the non-applicability determination is explained below:

Rain CII Carbon LLC - Robinson Calcining Plant is not subject to Subpart DDDDD as they operate kilns and not boilers or process heaters, as defined within NESHAP 5D.

In the kilns, the combustion gases come into direct contact with the process materials. Additionally, the kilns do not have the primary purpose of recovering thermal energy in the form of steam or hot water or of transferring heat indirectly to a process material or to a heat transfer material. Therefore, the kilns are not industrial, commercial, or institutional boilers or process heaters as defined in § 63.7575.

Thus, the source would not be subject to NESHAP 5D; see 40 CFR 63.7485 for the following explanation:

*You are subject to this subpart if you own or operate an industrial, commercial, or institutional boiler or process heater as defined in 40 CFR 63.7575 that is located at, or is part of, a major source of HAP, except as specified in 40 CFR 63.7491. For purposes of this subpart, a major source of HAP is as defined in 40 CFR 63.2, except that for oil*

*and natural gas production facilities, a major source of HAP is as defined in 40 CFR 63.7575.*

The relevant definitions, contained within 40 CFR 63.7575, for a boiler, a process heater, heat input, a waste heat boiler, and a waste heat process heater are as follows:

- Boiler means an enclosed device using controlled flame combustion and having the primary purpose of recovering thermal energy in the form of steam or hot water. Controlled flame combustion refers to a steady-state, or near steady-state, process wherein fuel and/or oxidizer feed rates are controlled. A device combusting solid waste, as defined in § 241.3 of this chapter, is not a boiler unless the device is exempt from the definition of a solid waste incineration unit as provided in section 129(g)(1) of the Clean Air Act. Waste heat boilers are excluded from this definition.
- Process heater means an enclosed device using controlled flame, and the unit's primary purpose is to transfer heat indirectly to a process material (liquid, gas, or solid) or to a heat transfer material (e.g., glycol or a mixture of glycol and water) for use in a process unit, instead of generating steam. Process heaters are devices in which the combustion gases do not come into direct contact with process materials. A device combusting solid waste, as defined in § 241.3 of this chapter, is not a process heater unless the device is exempt from the definition of a solid waste incineration unit as provided in section 129(g)(1) of the Clean Air Act. Process heaters do not include units used for comfort heat or space heat, food preparation for on-site consumption, or autoclaves. Waste heat process heaters are excluded from this definition.
- Heat input means heat derived from combustion of fuel in a boiler or process heater and does not include the heat input from preheated combustion air, recirculated flue gases, returned condensate, or exhaust gases from other sources such as gas turbines, internal combustion engines, kilns, etc.
- Waste heat boiler means a device that recovers normally unused energy (i.e., hot exhaust gas) and converts it to usable heat. Waste heat boilers are also referred to as heat recovery steam generators. Waste heat boilers are heat exchangers generating steam from incoming hot exhaust gas from an industrial (e.g., thermal oxidizer, kiln, furnace) or power (e.g., combustion turbine, engine) equipment. Duct burners are sometimes used to increase the temperature of the incoming hot exhaust gas.
- Waste heat process heater means an enclosed device that recovers normally unused energy (i.e., hot exhaust gas) and converts it to usable heat. Waste heat process heaters are also referred to as recuperative process heaters. This definition includes both fired and unfired waste heat process heaters.

#### **Startup/Shutdown/Malfunction-Breakdown Discussion**

The source requested and has been granted Startup and Malfunction-Breakdown exceptions, see Chapter III Section 3.11. The Startup and Malfunction-Breakdown have general procedures that must be followed in the event of a Startup or Malfunction-Breakdown. These procedures are specifically noted in Conditions 7.3(a)(iii & iv) for Startup procedures and in Condition 7.4(a)(iv) for the Malfunction-Breakdown procedures. These Conditions are intended to

minimize emissions during a Startup or a Malfunction-Breakdown. The basic principles of the of these operating conditions to be followed during malfunction/breakdown were generally established by Construction Permit #96050103.

The source has fully justified and provided rationale, which adequately demonstrates the need to be provided these startup and malfunction/breakdown provisions. It was explained that there are significant differences between a "cold" start and a "warm" start of the Coke Calcining systems. Due to the unique physical characteristics of the system, specifically the kiln and pyroscrubber refractory linings, the temperature increases and decreases of the kilns and pyroscrubbers must maintain a steady gradient in general accordance with the manufacture's guidelines. Because of the high operating temperatures of the system, it can be concluded that the timeframes can significantly be altered by the initial temperature at which the system begins the startup. As well, an immediate shutdown of the system in which the kilns were to stop turning could result in the kilns bowing and eventually collapsing. Failure to follow adequate procedures for heating and cooling the system may result in failure (cracking) of the refractory linings as well as the overall premature failure of the system. In the event of a malfunction/breakdown the source attempts to maintain in "stand-by mode", and return operation to "normal" as soon as possible, to avoid a possible "cold" start as a result. The main reason for this is that during a "cold" start emissions are generally much higher than with a "warm" start. This is because during a "warm" start the pyroscrubbers can reach the required operating temperature to provide the full potential of emission reduction much sooner than with a "cold" start.

**Prompt Reporting Discussion**

Prompt reporting of deviations has been established as 30 days. See rationale in Chapter III Section 3.9.

<b>3. Fugitive Dust</b>		
<b>Applicable Requirements Summary</b>		
<b>Applicable Requirement</b>	<b>Type</b>	<b>Location</b>
Opacity Requirement (35 IAC 212.123)	Applicable Standard	See the Permit, Condition 4.3.2(a)(i)(A)
PM Requirement (35 IAC 212.301)	Applicable Standard	See the Permit, Condition 4.3.2(b)(i)(A)
Work Practice Requirement	Applicable Work Practice	See the Permit, Condition 4.3.2(c)(i)(A)

**Visible Emissions (i.e., Opacity)**

- ✓ Monitoring as follows (Condition 4.3.2(a)(ii)(A & B)):
  - o The source shall monitor the visible emissions associated with the fugitive dust using Method 22 and/or Method 9 anytime that such monitoring is requested by the IEPA, but at least on an annual basis.
  
- ✓ Recordkeeping as follows (Condition 4.3.2(a)(ii)(C & D)):
  - o Records for each Method 22 observation required
  - o Records for each Method 9 measurement required
  
- ✓ Reporting as follows (Condition 4.3.5(a)):
  - o Prompt reporting of deviations within 30 days to the IEPA.

**Rationale and Justification for Periodic Monitoring**

Periodic Monitoring is sufficient for these emission units because:

- Emissions do not vary significantly under normal operation and/or vary slowly with time.
- Source has not exhibited a history of non-compliance.
- Monitoring is consistent with other sources in this source category.
- The plan provided by the source in the application is deemed to be sufficient to reduce the visible PM emissions at the source. If the moisture content of material is kept up, the PM emissions from handling and storage piles will be greatly reduced. Proper cleaning of paved roadways at the source will eliminate PM emissions resulting from vehicular traffic on these paved surfaces. The PM emissions as a result of vehicular traffic on any unpaved surfaces or storage piles will be reduced by good work practices (e.g., increasing the moisture content of the surfaces during periods of drought and/or reducing vehicle speed at the source).

#### **Particulate Matter Emission**

- ✓ Monitoring as follows (Condition 4.3.2(b)(ii)(A)):
  - o Condition 3.1(a)(ii) requires that, upon request, the Permittee monitor visible emissions of fugitive particulate matter from the source to address compliance with 35 IAC 212.301. For this purpose, daily observations shall be conducted for a week for particular area(s) of concern at the source, as specified in the request, observations shall begin either within one day or three days of receipt of a written request from the IEPA.
- ✓ Recordkeeping as follows (Condition 4.3.2(b)(ii)(B)):
  - o Condition 3.1(a)(ii) requires that the Permittee maintain records for the observations in Condition 3.1(a)(ii).
  - o Monthly and annual records for the PM emissions associated with vehicular traffic, unloading operations, and storage piles.
- ✓ Reporting as follows (Condition 4.3.5(a)):
  - o Prompt reporting of deviations within 30 days to the IEPA.

#### **Rationale and Justification for Periodic Monitoring**

Periodic Monitoring is sufficient for these emission units because:

- Emissions do not vary significantly under normal operation and/or vary slowly with time.
- Source has not exhibited a history of non-compliance.
- Monitoring is consistent with other sources in this source category.
- The source plans to minimize the fugitive PM emissions by good housekeeping practices and the use of wetting agents/dust suppressants on the storage piles when needed.
- The plan provided by the source in the application is deemed to be sufficient to reduce the visible PM emissions at the property line to a level that cannot be seen. If the moisture content of material is kept at a high level, PM emissions from handling and storage piles will be greatly reduced. Proper cleaning of paved roadways at the source will eliminate PM emissions resulting from vehicular traffic on paved surfaces. The PM emissions as a result of vehicular traffic on any unpaved surfaces will be reduced by good work practices (e.g., increasing the moisture content of the surfaces during periods of drought and/or reducing vehicle speed at the source).

#### **Non-Applicability Discussion**

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

**Prompt Reporting Discussion**

Prompt reporting of deviations has been established as 30 days. See rationale in Chapter III Section 3.9.

4. Storage Tanks		
Applicable Requirements Summary		
Applicable Requirement	Type	Location
VOM Requirement (35 IAC 215.122)	Applicable Standard	See the Permit, Condition 4.4.2(a)(i)(A)
VOM Requirement (35 IAC 215.583)	Applicable Standard	See the Permit, Condition 4.4.2(a)(i)(B)

**Organic Material Emission**

- ✓ Monitoring as follows (Condition 4.4.2(a)(ii)(A)):
  - o Monitoring provided by Condition 4.4.2(c), which provides for annual inspections of the gas storage tank to ensure that a submerged loading pipe is present and in good working condition.
  
- ✓ Recordkeeping as follows (Condition 4.4.2(a)(ii)(B & C)):
  - o Records of the monthly and annual VOM emissions from each tank.
  - o Records of the design of each tank showing that a submerged loading pipe is present.
  - o Records of the monthly and yearly throughput to each tank and records for the type of liquid stored in the tanks.
  - o Records which include the information on each inspection performed (e.g., name of inspection personnel and presence of submerged loading pipe).
  
- ✓ Reporting as follows (Condition 4.4.5(a)):
  - o Prompt reporting of deviations within 30 day to the IEPA.

**Rationale and Justification for Periodic Monitoring**

Periodic Monitoring is sufficient for these emission units because:

- There is a small likelihood of an exceedance.
- Emissions do not vary significantly under normal operation and/or vary slowly with time.
- Source has not exhibited a history of non-compliance.
- Monitoring is consistent with other sources in this source category.
- The source generally uses computer software, TANKS, to calculate VOM emissions from the storage tanks. This software has been widely accepted to accurately depict the emissions that occur as a result of these tanks.
- The emission rate, which is in lb/hr, can easily be demonstrated through the required records of VOM emissions. The tanks have vents to prevent pressure build up. Therefore, whenever the tanks contain a liquid, which is throughout the entire year, the tanks can be assumed to be in "operation". The emissions during loading should not vary significantly due to the presence of submerged loading pipes. Compliance with the emission rate can be verified by simply taking the VOM emissions for the month or year and dividing by the number of hours in the month or 8760 (for the year).
- Compliance with the submerged loading pipe requirements will be assured by requiring the source to maintain design information of the tanks, which notes the presence of submerged loading pipes. Furthermore, for the gas

storage tank, an annual inspection to ensure that the loading pipe is in proper working condition and is present is required.

### **Non-Applicability Discussion**

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

### **Prompt Reporting Discussion**

Prompt reporting of deviations has been established as 30 days. See rationale in Chapter III Section 3.9.

### **3.8 Insignificant Activities Discussion**

There are no insignificant activities for the source subject to specific regulations which are obligated to comply with Sections 9.1(d) and Section 39.5 of the Act; Sections 165, 173, and 502 of the Clean Air Act; or any other applicable permit or registration requirements and therefore there are no periodic monitoring requirements that need to be separately addressed.

There are insignificant activities in Section 6.2 of the Permit that have operational throughput limitations. Therefore, recordkeeping to demonstrate that throughput to each tank does not exceed 100,000 gallons/year is required by Condition 6.5(c) of the Permit.

### **3.9 Prompt Reporting Discussion**

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

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

### **Regulatory Reports**

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

restated in the CAAPP Permit. Depending on the regulatory obligations, these regulatory reports may also constitute a deviation report as described below.

The Draft CAAPP Permit for this source would embody all regulatory reporting as promulgated under federal and state regulations under the Clean Air Act and the Illinois Environmental Protection Act. Depending on the frequency of the report, the regulatory report may also satisfy the prompt reporting obligations discussed below. These reports must be certified by a responsible official.

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

#### **Deviation Reports (Prompt Reporting)**

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

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

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

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

### Semi-Annual Monitoring Reports

Section 39.5(7)(f)(i) of the Illinois Environmental Protection Act mandates that each CAAPP Permit require a report relative to monitoring obligations as set forth in the permit. Depending upon the monitoring obligation at issue, the semi-annual monitoring report may also constitute a deviation report as previously discussed. This monitoring at issue includes instrumental and non-instrumental emissions monitoring, emissions analyses, and emissions testing established by state or federal laws or regulations or as established in the CAAPP Permit. This monitoring also includes recordkeeping. Each deviation from each monitoring requirement must be identified in the relevant semi-annual report. These reports provide a timely opportunity to assess for compliance patterns of concern. The semi-annual reports shall be submitted regardless of any deviation events. Reporting periods for semi-annual monitoring reports are January 1 through June 30 and July 1 through December 31 of each calendar year. Each semi-annual report is due within 30 days after the close of reporting period. The reports shall be certified by a responsible official. The Draft CAAPP Permit for this source would require such reports at Condition 3.5(b).

### Annual Compliance Certifications

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

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

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

As a result, the Illinois EPA's approach to prompt reporting of deviations as discussed herein is consistent with the requirements of Section 39.5(7)(f)(ii) of the Illinois Environmental Protection Act as well as 40 CFR

Part 70 and the CAA. This reporting arrangement is designed so that the source will appropriately notify the Illinois EPA of those events that might warrant individual attention.

### **3.10 Inclusion of a Compliance Schedule**

The identification of non-compliance and/or the issuance of an NOV/VN, and reference to information contained therein, alone is not sufficient to satisfy the demonstration requirement under 505(b)(2) of the CAA requiring the inclusion of an approvable compliance schedule. This alleged non-compliance is simply an early stage in the larger enforcement process of determining whether a violation, in fact, has occurred. This information noted above is therefore too speculative to warrant a compliance schedule without further investigation by appropriate enforcement staff at the State or Federal level. This investigation typically involves additional information gathering sessions and exchanges which is part of the enforcement proceeding and not a part of the permitting process. This stage of the enforcement proceeding is considered a critical step of fact finding under our civil litigation procedures and affords the source the necessary due process. Neither the issuance of an NOV/VN or the identification of alleged non-compliance has the force or effect of the law and therefore is not subject to judicial review at this stage.

If the Illinois EPA were to consider this information as a factor regarding applicability requirements for purposes of CAAPP, other relevant considerations would need to be taken into account such as (1) the quality and source of the information, (2) whether the facts are disputable, (3) the types of defenses, and (4) the nature of any disputed legal ambiguities. These factors may not be readily discernable at this early stage and would need to be considered within the constraints of the CAAPP process. Neither 40 CFR Part 70 or Section 39.5 of the Illinois Environmental Protection Act contemplates this type of judicial review in the context of a Title V permit and does not provide the necessary authorities to proceed with such investigation. As such, Illinois EPA must consider the potential impact that both enforcement and permitting have on one another. Where there is a pending or active enforcement case at the same time as a permitting action, the source and the Illinois EPA could easily find them self-litigating the same matters in two different venues with the risk of different and conflicting results.

Therefore, while nothing in the Illinois Environmental Protection Act would prohibit Illinois EPA from including a compliance schedule in the permit, the question that presents itself is whether the inclusion of a compliance schedule is mandatory when such information is available before the matter has been adjudicated and required actions to achieve compliance have yet to be identified. USEPA has stated, in multiple petition responses regarding this topic of discretionary versus mandatory compliance schedules, which it is entirely appropriate for the permitting authority to allow the enforcement case to take its course and wait to see whether an adjudicated order results at which time, the permit may be reopened to include a compliance schedule at that time.

### **3.11 Start-up/Shutdown/Malfunction Breakdown Discussion**

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

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

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

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

The approach taken by Illinois' regulation can be distinguished from and contrasted with that of the federal NESHAP regulations, under 40 CFR Part 63. These federal regulations address excess emissions during malfunction (and shutdown) or startup without the initial step required by Illinois' rules. This is because all sources are able to claim exclusion from an otherwise applicable standard during a malfunction or startup event. The validity of the claims is then subject to scrutiny by USEPA and the state enforcement authority, as to the acceptability of a source's claim that an incident should qualify for an exemption. That is, that the excess emissions could not be

readily prevented and were not contrary to good air pollution control practices. In fact, this case-by-case scrutiny is the second step provided for in Illinois' regulations. This "federal approach" is set forth in the planned revised CAAPP Permit for select emission units that are subject to certain NESHAPs. Violations of applicable NESHAP emission limits are governed by the "federal approach." Violations of emissions standards found in state air pollution control regulations at 35 IAC Subtitle B Chapter I Subchapter c are governed by the SIP approach.

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

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

For any source that receives such authorization, the type of authorization (i.e., malfunction/breakdown or startup), the emission units for which authorization has been received, and the conditions under, and manner in which

such authorization may be utilized are clearly set forth in the CAAPP Permit. The origin of these authorizations is 35 IAC 201.149.

### **3.12 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.<sup>4</sup> 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.<sup>5</sup> 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.<sup>6</sup> 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.<sup>7</sup> 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 than the Illinois Environmental Protection Act, do not constitute applicable requirements under the CAAPP.

### **3.13 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.<sup>8</sup> 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.<sup>9</sup>

The criteria that are mentioned in USEPA Administrator Petition Responses stress the importance of identifying, *with specificity*, the object of the incorporation.<sup>10</sup> 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*<sup>11</sup>. 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.<sup>12</sup>

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.<sup>13</sup> 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.<sup>14</sup>

### **3.14 Periodic Monitoring General Discussions**

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

As a general matter, the required content of a CAAPP Permit with respect to such Periodic Monitoring is addressed in Section 39.5(7) of the Illinois Environmental Protection Act.<sup>15</sup> Section 39.5(7)(b) of the Illinois Environmental Protection Act<sup>16</sup> provides that in a CAAPP Permit:

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

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

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

Accordingly, the scope of the Periodic Monitoring that must be included in a CAAPP Permit is not restricted to monitoring requirements that were adopted through rulemaking or imposed through permitting. When applicable regulatory emission standards and control requirements or limits and control requirement in relevant Title 1 permits are not accompanied by compliance procedures, it is necessary for Monitoring for these standards, requirements or limits to be established in a CAAPP Permit.<sup>17, 18</sup> Monitoring requirements must also be established when standards and control requirement are accompanied by compliance procedures but those procedures are not adequate to assure compliance with the applicable standards or requirements.<sup>19, 20</sup> For this purpose, the requirements for Periodic Monitoring in a CAAPP Permit may include requirements for emission testing, emissions monitoring, operational monitoring, non-instrumental monitoring, and recordkeeping for each emission unit or group of similar units at a facility, as required by rule or permit, as appropriate or as needed to assure compliance with the applicable substantive requirements. Various combinations of monitoring measures will be appropriate for different emission units depending on their circumstances, including the substantive emission standards, limitations and control requirements to which they are subject.

What constitutes sufficient Periodic Monitoring for particular emission units, including the timing or frequency associated with such Monitoring requirements, must be determined by the permitting authority based on its knowledge, experience and judgment.<sup>21</sup> For example, as Periodic Monitoring must collect representative data, the timing of Monitoring requirements need not match the averaging time or compliance period of the associated substantive requirements, as set by the relevant regulations and permit provisions. The timing of the various requirements making up the Periodic Monitoring for an emission unit is something that must be considered when those Monitoring requirements are being established. For this purpose, Periodic Monitoring often consists of requirements that apply on a regular basis, such as routine recordkeeping for the operation of control devices or the implementation of the control practices for an emission unit. For certain units, this regular monitoring may entail "continuous" monitoring of emissions, opacity or key operating parameters of a process or its associated control equipment, with direct measurement and automatic recording of the selected parameter(s). As it is infeasible or impractical to require emissions monitoring for most emission units, instrumental monitoring is more commonly conducted for the operating parameters of an emission unit or its associated control equipment. Monitoring for operating parameter(s) serves to confirm proper operation of equipment, consistent with operation to comply with applicable emission standards and limits. In certain cases, an applicable rule may directly specify that a particular level of an operating parameter be maintained, consistent with the manner in which a unit was being operated during emission testing. Periodic Monitoring may also consist of requirements that apply on a periodic basis, such as inspections to verify the proper functioning of an emission unit and its associated controls.

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

There are a number of considerations or factors that are or may be relevant when evaluating the need to establish new monitoring requirements as part of the Periodic Monitoring for an emission unit. These factors include: (1) The nature of the emission unit or process and its emissions; (2) The variability in the operation and the emissions of the unit or process over time; (3) The use of add-on air pollution control equipment or other practices to control emissions and comply with the applicable substantive requirement(s); (4) The nature of that control equipment or those control practices and the potential for variability in their effectiveness; (5) The nature of the applicable substantive requirement(s) for which Periodic Monitoring is needed; (6) The nature of the compliance procedures that specifically accompany the applicable requirements; (7) The type of data that would already be available for the unit; (8) The effort needed to comply with the applicable requirements and the expected margin of compliance; (9) The likelihood of a violation of applicable requirements; (10) The nature of the Periodic Monitoring that may be readily implemented for the emission unit; (11) The extent to which such Periodic Monitoring would directly address the applicable requirements; (12) The nature of Periodic Monitoring commonly required for similar emission units at other facilities and in similar circumstances; (13) The interaction or relationship between the different measures in the Periodic Monitoring for an emission unit; and (14) The feasibility and reasonableness of requiring additional measures in the Periodic Monitoring for an emission unit in light of other relevant considerations.<sup>22</sup>

## **CHAPTER IV - CHANGES FROM PREVIOUSLY ISSUED CAAPP PERMITS**

### **4.1 Major Changes Summary**

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

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

### **4.2 Notable Specific Changes**

#### Testing/Monitoring

- Previous to this permit, there were no established periodic testing requirements. There will now be periodic testing of PM and VOM emissions from the kilns at least once every 5 years. There will now be periodic testing of SO<sub>2</sub> emissions from the kilns at least once per year. (See Conditions 4.2.2(b)(ii)(C), 4.2.2(c)(ii)(B), and 4.2.2(d)(ii)(B) of the Permit)
- The monitoring procedures for opacity from the kilns and rotary coolers have been changed. Previously, the source was required to perform twice daily Method 22 observations. Per the review of compliance reports, issued VNs, and by the request of the source, these twice daily Method 22 observations have been replaced by a Method 9 at least once per operating day. Method 9 observations are more stringent requirement and provide a more exact measurement of opacity than Method 22 only.

## Endnotes

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

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

<sup>3</sup> The incorporation, or carry-over, of terms or conditions from previous Title I permits into Title V permits typically does not occur on a wholesale basis. Recognizing that construction permits may frequently contain obsolete or extraneous terms and conditions, USEPA has emphasized that only "environmentally significant terms" from previous preconstruction permits must be carried over into Title V permits. See, White Paper for Streamlined Development of Part 70 Permit Applications, dated July 10, 1995. Therefore, certain T1 terms and conditions have not been carried over from these SIP approved permits for reasons that are explained below.

<sup>4</sup> 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 CO<sub>2</sub>e and 100 tons per year of GHG on a mass basis).

<sup>5</sup> 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).

<sup>6</sup> See generally, PSD and Title V Permitting Guidance for GHG at pages 53-56.

<sup>7</sup> 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<sub>2</sub>e 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.

<sup>8</sup> 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.

<sup>9</sup> 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").

<sup>10</sup> 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.

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<sup>11</sup> See, White Paper 2 at page 39.

<sup>12</sup> 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).

<sup>13</sup> 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 Laggos, STAPPA/ALAPCO, pages 9-10 of Enclosure B.

<sup>14</sup> 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.

<sup>15</sup> The provisions of the Act for Periodic Monitoring in CAAPP permits reflect parallel requirements in the federal guidelines for State Operating Permit Programs, 40 CFR 70.6(a)(3)(i)(A), (a)(3)(i)(B), and (c)(1).

<sup>16</sup> Section 39.5(7)(p)(i) of the Act also provides that a CAAPP permit shall contain "Compliance certification, testing, monitoring, reporting and record keeping requirements sufficient to assure compliance with the terms and conditions of the permit."

<sup>17</sup> The classic example of regulatory standards for which Periodic Monitoring requirements must be established in a CAAPP permit are state emission standards that pre-date the 1990 Clean Air Act Amendments that were adopted without any associated compliance procedures. Periodic Monitoring must also be established in a CAAPP permit when standards and limits are accompanied by compliance procedures but those procedures are determined to be inadequate to assure compliance with the applicable standards or limits.

<sup>18</sup> Another example of emission standards for which requirements must be established as part of Periodic Monitoring is certain NSPS standards that require initial performance testing but do not require periodic testing or other measures to address compliance with the applicable limits on a continuing basis.

<sup>19</sup> The need to establish Monitoring requirements as part of Periodic Monitoring when existing compliance procedures are determined to be inadequate, as well as when they are absent, was confirmed by the federal appeals court in *Sierra Club v. Environmental Protection Agency*, 536 F.3d 673, 383 U.S. App. D.C. 109.

<sup>20</sup> The need to establish Monitoring requirements as part of Periodic Monitoring is also confirmed in USEPA's Petition Response. USEPA explains that "...if there is periodic monitoring in the applicable requirements, but that monitoring is not sufficient to assure compliance with permit terms and conditions, permitting authorities must supplement monitoring to assure such compliance." Petition Response, page 6.

<sup>21</sup> The test for the adequacy of "Periodic Monitoring" is a context-specific determination, particularly whether the provisions in a Title V permit reasonably address compliance with relevant substantive permit conditions. 40 CFR 70.6(c)(1); see also 40 CFR 70.6(a)(3)(i)(B); see also, *In the Matter of CITGO Refinery and Chemicals Company L.P.*, Petition VI-2007-01 (May 28, 2009); see also, *In the Matter of Waste*

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

<sup>22</sup> A number of these factors are specifically listed by USEPA in its Petition Response. USEPA also observes that the specific factors that it identifies in its Petition Response with respect to Periodic Monitoring provide "...the permitting authority with a starting point for its analysis of the adequacy of the monitoring; the permitting authority also may consider other site-specific factors." Petition Response, page 7.