Statement of Basis

for the DRAFT CAAPP Permit for:

Source Name

Chem-Plate Industries

Statement of Basis No.: 01110050-1

I.D. No.: 031440AHP

Permit No.: 01110050

Date Prepared: October 25, 2011

Permitting Authority:

Illinois Environmental Protection Agency
Bureau of Air, Permit Section
217/782-2113

This Statement of Basis is being provided to USEPA and any interested parties as required by 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 new CAAPP Permit issued on 03/18/2002, the CAAPP administrative amendment was issued in 2003 and related to the ownership change. The CAAPP renewal application was received on 06/14/2006.

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 would go beyond the statutory requirements for this Statement, which contains supplemental material that would assist interested parties in the education of this source and the draft CAAPP permit. The Statement of Basis does not shield the source from enforcement actions or its responsibility to comply with existing or future applicable regulations. Nor does the Statement of Basis constitute a defense to a violation of the Federal Clean Air Act or the Illinois Environmental Protection Act including implementing regulations.

This document does not purport to establish policy or guidance.

INTRODUCTION

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

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

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

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

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

- ✓ Emissions of:
  - VOM
  - HAP
- ✓ Emission units:
  - Coating Lines

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 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 06/14/2006. The source is currently operating under conditions of the initial CAAPP issued in 2002. This draft CAAPP permit addresses application content and necessary revisions to meet the requirements for issuance of the permit.

b. Present Compliance Status

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

c. Payment of Fees

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

d. Additional Information

The source was not required to submit any additional application material.

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 3.1 and 3.2 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 Permit and are provided in the permit itself as the origin and authority.

a. Applicable Federal Regulations

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

40 CFR Part 61 – Subpart N
40 CFR Part 63 – Subpart MMMM
40 CFR Part 63 – Subpart WWWWW

b. Applicable SIP Regulations

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

35 IAC Part 201 - Permits And General Provisions
35 IAC Part 205 - Emissions Reduction Market System
35 IAC Part 212 – Visible And Particulate Matter Emissions
35 IAC Part 214 – Sulfur Limitations
35 IAC Part 216 – Carbon Monoxide Emissions
35 IAC Part 218 – Organic Material Emission Standards
35 IAC Part 244 – Episodes
35 IAC Part 254 – Annual Emissions Report

c. Other Applicable Requirements

The Illinois EPA promulgated a new VOM RACT rule, which is required to be addressed as well in this permit. However, this rule has not yet been SIP approved by the USEPA and, as such, has been incorporated into this permit as a State Only Requirement at this time.

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: 3471, Plating and Polishing
County: Cook

The source applies several finishes to mostly small steel parts. The source includes metal plating lines and organic coating lines to provide corrosion resistance, durability, or other functions as required.

Process Description

Emission Units	*Description*
Plating and Cleaning Tanks	Each of the wet processing lines contain cleaning tanks (both caustic and acidic) that clean the parts prior to being processed in the main process tank of the line (e.g., plating, phosphating)
Oil Coating Dip Tanks	Small metal parts are sent to the coating lines for application of the required finish
Coating Lines	Small metal parts are sent to the coating lines for application of the required finish
Heat Treat Furnaces	Following application of a metal or organic coating finish, metal parts are hardened, quenched, and then tempered in a heat treat furnace
Sludge Dryer	The sludge that generated in a wastewater treatment system is dewatered in a sludge dryer controlled by cyclone/scrubber system
Boiler	Small (4.0 mmBtu/hr heat input) natural gas-fired boiler is used to produce heat for the source's needs

2.3. Single Source Status

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

2.4. Ambient Air Quality Status for the Area

The source is located in an area that, as of the date of permit issuance, is designated nonattainment for the National Ambient Air Quality Standards for ozone (moderate nonattainment), $PM_{2.5}$, and attainment or unclassifiable for all other criteria pollutants (PM_{10}, CO, lead, NO_x, SO_2). (see 40 CFR Part 81—Designation of Areas for Air Quality Planning Purposes).

2.5. Source Status

The source requires a CAAPP permit as follows: This source is considered major (based on its PTE) for the volatile organic material (VOM) emissions.
The source also requires a CAAPP permit because the source is subject to a standard of Section 112 (HAPs) of the CAA for which USEPA requires a CAAPP permit. Specifically, this source is subject to 40 CFR 63 Subpart MMMMM.

This source maintains synthetic minor limits (see Condition 3.4(a)) for HAP's. This condition is being imposed so that the source is not a major source for HAP

emissions. Because PTE of HAP's had never been limited through the federally enforceable permit for this source on or before compliance date (January 2, 2007) of 40 CFR Part 63 Subpart MMMM, these limits are based on the USEPA policy ("once in – always in" provision) and the source is considered to be major for the underlined MACT standard, 40 CFR Part 63, Subpart MMMM. This synthetic minor limit is being established on the date of issuance of this permit,

This source is considered a natural minor for the following regulated air pollutants: PM_{10}, $PM_{2.5}$, nitrogen oxides (NO_x), carbon monoxide (CO), sulfur dioxide (SO_2) and greenhouse gases (GHG's).

2.6. Annual Emissions

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

Pollutant	2006	2007	2008	2009	2010
CO	3.97	4.30	2.99	1.63	3.07
NOx	4.82	5.17	3.65	2.05	3.65
PM	1.82	1.65	2.43	1.09	1.37
SO_2	0.03	0.03	0.02	0.01	0.02
VOM	21.45	11.53	8.58	2.00	2.50
CO_{2E}	----	6,140.904	4,274.640	2,326.158	4,384.342
HAP (total)	2.5	3.0	1.9	1.4	1.7

2.7. Fee Schedule

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

Pollutant	Fee Schedule (tons)
NOx	17.29
PM	60.01
SO_2	0.06
VOM	88.80
HAP (total)	----
Total	166.16

2.8 SIP Permit Facts

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

In the CAAPP or Illinois's Title V permit program, the Illinois EPA's practice is to identify requirements that are carried over from an earlier Title I permit into a New or Renewed CAAPP Permit as "TI" conditions (i.e., Title I conditions). Title I Conditions that are revised as part of their incorporation into a CAAPP Permit are further designated as "TIR." Title I Conditions that are newly established through a CAAPP Permit are designated as "TIN." It is important that Title I Conditions be

identified in a CAAPP Permit because these conditions will not expire when the CAAPP Permit expires. Because the underlying authority for Title I Conditions comes from Title I of the CAA and their initial establishment in Title I Permits, the effectiveness of T1 Conditions derives from Title I of the CAA rather than being linked to Title V of the A. For “changes” to be made to Title I Conditions, they must either cease to be applicable based on obvious circumstances, e.g., the subject emission unit is permanently shut down, or appropriate Title I procedures must be followed to change the conditions.

Previously Incorporated Construction Permits		
Permit No.	Date Issued	Subject
84050063	01/10/1989	Storage tank
84070055	10/11/1995	Metal finishing facility
00060072	10/25/2000	New metal parts coating line and curing oven

The Illinois EPA has not recently issued construction permits for this source.

The proposed draft does not contain any T1N or T1R conditions.

Extraneous or Obsolete T1 Conditions[3]		
Construction Permit No.	Condition Number	Subject
84070055 01110050 (initial CAAPP)	N/A 7.1.6	Initial CAAPP was mistakenly references to CP 84070055 as T1 when new PM limits have been established for the plating tanks in the CAAPP. The source is not major for PM (and never was) and any inflated/unreliable PM emissions used for purposes of PSD/NSR avoidance just mislead a reader about the nature of the source in general and plating operations in particular.

CHAPTER III – SUPPLEMENTAL DISCUSSIONS REGARDING THE PERMIT

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

3.1 Environmental Justice Discussions

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

3.2 Emission Testing Results

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

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

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

3.4 Field Inspection Results

A review of the source's latest field inspection reports demonstrates the source's ability to comply with all applicable requirements. Last inspection had been conducted on January 29, 2008.

3.5 Historical Non-compliance

There is no historical non-compliance for this source.

3.6 Source Wide Justifications and Rationale

Applicable Requirements Summary		
Applicable Requirement	**Type**	**Location**
Visible fugitive emissions beyond the property line	35 IAC 212.301 and 212.314	See the Permit, page 12, Condition 3.1(a)
Synthetic Minor Limits for HAPs	HAP emission limits	See the Permit, page 14, Condition 3.4(a)

Visible Emissions (i.e., Opacity)

✓ Monitoring as follows (Condition 3.1(a))
- o Daily visible observations shall be performed upon request from IEPA

✓ Recordkeeping as follows (Condition 3.1(a)):
- o Records of this observations

✓ Reporting as follows (Condition 3.5(a)(i)):
- o Report to IEPA deviation within 30 days

Rationale and Justification for Periodic Monitoring

Periodic Monitoring is sufficient for this source because:

- The source is not involved in classical extensive “material handling activities”, therefore, 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.
- Emissions are considered negligible

HAP Emissions

✓ Monitoring as follows (Condition 3.4(b))
- o Monthly and annual records of HAP emissions from the source.

✓ Reporting as follows (Condition 3.5(a)(i)):
- o Report to IEPA deviation within 30 days.

Rationale and Justification for Periodic Monitoring

Periodic Monitoring is sufficient for this source because:

- There is a small likelihood of an exceedance.
- Emissions do not vary significantly under normal operation and/or vary slowly with time.
- Source has not exhibited a history of non-compliance.
- Monitoring is consistent with other sources in this source category.

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 9.

3.7 Emission Unit Justifications and Rational

a. Plating and Cleaning Tanks		
Applicable Requirements Summary		
Applicable Requirement	Type	Location
Opacity	Applicable standard (35 IAC 212.123(a))	See the Permit, page 17. (Condition 4.1(2)(a)(i))
PM	Applicable standard (35 IAC 212.321(a))	See the Permit, page 17. (Condition 4.1(2)(b)(i))
PM	Applicable limits [T1]	See the Permit, page 17. (Condition 4.1(2)(b)(i)(B))

Visible Emissions (i.e., Opacity)

✓ Monitoring as follows (Condition 4.1(2)(a)(i))
- o Annual opacity observations by using Method 22

✓ Recordkeeping as follows (Condition 4.1(2)(a)(ii)):
- o Records of opacity readings

✓ Reporting as follows (Condition 4.1(5)(a)(i)):
- o Report to IEPA deviation within 30 days

Rationale and Justification for Periodic Monitoring
Periodic Monitoring is sufficient for these emission units because:

- There is a small likelihood of an exceedance.
- Emissions do not vary significantly under normal operation and/or vary slowly with time.
- Emission units have not exhibited a history of non-compliance.
- Monitoring is consistent with other sources in this source category.

Particulate Matter Emission (Process weight standards)

✓ Monitoring as follows (Condition 4.1(2)(b)(ii)):
- o Amounts of parts processed
- o PM emission factors and PM emissions w/supporting calculations

✓ Recordkeeping as follows (Condition 4.1(2)(b)(ii)):
- o See all above

✓ Reporting as follows (Condition 4.1(5)(a)(i)):
- o Prompt reporting of deviations within 30 days

Rationale and Justification for Periodic Monitoring
Periodic Monitoring is sufficient for these emission units because:

- There is a small likelihood of an exceedance.
- Emissions do not vary significantly under normal operation and/or vary slowly with time.
- Source has not exhibited a history of non-compliance.
- Monitoring is consistent with other sources in this source category.
- Emissions are considered negligible

Work and Management Practice Requirements

- ✓ Monitoring as follows (Condition 4.1(2)(c)(ii)):
  - o Records of all work practice activities required by MACT (Subpart WWWWWW)

- ✓ Recordkeeping as follows (Condition 4.1(2)(c)(ii)):
  - o See all above

- ✓ Reporting as follows (Condition 4.1(5)(a)(i)):
  - o Prompt reporting of deviations within 30 days

Rationale and Justification for Periodic Monitoring
Periodic Monitoring is sufficient for these emission units because:

- Records are the only monitoring instrument allowing compliance verification for the work and management ptacticies
- Monitoring is consistent with other sources in this source category.

Non-Applicability Discussion

Complex non-applicability determinations were not made for this emission unit.

Prompt Reporting Discussion

Prompt reporting of deviations has been established as 30 days. See rationale in Chapter III Section 9.

b. Oil Coating Dip Tanks		
Applicable Requirements Summary		
Applicable Requirement	Type	Location
Opacity	Applicable standard (35 IAC 212.123(a))	See the Permit, page 18. (Condition 4.2(2)(a)(i))
PM	Applicable standard (35 IAC 212.321(a))	See the Permit, page 18. (Condition 4.2(2)(b)(i))
VOM	Applicable standard (35 IAC 218.204(j)(2)(A))	See the Permit, page 18. (Condition 4.2(2)(c)(i)(A))
VOM	Emission limit (T1)	See the Permit, page 19. (Condition 4.2(2)(c)(i)(C))
HAP	Applicable standard (40 CFR 63.3890(b)(1), (b)(2) and (b)(5))	See the Permit, page 19. (Condition 4.2(2)(d)(i))

Visible Emissions (i.e., Opacity)

✓ Monitoring as follows (Condition 4.2(2)(a)(i))
- o Annual opacity observations by using Method 22

✓ Recordkeeping as follows (Condition 4.2(2)(a)(ii)):
- o Records of opacity readings

✓ Reporting as follows (Condition 4.2(5)(a)(i)):
- o Report to IEPA deviation within 30 days

Rationale and Justification for Periodic Monitoring

Periodic Monitoring is sufficient for these emission units because:

- There is a small likelihood of an exceedance.
- Emissions do not vary significantly under normal operation and/or vary slowly with time.
- Source has not exhibited a history of non-compliance.
- Monitoring is consistent with other sources in this source category.
- Emissions are considered negligible

Particulate Matter Emission (Process weight standards)

✓ Monitoring as follows (Condition 4.2(2)(b)(ii)):
- o PM emission factors and PM emissions w/supporting calculations

✓ Recordkeeping as follows (Condition 4.2(2)(b)(ii)):
- o See all above

✓ Reporting as follows (Condition 4.2(5)(a)(i)):
- o Prompt reporting of deviations within 30 days

Rationale and Justification for Periodic Monitoring

Periodic Monitoring is sufficient for these emission units because:

- There is a small likelihood of an exceedance.
- Emissions do not vary significantly under normal operation and/or vary slowly with time.
- Source has not exhibited a history of non-compliance
- Monitoring is consistent with other sources in this source category.
- Emissions are considered negligible

VOM Emissions

✓ Monitoring as follows (Condition 4.2(2)(c)(ii)(A)):
  - o Annual testing of VOM content of applied coatings and clean-up solvents

✓ Recordkeeping as follows (Condition 4.2(2)(c)(ii)(B)):
  - o Monthly and annual usage
  - o Density of each coating
  - o The weight of VOM per volume
  - o VOM content test results
  - o Monthly and annual VOM emissions

✓ Reporting as follows (Condition 4.2(5)(a)(i)):
  - o Prompt reporting of deviations within 30 days

Rationale and Justification for Periodic Monitoring
Periodic Monitoring is sufficient for these emission units because:

- There is a small likelihood of an exceedance.
- Monitoring is consistent with other sources in this source category.

HAP Emissions

✓ Monitoring as follows (Condition 4.2(2)(d)(ii)):
  - o Copy of each notification report
  - o Copy of materials supplier and formulation data
  - o Records of HAP emissions calculations
  - o Name and volume of each coating and cleaning material used
  - o Records of mass fraction of organic HAP for each coating
  - o Density of each coating and cleaning material
  - o Time and duration of each deviation

✓ Reporting as follows (Condition 4.2(5)(b)):
  - o Prompt reporting of deviations in the semiannual compliance reports

Rationale and Justification for Periodic Monitoring
Periodic Monitoring is sufficient for these emission units because:

- There is a small likelihood of an exceedance.
- Monitoring is consistent with other sources in this source category.

Non-Applicability Discussion

Complex non-applicability determinations were not made for this emission unit.

Prompt Reporting Discussion

- Prompt reporting of deviations from opacity, PM and VOM has been established as 30 days. See rationale in Chapter III Section 9.

- Prompt reporting of deviations from the HAP content limits of 40 CFR 63.3890 has been established semi-annually as part of the compliance report puersuant to 40 CFR 63.3920(a)(5).

c. Coating Lines		
Applicable Requirements Summary		
Applicable Requirement	Type	Location
Opacity	Applicable standard (35 IAC 212.123(a))	See the Permit, page 25. (Condition 4.3(2)(a)(i))
PM	Applicable standard (35 IAC 212.321(a))	See the Permit, page 25. (Condition 4.3(2)(b)(i))
VOM	Applicable standard (35 IAC 218.204(j)(1),(j)(2), and (j)(4))	See the Permit, page 25. (Condition 4.3(2)(c)(i)(A))
VOM	Applicable limits [T1]	See the Permit, page 25. (Condition 4.3(2)(c)(i)(C))
SO_2	Applicable standard (35 IAC 214.301)	See the Permit, page 27. (Condition 4.3(2)(d)(i))
HAP	Applicable standard (40 CFR 63.3890(b)(1), (b)(2) and (b)(5))	See the Permit, page 27. (Condition 4.3(2)(e)(i))

Visible Emissions (i.e., Opacity)

✓ Monitoring as follows (Condition 4.3(2)(a)(i))
- o Annual opacity observations by using Method 22

✓ Recordkeeping as follows (Condition 4.3(2)(a)(ii)):
- o Records of opacity readings

✓ Reporting as follows (Condition 4.3(5)(a)(i)):
- o Report to IEPA deviation within 30 days

Rationale and Justification for Periodic Monitoring

Periodic Monitoring is sufficient for these emission units because:

- There is a small likelihood of an exceedance.
- Emissions do not vary significantly under normal operation and/or vary slowly with time.
- Source has not exhibited a history of non-compliance.
- Monitoring is consistent with other sources in this source category.

Particulate Matter Emission (Process weight standards)

✓ Monitoring as follows (Condition 4.3(2)(b)(ii)):
- o PM emission factors and PM emissions w/supporting calculations

✓ Recordkeeping as follows (Condition 4.3(2)(b)(ii)):
- o See all above

✓ Reporting as follows (Condition 4.3(5)(a)(i)):
- o Prompt reporting of deviations within 30 days

Rationale and Justification for Periodic Monitoring

Periodic Monitoring is sufficient for these emission units because:

- There is a small likelihood of an exceedance.
- Emissions do not vary significantly under normal operation and/or vary slowly with time.
- Source has not exhibited a history of non-compliance
- Monitoring is consistent with other sources in this source category.

VOM Emissions

- ✓ Monitoring as follows (Condition 4.3(2)(c)(ii)(A)):
  - o Annual testing of VOM content of applied coatings and clean-up solvents

- ✓ Recordkeeping as follows (Condition 4.3(2)(c)(ii)(B)):
  - o Monthly and annual usage
  - o Density of each coating
  - o The weight of VOM per volume
  - o VOM content test results
  - o Monthly and annual VOM emissions

- ✓ Reporting as follows (Condition 4.3(5)(a)(i)):
  - o Prompt reporting of deviations within 30 days

Rationale and Justification for Periodic Monitoring
Periodic Monitoring is sufficient for these emission units because:

- There is a small likelihood of an exceedance.
- Monitoring is consistent with other sources in this source category.

Sulfur Emissions

- ✓ Monitoring as follows (Condition 4.3(2)(d)(ii))
  - o Pipeline natural gas shall be used

- ✓ Recordkeeping as follows (Condition 4.3(2)(d)(ii)):
  - o Document from a gas supplier company that sulfur content stays below 2000 ppm

- ✓ Reporting as follows (Condition 4.3(5)(a)(i)):
  - o Prompt reporting of deviations within 30 days

Rationale and Justification for Periodic Monitoring
Periodic Monitoring is sufficient for these emission units because:

- Sulfur content in pipeline natural gas is substantially below 2000 ppm
- There is a small likelihood of an exceedance
- Monitoring is consistent with other sources in this source category

HAP Emissions

- ✓ Monitoring as follows (Condition 4.3(2)(e)(ii)):
  - o Copy of each notification report
  - o Copy of materials supplier and formulation data
  - o Records of HAP emissions calculations
  - o Name and volume of each coating and cleaning material used
  - o Records of mass fraction of organic HAP for each coating
  - o Density of each coating and cleaning material
  - o Time and duration of each deviation

- ✓ Reporting as follows (Condition 4.3(5)(b)):
  - o Prompt reporting of deviations in the semiannual compliance reports

Rationale and Justification for Periodic Monitoring
Periodic Monitoring is sufficient for these emission units because:

- There is a small likelihood of an exceedance.
- Monitoring is consistent with other sources in this source category.

Non-Applicability Discussion

Complex non-applicability determinations were not made for this emission unit.

Prompt Reporting Discussion

- Prompt reporting of deviations from opacity, PM and VOM has been established as 30 days. See rationale in Chapter III Section 9.

- Prompt reporting of deviations from the HAP content limits of 40 CFR 63.3890 has been established semi-annually as part of the compliance report puersuant to 40 CFR 63.3920(a)(5).

d. Heat Treat Furnace		
Applicable Requirements Summary		
Applicable Requirement	Type	Location
Opacity	Applicable standard (35 IAC 212.123(a))	See the Permit, page 31. (Condition 4.4(2)(a)(i))
PM	Applicable standard (35 IAC 212.321(a))	See the Permit, page 31. (Condition 4.4(2)(b)(i))
SO_2	Applicable standard (35 IAC 214.301)	See the Permit, page 31. (Condition 4.4(2)(c)(i))

Visible Emissions (i.e., Opacity)

✓ Monitoring as follows (Condition 4.4(2)(a)(ii))
- o Annual opacity observations by using Method 9

✓ Recordkeeping as follows (Condition 4.4(2)(a)(ii))
- o Records of opacity observations

✓ Reporting as follows (Condition 4.4(5)(a)(i))
- o Report to IEPA deviation within 30 days

Rationale and Justification for Periodic Monitoring
Periodic Monitoring is sufficient for these emission units because:

- There is a small likelihood of an exceedance
- Natural gas is the only fuel being used: PM content in natural gas is signofibatly lower than in other fuels (coal and oil)
- 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

Particulate Matter Emission (Process weight standards)

✓ Monitoring as follows (Condition 4.4(2)(b)(ii)):
- o Emission factors with supporting calculations
- o Actual process weight rates processed and allowable PM emissions based on 35 IAC 212.321(c)
- o Actual PM emissions

✓ Recordkeeping as follows (Condition 4.4(2)(b)(ii)):
- o See all above

✓ Reporting as follows (Condition 4.4(5)(a)(i)):
- o Prompt reporting of deviations within 30 days

Rationale and Justification for Periodic Monitoring
Periodic Monitoring is sufficient for these emission units because:

- There is a small likelihood of an exceedance
- Natural gas is the only fuel being used
- 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

Sulfur Emissions

- ✓ Monitoring as follows (Condition 4.4(2)(c)(ii))
  - o Pipeline natural gas shall be used; or

- ✓ Recordkeeping as follows (Condition 4.4(2)(c)(ii)):
  - o Document from a gas supplier company that sulfur content stays below 2000 ppm

- ✓ Reporting as follows (Condition 4.4(5)(a)(i)):
  - o Prompt reporting of deviations within 30 days

Rationale and Justification for Periodic Monitoring

Periodic Monitoring is sufficient for these emission units because:

- There is a small likelihood of an exceedance
- Monitoring is consistent with other sources in this source category

Non-Applicability Discussion

Complex non-applicability determination was not made for this emission unit.

Prompt Reporting Discussion

Prompt reporting of deviations has been established as 30 days. See rationale in Chapter III Section 9.

e. Sludge Dryer		
Applicable Requirements Summary		
Applicable Requirement	Type	Location
Opacity	Applicable standard (35 IAC 212.123(a))	See the Permit, page 33. (Condition 4.5(2)(a)(i))
PM	Applicable standard (35 IAC 212.321(a))	See the Permit, page 33. (Condition 4.5(2)(b)(i)(A))
PM	Applicable limits [T1]	See the Permit, page 33. (Condition 4.5(2)(b)(i)(B))
SO_2	Applicable standard (35 IAC 214.301)	See the Permit, page 34. (Condition 4.5(2)(c)(i))
NO_x	Applicable limits [T1]	See the Permit, page 34. (Condition 4.5(2)(d)(i))
Hg	Applicable standard (40 CFR 61.52(b))	See the Permit, page 34. (Condition 4.5(2)(i)(i))

Visible Emissions (i.e., Opacity)

✓ Monitoring as follows (Condition 4.5(2)(a)(ii))
- o Monthly opacity observations by using Method 22
- o Monthly inspections of scrubber

✓ Recordkeeping as follows (Condition 4.5(2)(a)(ii)):
- o Records of opacity readings
- o Records of inspection and maintenance logs

✓ Reporting as follows (Condition 4.5(5)(a)(i)):
- o Report to IEPA deviation within 30 days

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
- Natural gas is used as a fuel
- Source has not exhibited a history of non-compliance
- Monitoring is consistent with other sources in this source category

Particulate Matter Emission

✓ Monitoring as follows (Condition 4.5(2)(b)(ii)):
- o Monthly inspections of scrubber
- o Testing PM emissions from scrubber (once in 5 years after permit issuance)

✓ Recordkeeping as follows (Condition 4.5(2)(b)(ii)):
- o Records of inspections and maintenance logs
- o Records of tests performed
- o PM emissions with supporting calculations

✓ Reporting as follows (Condition 4.5(5)(a)(i)):
- o Prompt reporting of deviations within 30 days

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

- Natural gas is used as fuel
- Source has not exhibited a history of non-compliance.
- Monitoring is consistent with other sources in this source category.

Sulfur Emissions

✓ Monitoring as follows (Condition 4.5(2)(c)(ii))
  - o Pipeline natural gas shall be used; or

✓ Recordkeeping as follows (Condition 4.5(2)(c)(ii)):
  - o Document from a gas supplier company that sulfur content stays below 2000 ppm

✓ Reporting as follows (Condition 4.5(5)(a)(i)):
  - o Prompt reporting of deviations within 30 days

Rationale and Justification for Periodic Monitoring
Periodic Monitoring is sufficient for these emission units because:

- Sulfur content in pipeline natural gas is substantially below 2000 ppm
- There is a small likelihood of an exceedance
- Monitoring is consistent with other sources in this source category

Nitrogen Oxides Emissions

✓ Monitoring as follows (Condition 4.5(2)(d)(ii))
  - o Records of emission factors with supporting calculations
  - o Records of actual emissions with supporting calculations
  - o Records of natural gas usage

✓ Recordkeeping as follows (Condition 4.5(2)(d)(ii)):
  - o See above

✓ Reporting as follows (Condition 4.5(5)(a)(i)):
  - o Prompt reporting of deviations within 30 days

Rationale and Justification for Periodic Monitoring
Periodic Monitoring is sufficient for this emission unit because:

- Emissions do not vary significantly under normal operation and/or vary slowly with time.
- Natural gas is used as fuel
- Source has not exhibited a history of non-compliance.
- Monitoring is consistent with other sources in this source category.

Mercury Emissions

✓ Monitoring as follows (Condition 4.5(2)(e)(ii))
  - o Stack testing and sludge sampling shall be conducted within 2 ½ years after permit issuance by using Methods 101A/105; sludge sampling shall be conducted every 2 ½ years thereafter
  - o Mercury emissions shall be monitored at least once per year if emissions exceed 3.5 lb/24-hour period

✓ Recordkeeping as follows (Condition 4.5(2)(e)(ii)):
  - o Records of emission tests, sludge sampling and charging rate determination

✓ Reporting as follows (Condition 4.5(5)(a)(i)):
  - o Prompt reporting of deviations within 30 days

- ✓ Reporting as follows (Condition 4.5(5)(b)):
  - o Reporting of each determination of mercury emissions within 15 days

Rationale and Justification for Periodic Monitoring
Periodic Monitoring is sufficient for this emission unit because:

- There is a small likelihood of an exceedance (standard is too high to exceed)
- 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/sampling will provide most current mercury data

Non-Applicability Discussion
Complex non-applicability determinations were not made for this emission unit.

Prompt Reporting Discussion
Prompt reporting of deviations has been established as 30 days. See rationale in Chapter III Section 9.

f. Boiler		
Applicable Requirements Summary		
Applicable Requirement	Type	Location
Opacity	Applicable standard (35 IAC 212.123(a))	See the Permit, page 37. (Condition 4.6(2)(a)(i))

Visible Emissions (i.e., Opacity)

✓ Monitoring as follows (Condition 4.6(2)(a)(ii))
- o Annual visible emission observations by using Method 22

✓ Recordkeeping as follows (Condition 4.6(2)(a)(ii)):
- o Records of visible observations

✓ Reporting as follows (Condition 4.6(5)(a)(i)):
- o Report to IEPA deviation within 30 days

Rationale and Justification for Periodic Monitoring

Periodic Monitoring is sufficient for these emission units because:

- There is a small likelihood of an exceedance
- Emissions do not vary significantly under normal operation and/or vary slowly with time
- Natural gas is used as fuel
- Source has not exhibited a history of non-compliance
- Monitoring is consistent with other sources in this source category

Non-Applicability Discussion

Complex non-applicability determination was not made for this emission unit.

Prompt Reporting Discussion

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

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.

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

Semi-Annual Monitoring Reports

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

Annual Compliance Certifications

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

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

Any occurrence that results in an excursion from any emission limitation, operating condition, or work practice standard as specified in this Draft CAAPP Permit is a deviation subject to prompt reporting. Additionally, any failure to comply with any permit term or condition is a deviation of that permit term or condition and must be reported to the Illinois EPA as a permit deviation. The deviation may or may not be a violation of an emission limitation or standard. A permit deviation can exist even though other indicators of compliance suggest that no emissions

violation or exceedance has occurred. Reporting permit deviations does not necessarily result in enforcement action. The Illinois EPA has the discretion to take enforcement action for permit deviations that may or may not constitute a deviation from an emission limitation or standard or the like, as necessary and appropriate.

As a result, the Illinois EPA's approach to prompt reporting of deviations as discussed herein is consistent with the requirements of Section 39.5(7)(f)(ii) of the Illinois Environmental Protection Act as well as 40 CFR Part 70 and the CAA. This reporting arrangement is designed so that the source will appropriately notify the Illinois EPA of those events that might warrant individual attention.

3.10 Emissions Reduction Market System (ERMS)

The Emissions Reduction Market System (ERMS) is a “cap and trade” market system for major stationary sources located in the Chicago ozone nonattainment area. It is designed to reduce VOM emissions from stationary sources to contribute to reasonable further progress toward attainment, as required by Section 182(c) of the CAA.

The ERMS addresses VOM emissions during a seasonal allotment period from May 1 through September 30. Participating sources must hold “allotment trading units” (ATUs) for their actual seasonal VOM emissions. Each year participating sources are issued ATUs based on allotments set in the sources’ CAAPP permits. These allotments are established from historical VOM emissions or “baseline emissions” lowered to provide the emissions reductions from stationary sources required for reasonable further progress.

By December 31 of each year, the end of the reconciliation period following the seasonal allotment period, each source shall have sufficient ATUs in its transaction account to cover its actual VOM emissions during the preceding season. A transaction account’s balance as of December 31 will include any valid ATU transfer agreements entered into as of December 31 of the given year, provided such agreements are promptly submitted to the Illinois EPA for entry into the transaction account database. The Illinois EPA will then retire ATUs in sources’ transaction accounts in amounts equivalent to their seasonal emissions. When a source does not appear to have sufficient ATUs in its transaction account, the Illinois EPA will issue a notice to the source to begin the process for Emissions Excursion Compensation.

In addition to receiving ATUs pursuant to their allotments, participating sources may also obtain ATUs from the market, including ATUs bought from other participating sources and general participants in the ERMS that hold ATUs (35 IAC 205.630) and ATUs issued by the Illinois EPA as a consequence of VOM emissions reductions from an Emissions Reduction Generator or an Intersector Transaction (35 IAC 205.500 and 35 IAC 205.510). During the reconciliation period, sources may also buy ATUs from a secondary reserve of ATUs managed by the Illinois EPA, the “Alternative Compliance Market Account” (ACMA) (35 IAC 205.710). Sources may also transfer or sell the ATUs that they hold to other sources or participants (35 IAC 205.630).

3.11 Federal Start-up/Shutdown/Malfunction-Breakdown Authorization Discussion

As originally adopted, the General Provisions of the NESHAP, 40 CFR Part 63 Subpart A (40 CFR 63.6(f) and (h)) provided that the limits of the NESHAP generally did not apply during startup, shutdown and malfunction (SSM) events (the "SSM Exemption") unless otherwise provided in a particular subpart for a particular category of source or emissions unit.[4] However, in December 2008, a US Court of Appeals decision in *Sierra Club v. EPA*, 551 F.3d 1019 (D.C. Cir. 2008), vacated this SSM Exemption.[5]

On July 22, 2009, Adam Kushner, Director of the Office of Civil Enforcement of the USEPA issued guidance identifying the categories of sources that would no longer be exempt from applicable numerical NESHAP standards during startup, shutdown, and malfunction as a result of the vacatur of the SSM exemption (the SSM Vacatur). This guidance states that the SSM vacatur immediately affects only the NESHAP standards for source categories that both (i) incorporate the SSM Exemption by reference and (ii) contain no other regulatory text that provides an exemption or exception from otherwise applicable limits during startup, shutdown or malfunction events. The NESHAP standards for many source categories contain such separate category-specific exemption language for startup, shutdown and malfunction events. These provisions were not at issue in the *Sierra Club* case and decision, and accordingly those separate provisions would not be affected by the vacatur of the SSM Exemption in 40 CFR 63 Subpart A. The guidance identifies the NESHAP standards for various categories of sources that would be affected by the SSM vacatur and the standards for other categories of sources that would not be affected ("Table 1" and "Table 2," respectively, of the guidance).[6]

3.12 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.[7] 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.[8]

The criteria that are mentioned in USEPA Administrator Petition Responses stress the importance of identifying, *with specificity*, the object of the incorporation.[9] 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*[10]. 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.[11]

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.[12] 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: Fugitive Particulate Matter Operating Program.[13] These plans do not contain the type of information that is integral to assuring compliance with applicable requirements, including emissions limitations, compliance certification, testing monitoring, reporting or recordkeeping requirements, and is indistinguishable from other types of plans (such as operating and maintenance plans and SSM plans)[14] that USEPA has historically concluded need not be incorporated into Title V permits.[15]

3.13 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.[16] Section 39.5(7)(b) of the Illinois Environmental Protection Act[17] 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.[18, 19] 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.[20, 21] 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.[22] 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.[23]

CHAPTER IV - CHANGES FROM PREVIOUSLY ISSUED CAAPP PERMITS

4.1 General Permit Changes

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

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

4.2 Specific Permit Condition Changes

Section 3 – Condition 3.2(a): Fugitive PM Operating Program is incorporated by reference
Condition 3.2.4(a): Synthetic minor limits for HAP's are established
Condition 3.5(a): Prompt reporting

Section 4 –

Condition	Changes in the newly drafted CAAPP
4.1(1)	Plating tanks (ZSP-1, ZP-1, ZCP-1) and HCL cleaning tank (HCLT-5) have been removed from service and CAAPP permit
4.1(2)(a)	Applicable opacity standard of 35 IAC 212.123(a) has been identified and annual visible emissions observations (Method 22) have been established
4.1(5)(a)	Prompt reporting has been revised/expanded
4.2(1)	Oil coating dip tanks have been reestablished as a separate subsection and tanks OT-1 and OT-2 have been removed from service and CAAPP permit
4.2(2)(a)	Applicable opacity standard of 35 IAC 212.123(a) has been identified and annual visible emissions observations (Method 22) have been established
4.2(2)(d)	Standards for HAP emissions of 40 CFR 63 Subpart MMMM have been identified and applicable monitoring requirements established
4.2(5)(a)	Prompt reporting has been revised/expanded
4.2(5)(b) and (c)	Reporting of deviation and other reporting of 40 CFR 63 Subpart MMMM have been established
4.3(1)	Coating lines CL-1, CL-2, CL-4 with associated ovens have been removed from service and CAAPP permit
4.3(2)(a)	Applicable opacity standard of 35 IAC 212.123(a) has been identified and annual visible emissions observations (Method 22) have been established
4.3(2)(c)(i)(C)	Due to changes in operations, only T1 limit for line CL-5 was left
4.3(2)(d)	SO_2 applicable standard and applicable periodic monitoring have been established

4.3(2)(e)	Standards for HAP emissions of 40 CFR 63 Subpart MMMM have been identified and applicable monitoring requirements established
4.3(5)(a)	Prompt reporting has been revised/expanded
4.3(5)(b) and (c)	Reporting of deviation and other reporting of 40 CFR 63 Subpart MMMM have been established
4.4(1)	Furnaces HTF-1,2,4 have been removed from service and CAAPP permit
4.4(2)(a)(ii)	Annual opacity observation (Method 9) and records of these observations have been established
4.4(2)(c)	SO_2 applicable standard and applicable periodic monitoring have been established
4.4(5)(a)	Prompt reporting has been revised/expanded
4.5(2)(a)(ii)	Monthly inspections of scrubber, visible emissions observations and appropriate records have been added
4.5(2)(c)	SO_2 applicable standard and applicable periodic monitoring have been established
4.5(2)(e)(ii)	Stack testing or sludge sampling conducted within 30 months of CAAPP issuance
4.5(5)(a)	Prompt reporting has been revised/expanded
4.6	4.00 mmBtu/hr boiler was moved from insignificant activities

Section 8 - Condition 8.2(a) and (b): newly promulgated RACT standards for miscellaneous metal parts coating

Endnotes

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

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

[3] 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.

[4] During startup, shutdown and malfunction, a source was instead required to minimize emissions of subject emission units in a manner consistent with good air pollution control practice. A startup shutdown and malfunction plan must be maintained by a source setting forth how it operate emission units to minimize emissions during events, ideally so that they are not accompanied by any violations of the applicable standards. Finally, the term "malfunction" is also narrowly defined under the NESHAP. Malfunctions only include events that are sudden, infrequent and not reasonably preventable. Events that are caused, even in part, by poor maintenance or careless operation are not malfunctions for purposes of any SSM exemption.

[5] The *Sierra Club* decision has created concern for the sources that are subject to NESHAP standards and have relied upon the SSM Exemption. For some source categories, the technological capability to maintain compliance with numerical NESHAP standards during SSM events may not currently exist. Numerical standards were also adopted without critical consideration necessarily having been given to whether those standards could reasonably and appropriately be met during startup, shutdown or malfunction events. Consequently, the vacatur of the SSM Exemption creates uncertainty and concern about how to apply these NESHAP standards pertaining to such events.

[6] The USEPA guidance contains a caveat. USEPA recognizes that the source category-specific SSM exemption provisions may be challenged separately. As such, the analysis in its guidance could be subject to change. USEPA indicates that it intends to evaluate which source category-specific SSM exemption provisions should be revised. The Illinois EPA is not aware of any such specific challenges that have been made to source category-specific SSM exemption provisions in the NESHAP.

[7] 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.

[8] 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").

[9] 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.

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

[11] 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).

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

[13] 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.

[14] *See,* Letter and Enclosures, dated May 20, 1999, from John Seitz, Director of Office of Air Quality Planning and Standards, to Robert Hodanbosi and Charles Lagges, STAPPA/ALAPCO, page 9 of Enclosure B.

[15] In the most recent final rulemaking for 40 CFR 63, Subpart A – General Provisions, the US EPA dealt with the need for SSM Plans to be available, the level of detail in an SSM necessary for purposes including permitting and whether a SSM Plan is tantamount to a compliance schedule necessary for incorporation into a Title V permit. USEPA concluded that SSM Plans need not be mandatorily available for public access but rather must be made available upon request by the permitting authority. In addition, these plans do not contain enforceable requirements necessary to demonstrate compliance with the general duty clause at 63.6(e)(1)(i) and are therefore not applicable requirements. Lastly, SSM Plans are not of the same ilk as a compliance schedule required in 502(b)(8) or 503(c) of the CAA or 40 CFR 70.5(c)(8) as the criteria for such documents are clearly distinguishable for each. See, FR Vol. 71, No. 76/Thursday, April 20, 2006 (pg. 20447 and 20449 – 20451); FR Vol. 70, No. 145/Friday, July 29, 2005 (pg. 43993 – 43994); FR Vol. 67, No. 236/Monday December 9, 2002 (pg. 72880). Therefore, the Illinois EPA has concluded that these plans are not required to be incorporated by reference or any of the content of such plans need be incorporated into the CAAPP permit.

[16] 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).

[17] 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."

[18] 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.

[19] 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.

[20] 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.

[21] 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.

[22] The test for the adequacy of "Periodic Monitoring" is a context-specific determination, particularly whether the provisions in a Title V permit reasonably address compliance with relevant substantive permit conditions. 40 CFR 70.6(c)(1); *see also* 40 CFR 70.6(a)(3)(i)(B); *see also, In the Matter of CITGO Refinery and Chemicals Company L.P.,* Petition VI-2007-01 (May 28, 2009); *see also, In the Matter of Waste Management of LA. L.L.C. Woodside Sanitary Landfill & Recycling Center, Walker, Livingston Parish, Louisiana,* Petition VI-2009-01 (May 27, 2010); *see also, In the Matter of Wisconsin Public Service Corporation's JP Pulliam Power Plant,* Petition V-2009-01 (June 28, 2010).

[23] 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.