

Statement of Basis

For a Planned Significant Modification of the
Clean Air Act Permit Program (CAAPP) Permit for

Midwest Generation, LLC - Waukegan Generating Station

Source ID No.: 097190AAC
Permit No.: 95090047

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

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PREFACE

The purpose of this Statement of Basis is to discuss the development and legal basis for the planned significant modification of the Clean Air Act Permit Program (CAAPP)¹ permit for the Waukegan Generating Station. This planned action would make certain revisions to the CAAPP permit for this source. These revisions arise from the settlement negotiations for the permit appeal currently pending before the Illinois Pollution Control Board for the CAAPP permit that was initially issued by the Illinois EPA for this source.

A Statement of Basis is a document that the Illinois EPA must prepare as part of the public comment period for the planned issuance, renewal or significant modification of a CAAPP permit. Statements of Basis are intended to aid the public in understanding the relevant facts and legal underpinnings of planned actions on CAAPP permits and the draft CAAPP permits that have been prepared by the Illinois EPA.² In this instance, this Statement of Basis addresses the significant modification of the CAAPP permit for the Waukegan Generating Station that is planned by the Illinois EPA.

This Statement of Basis is only explanatory in nature and is not enforceable. The Statement of Basis also does not shield the source from enforcement actions or its responsibility to comply with existing or future applicable regulations. Nor does this Statement of Basis constitute a defense to a violation of the federal Clean Air Act, the Environmental Protection Act (Act) or implementing regulations thereunder.

¹ The Clean Air Act Permit Program (CAAPP) is Illinois' operating permit program for sources of emissions pursuant to Title V of the federal Clean Air Act.

² The Illinois EPA must prepare Statements of Basis pursuant to Section 39.5(8)(b) of Illinois' Environmental Protection Act (Act). Along with the draft permit prepared for a public comment period, the Illinois EPA must 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." The Illinois EPA must also provide a copy of this statement to any person who requests it.

INTRODUCTION

The Clean Air Act Permit Program (CAAPP) is the operating permit program established in Illinois for stationary sources of emissions that is required by Title V of the federal Clean Air Act. Title V permits are a means of assembling and setting forth the various air pollution control requirements established under the Clean Air Act for major sources of emissions and certain other sources in particular categories. Illinois' CAAPP has been approved by USEPA as meeting the requirements for a Title V permit program. The CAAPP is administered by the Illinois EPA in conjunction with other state permitting programs for stationary sources of emissions. CAAPP permits contain conditions identifying the federal and state emission control requirements that apply to the various emission units at sources. They also contain detailed conditions establishing "monitoring", including operating practices, emission testing, emissions monitoring, operational monitoring, recordkeeping and reporting, that subject sources must implement to confirm they are operating in compliance with applicable emission control requirements.

The Waukegan Generating Station is a coal-fired power plant with three generating units. The initial CAAPP permit for the Waukegan Generating Station was issued by the Illinois EPA in February 2006. The permit addressed the applicable emission standards and requirements that existed at the time the permit was issued. In a subsequent permit appeal to the Illinois Pollution Control Board, Midwest Generation, LLC challenged the applicability of certain legal requirements and the imposition of certain requirements for monitoring in the CAAPP permit. In the years since the filing of the appeal, the issued permit has been stayed in its entirety. The presence of the stay, which was a consequence of the Illinois administrative review process, has prevented the issued permit from becoming effective. In addition, the stay has acted to prevent the renewal and revision of the CAAPP permit for the Waukegan Generating Station, which would have enabled the CAAPP permit for this source to appropriately address new rules and other relevant developments. The initial steps to advancing the development of an appropriate CAAPP permit for this source is to provide for the effectiveness of a CAAPP permit and the resolution of the permit appeal. The CAAPP permit for the source can and must then be brought up-to-date by the Illinois EPA through permit reopening and, as needed, additional permit revisions.

This Statement of Basis supports a significant modification of the CAAPP permit for the Waukegan Generating Station planned by the Illinois EPA that would make certain revisions to the CAAPP permit initially issued for this source that arise from the settlement of the permit appeal currently pending before the Illinois Pollution Control Board. Chapter I of this Statement of Basis provides historical background to the planned permitting action. It also discusses the legal framework for resolving permit appeals in Illinois, including the typical means for resolving permit appeals and the selected means of resolving Midwest Generation, LLC's appeal using the permit modification procedures under the CAAPP. In addition, other permitting actions that will occur as part of the settlement of the appeal are discussed. Chapter II provides the factual basis for the planned permit action. Chapter III provides a narrative discussion for the specific changes that are planned to the CAAPP permit in this permitting action, which would be made using the procedures for significant modification of CAAPP permits. Chapter IV provides supplemental information, including general discussions of the factual basis for the CAAPP permit that was initially issued to the source and background information relative to CAAPP permits.

CHAPTER I – HISTORICAL AND LEGAL BACKGROUND TO THE PLANNED ACTION

1.1 Historical Background

Midwest Generation, LLC owns a coal-fired electric power plant known as the Waukegan Generating Station. This power plant is located at 401 East Greenwood Ave., Waukegan, IL. In addition to coal-fired boilers, this power plant has ancillary equipment and operations, including coal handling, coal processing and fly ash equipment. The Waukegan Generating Station also has four distillate oil-fired turbines used to provide electricity to meet peak power demands.

Midwest Generation, LLC filed an application with the Illinois EPA on September 7, 1995 for a CAAPP Permit for the Waukegan Generating Station. The application was assigned Application No. 95090047.³ Following a public comment period that included a public hearing, opportunity for supplemental comments from the public and review of a proposed CAAPP permit by USEPA, the Illinois EPA issued a CAAPP permit for this source on February 7, 2006.⁴

On March 13, 2006, Midwest Generation, LLC petitioned Illinois' Pollution Control Board (Board) for review of the CAAPP permit issued by the Illinois EPA for the Waukegan Generating Station. In particular, Midwest Generation, LLC challenged the inclusion of certain specific terms and conditions in this permit, as identified in the petition. Midwest Generation, LLC requested that the Board reverse and remand the permit to the Illinois EPA specifically for the purpose of removing said conditions or revising the permit as requested in the petition. Midwest Generation, LLC further requested that the Board recognize that the "issued" CAAPP Permit was not final and effective, pending a final decision from the Board, with issuance of an order staying the permit as a whole. On March 16, 2006, the Board accepted Midwest Generation, LLC's appeal petition. As noted in the March 16, 2006, Board Order, the permit is stayed in its entirety by operation of law.

The Illinois EPA and Midwest Generation, LLC have been working to settle the appeal of the CAAPP permit. As discussed below, notice of the planned permit action and this accompanying document marks the first step to resolving the permit appeal and ultimately providing for permit effectiveness of a CAAPP permit for this source.

1.2 Resolution of Permit Appeal using CAAPP Procedures for Permit Revisions

As previously discussed, the planned permitting action would make certain revisions to the CAAPP permit arising from the resolution of the Midwest Generation, LLC administrative permit appeal. Although the appeal and the resulting stay of the CAAPP permit remain pending, the Illinois EPA and Midwest Generation, LLC have recently concluded negotiations that will resolve the various appeal points. Under the framework of the Environmental Protection Act, administrative appeals are typically resolved through negotiated settlements, with revised permits being issued by the Illinois EPA that memorialize the outcome of the negotiated settlement process. While it is possible for permit appeals to be resolved through actual litigation before the

³ The Source Identification (ID) Number historically assigned to Waukegan Generating Station by the Illinois EPA is 097190AAC.

⁴ The expiration date specified on the face of the initial CAAPP permit was February 7, 2011, which reflected the five-year permit term required by the CAAPP.

Board, with the possibility of subsequent review at the appellate court level thereafter, it is unusual for permit appeals to be resolved in this manner for a variety of reasons. In practice, resolution of permit appeals by litigation is an infrequent occurrence, except when the Illinois EPA and the permit applicant cannot come to a negotiated settlement.

Under the CAAPP, there are two approaches that the Illinois EPA could pursue to affect a resolution of the pending appeal of the CAAPP permit for Waukegan Generating Station. The first approach would involve complete reissuance of an initial CAAPP permit for this source, based on a new permit application from Midwest Generation, LLC. The second approach, rather than starting the permitting process anew, would address the various contested conditions in the issued CAAPP permit using the established procedures under the CAAPP for revision of permits.

The administrative review process for appeal of CAAPP permits is subject to established legal principles and precedents in Illinois relating to both environmental permitting and administrative law. Key among these principles is that the Illinois EPA cannot unilaterally reconsider its permit decisions. When a permit action has been appealed to the Pollution Control Board, the Board acts as the final decision-maker in adjudicating the appeal of the permit issued by the Illinois EPA. The Illinois EPA cannot, on its own initiative, act to resolve a permit appeal. Thus, when permit appeals are resolved through settlement, such settlements are made possible because the sources authorize the Illinois EPA to act anew in revised permits.

In this instance, the first approach, i.e., reissuance of an initial CAAPP permit, was not feasible. The first two coal-fired power plant petitioners declined to allow the Illinois EPA to act on an application for reissuance of an initial CAAPP permit, which would have resulted in bifurcated processes for resolving the appeals. Moreover, reissuance of the initial permit would also require a comprehensive permit review and accompanying public comment period and USEPA review concerning the same. For the uncontested conditions in the issued permit, the mechanics of this process would necessitate a second review and a repetition of the procedures used for the initial issuance of the CAAPP permit. In view of such scope, a reissuance of an initial CAAPP permit would result in redundancy for a large component of the permit, both in terms of its substantive review and process.

It is also significant that this approach would further delay the effectiveness of a CAAPP permit for the Waukegan Generating Station and the resolution of the appeal. Both the petition for appeal and administrative stay would likely remain in place until the completion of permit reissuance. When the number of appealed CAAPP permits for coal-fired power plants in Illinois is considered, the reissuance of CAAPP permits for all of these plants would almost certainly extend the current *status quo* for these plants for many years to come.

The second approach to the resolution of the appeal of the CAAPP permit for the Waukegan Generating Station, which the Illinois EPA has opted to pursue, involves making revisions to the issued CAAPP permit to achieve a settlement of the appeal. The contested conditions in the issued CAAPP permit will thus be addressed using the various procedures under the CAAPP for revisions of permits, rather than starting permitting anew. As discussed below, this approach involves three discrete phases and will avoid the difficulties of permit reissuance, as it will maintain continuity with the CAAPP permit that was initially issued and the underlying permit application. More

significantly, the Waukegan Generating Station will become subject to an effective CAAPP permit much more quickly.

1.3 Three-Phased Implementation

As related to the Clean Air Act Permit Program (CAAPP), as discussed above, the overall goal is to have the Waukegan Generating Station addressed by and subject to an appropriate CAAPP permit. For this appeal, the initial step to achieving this goal is the notice of the accompanying draft revised permit for public comment and opportunity for hearing, followed by USEPA 45-day review. The implementation of these procedures, which are reflected in the CAAPP's requirements for a significant permit modification, must be fulfilled in order to resolve, consistent with the terms of the parties' settlement, the more substantive appeal points raised in the administrative appeal. Minor points of the appeal are being addressed in parallel permit proceedings, as discussed below. As already discussed, this Statement of Basis supports the planned permitting action for those challenged conditions of the CAAPP permit that can be appropriately addressed using the significant modifications procedures of the CAAPP.

Following the completion of the aforementioned procedures but prior to actual issuance of a revised CAAPP permit, the Illinois EPA and Midwest Generation, LLC intend to file a joint motion with the Illinois Pollution Control Board (Board) requesting that the administrative stay be partially lifted to allow for modification of the initial CAAPP permit. The joint motion will also include a request for remand of the permit to the Illinois EPA so that it can be dated to reflect a full five-year term, as required under the CAAPP. Contemporaneous with the dating of the initial CAAPP permit, the Illinois EPA will issue the significant modification of the permit and parallel administrative and minor modifications of permit. Midwest Generation, LLC can subsequently be expected to seek dismissal of its appeal by the Board.⁵

In addition to the revisions to the permit arising from settlement of the appeal, the Illinois EPA will initiate a formal reopening of the CAAPP permit under the CAAPP's procedures for reopening. This third step will add additional requirements to the CAAPP permit, i.e., requirements under the Clean Air Act that have become applicable to the source since the original permit issuance in 2006, as authorized by Section 39.5(15)(a)(i) of the Act. For the coal-fired boilers, two regulations have been identified at this time as needing to be addressed in the reopening proceeding: the Mercury and Air Toxics Standards (77 FR 9304-9513, February 16, 2012, as amended) and the Cross-State Air Pollution Rule (76 FR 48208, August 8, 2011, as amended). The applicable requirements set by construction permits issued since 2006 for projects at the Waukegan Generating Station will also need be addressed in the reopening, since construction permits are issued under Title I of the Clean Air Act. The Illinois EPA will initiate the formal process of permit reopening in accordance with the requirements of the CAAPP immediately following issuance of this planned significant permit modification and parallel permit revisions.

⁵ The sequence of the three-phased implementation for the Waukegan Generating Station is the same as undertaken in recent efforts to resolve the permit appeal involving Kincaid Generation, LLC for the Kincaid Station.

1.4 The Current Permitting Action

Settlement negotiations have recently produced a final agreement as to the numerous appeal points that presently form the basis for revisions to the CAAPP permit. For this reason, the Illinois EPA is now proceeding with public notice of this draft permit, which reflects those changes to the CAAPP permit from the settlement that are being implemented through the procedures for significant modification.

The permit revisions addressed by this permitting action, as described in detail in Chapter III below, are those deemed to warrant processing as significant modifications under Section 39.5(14)(c) of the Act. These revisions would primarily involve the applicability of certain legal requirements and reasonable changes to requirements for periodic monitoring. As provided by the Act, the CAAPP's procedures for significant modification must be used "for applications requesting significant modifications and for those applications that do not qualify as either minor modifications or as administrative permit amendments". As relevant here, a permit modification that would entail a "significant change in existing monitoring" or a "relaxation of reporting or recordkeeping requirements" is considered "significant". Sections 39.5(14)(c)(i) and (ii) of the Act.

In addition to appeal resolution, and as a consequence of implementing a significant modification to the CAAPP permit, the Illinois EPA is addressing the federal rule for Compliance Assurance Monitoring (CAM Rule), 40 CFR Part 64. In this instance, the CAM rule is not being triggered as a result of CAAPP's procedures for permit revision but, rather, by an independent requirement of the CAM rule, CFR 64.5(a)(2), as it provides that CAM becomes applicable when a large pollutant-specific emission unit would be the subject of a significant permit modification. As CAM would now become applicable for the existing coal-fired boilers at the Waukegan Generating Station for emissions of particulate matter (PM), Midwest Generation, LLC has submitted a CAM plan to the Illinois EPA for those units. In the current permitting action, the Illinois EPA is proposing to conditionally approve this CAM Plan. (See Section 3.2 of this Statement of Basis for a further discussion of the CAM Rule.)

The Illinois EPA also plans to add a condition to the revised CAAPP permit in the current permitting action to address the informational requirements related to the subsequent reopening of this permit that is planned. A concern was expressed by the USEPA in a similar CAAPP permit appeal that the Illinois EPA's intent to invoke the reopening procedures of the CAAPP lacks a sufficiently enforceable commitment.⁶ To avoid either a similar permit objection or other possible administrative action by USEPA in this matter, the CAAPP permit will now require Midwest Generation, LLC to submit information identifying the additional Clean Air Act requirements that have become applicable to the Waukegan Generating Station, as well as information relating to any such requirement for which the source does not currently comply, unless the CAAPP permit has been reopened by the Illinois EPA before a specified date following issuance of the revised permit.

⁶ Indeed, the Illinois EPA considers the reopening provision to constitute an unambiguous statutory duty on the part of the Illinois EPA that is fully enforceable under the CAAPP.

As a planned significant modification to a CAAPP permit, this planned permitting action is subject to requirements for public participation and 45-day review by USEPA in accordance with Sections 39.5(8)(a) and (9) of the Act. It is Illinois EPA's preliminary determination that the planned permit action meets the standards for issuance of a "Significant Modification" of a CAAPP permit as set forth in Section 39.5(10)(a) of the Act (see Section 1.7 of this document). The Illinois EPA has therefore initiated the process for a Significant Modification of the CAAPP Permit.

The Illinois EPA has prepared a Draft Significant Modification of the CAAPP permit and this Statement of Basis.⁷ The draft permit is accompanied by a "tracked changes" or redlined version of the permit reflecting the negotiated changes to the original text of the initial CAAPP permit. It should be noted that both the draft and redlined versions of the permit also contain changes to provisions that are unrelated to the significant modification changes that are the subject of this planned permit action. The additional text in these documents represents the other changes to the CAAPP permit that would be made by administrative amendment and minor modification in parallel permitting actions, as discussed below. The form of these documents allows interested persons to view the cumulative changes to the CAAPP permit resulting from the negotiated settlement of the permit appeal. In this regard, the form of the documents is an outgrowth of negotiations that addressed revisions to the permit in relation to the appeal, rather than the procedures that would eventually be used in making the revisions. The presentation avoids the administrative difficulties associated with creating discrete text for the separate permitting actions.

1.5 Parallel Permitting Actions

In addition to this permitting action for a significant modification of the CAAPP permit, the Illinois EPA is planning, in the near future, to implement certain negotiated revisions to the initial CAAPP permit through the procedures for administrative amendment. Specifically, the changes that are being addressed through these procedures involve typographical corrections, minor administrative changes and/or more frequent monitoring or reporting, as authorized by Section 39.5(13)(c)(i), (ii) and (iii) of the Act, respectively. For permit revisions meeting the criteria for administrative amendment, the Illinois EPA is required to address the revisions using the procedures for administrative amendment of CAAPP permits. The revisions that will be made to the CAAPP permit using the procedures for administrative amendment are described in an ancillary document to this Statement of Basis (Attachment 1). The CAAPP does not provide for public participation on planned administrative amendments. A copy of the amended permit will be submitted to the USEPA following revision, as required by Section 39.5(13)(b) of the Act.

In the near future, the Illinois EPA will also proceed with certain negotiated revisions to the initial CAAPP permit through the CAAPP's procedures for minor modification of permits. The revisions that will be addressed using these procedures involve a variety of changes, including, among other things, those that do not cause significant changes to existing monitoring, reporting or recordkeeping, as provided for by Section 39.5(14)(a)(i)(B) of the Act. For

⁷ The draft Significant Modification of the CAAPP permit and this Statement of Basis have been posted on and are available at both, Illinois EPA and USEPA's website: <http://www.epa.state.il.us/public-notice/>
<http://www.epa.gov/reg5oair/permits/ilonline.html>

permit revisions meeting the criteria for minor modification, the Illinois EPA is required to review the revisions using the CAAPP's procedures for minor modifications. The revisions that will be made using the minor modification process are described in an ancillary document to this Statement of Basis (Attachment 2). The CAAPP does not provide for public participation on planned minor modifications of CAAPP permits. USEPA will be afforded a 45-day review period to comment on the proposed modifications, as provided for by Section 39.5(14) (a) (v) of the Act.

1.6 Legal Basis for the CAAPP Program

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

1.7 Legal Basis for Issuance of Revised CAAPP Permit

In accordance with Section 39.5(10) (a) of the Act, the Illinois EPA has a statutory duty to issue a CAAPP permit, including a significant modification of 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 Act, as applicable, and applicable regulations;
- 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 Act and applicable regulations;
- The applicant has timely paid the fees required pursuant to Section 39.5(18) of the Act and applicable regulations; and
- The applicant has provided any additional information as requested by the Illinois EPA.

These standards have been met. Midwest Generation, LLC has submitted an appropriate application for a revised CAAPP permit. Midwest Generation, LLC submitted an approvable Compliance Plan as part of its initial permit application, in which it certified compliance with all applicable regulations. In addition, the CAAPP permit would require Midwest Generation, LLC to certify as to the source's compliance status on an annual basis.⁸ Midwest Generation, LLC is current on payment of all fees under the CAAPP for the Waukegan Generating Station. As part of the processing of the subject application, the Illinois EPA has not requested any additional information from Midwest Generation, LLC.

⁸ Because the initial CAAPP permit for the Waukegan Generating Station was stayed, Midwest Generation, LLC has not been required to submit reports, including annual compliance certifications, under the CAAPP. When a CAAPP permit takes effect for the Waukegan Generating Station, Midwest Generation, LLC will need to begin submitting the various reports required under the CAAPP. In particular, the first quarterly compliance report that the source must provide will need to address operation of the Waukegan Generating Station during the calendar quarter in which the revised CAAPP permit becomes effective; however, the report need only address operation on or after the permit's effective date.

1.8 Legal Basis for Conditions in the CAAPP Permit

This source, i.e., the Waukegan Generating Station, is subject to a variety of federal and state emission standards and emission control requirements, which are the legal basis for the conditions in this CAAPP permit that limit emissions. Certain other requirements have their origin in preconstruction permits issued for new or modified emission units at the source.⁹ The CAAPP itself provides the legal basis for additional requirements such as periodic monitoring, reporting, and recordkeeping. The specific statutory and regulatory provisions that are the legal basis for the conditions in the CAAPP permit for this source are provided in the permit, as the origin and authority of conditions are also specified and referenced in the conditions of the permit. Conditions that have their origin in a preconstruction permit are also identified.¹⁰

⁹ 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 NSR programs include the federal rules for Prevention of Significant Deterioration of Air Quality (PSD), 40 CFR 52.21, which the Illinois EPA administers for major projects in Illinois pursuant to a delegation agreement with USEPA. In areas that are or have been nonattainment, NSR also includes the 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. The NSR program also encompasses state construction permit programs for projects that are not major.

¹⁰ In CAAPP permits, 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 Act.

CHAPTER II - FACTUAL BASIS FOR THE PLANNED PERMIT ACTION

2.1 Description of the Source

At the Waukegan Generating Station, coal-fired boilers and distillate oil-fired turbines are operated to generate electrical power. The source is located at 401 East Greenwood Avenue, Waukegan, Illinois. The area in which the source is located has been identified as posing a potential concern for consideration of Environmental Justice.

SIC Code: 4911
Location: Lake County

The CAAPP permit for this source currently addresses the following emission units and operations.¹¹

Emission Unit(s)	Description
Unit 6 ¹² Boiler BLR 6	Babcock and Wilcox Boiler (1952)
Unit 7 Boiler BLR 7	Combustion Engineering Boiler (1958)
Unit 8 Boiler BLR 8	Combustion Engineering Boiler (1962)
Coal Handling Equipment	Coal Receiving Operations, Coal Storage Operations and Coal Transfer Operations
Coal Breaker Building - TP2	Coal Crushing Operation
Fly Ash Equipment	Transfer Systems, Silo, and Loadout Operation
Turbine GT 31-1	Distillate Oil Fired Turbine
Turbine GT 31-2	Distillate Oil Fired Turbine
Turbine GT 32-1	Distillate Oil Fired Turbine
Turbine GT 32-2	Distillate Oil Fired Turbine

2.2 Ambient Air Quality Status for the Area

The source is located in an area that is currently designated attainment or unclassifiable for the National Ambient Air Quality Standards for criteria pollutants, including Particulate Matter less than 2.5 microns (PM_{2.5}), Particulate Matter less than 10 microns (PM₁₀), nitrogen dioxide (NO₂), sulfur dioxide (SO₂), carbon monoxide (CO) and lead. The source is located in Lake

¹¹ The initial CAAPP permit does not address new control systems or equipment installed after February 7, 2006 and any associated ancillary operations. This includes any Fuel Additive systems, Sorbent Injection systems, activated carbon injection systems and wet flue gas desulfurization systems that will be addressed as part of the reopening of this permit.

¹² Midwest Generation, LLC retired Unit 6, effective [12/31/2007]; consequently, as provided by Condition 9.11 of the CAAPP permit, no condition of the permit should be construed to impose obligations related to that unit.

County which is currently designated as non-attainment for ozone. (See 40 CFR 81.314, Attainment Status Designations: Illinois)

2.3 Status of the Source under the CAAPP

The source requires a CAAPP permit because it is considered a major source for emissions of the following regulated pollutants: particulate matter (PM), nitrogen oxides (NO_x), volatile organic material (VOM), CO, SO₂ and hazardous air pollutants (HAP).¹³ A major source of emissions is required to have a CAAPP permit by Section 39.5(2) (a) (i) of the Act.¹⁴

The source also requires a CAAPP Permit as an "affected source" for the purposes of Acid Deposition Control, Title IV of the Clean Air Act, as provided by Section 39.5(2) (a) (iii) of the Act.

2.4 Fee Schedule

A schedule limiting the source's annual emissions is not included in the permit for the purpose of fees under the CAAPP. Midwest Generation, LLC currently pays the maximum annual fee for a source under the CAAPP.

2.5 Construction Permits

The Construction Permits listed below, issued prior to February 2006, were reviewed in development of the initial CAAPP Permit issued for the source. Applicable conditions that originated in these construction permits were incorporated into the initial CAAPP Permit.

¹³ The actual annual emissions of regulated pollutants from the Waukegan Generating Station, as reported by Midwest Generation, LLC in its Annual Emission Reports submitted to the Illinois EPA, are provided below:

Pollutant	Reported Emissions (tons/year)			
	2014	2013	2012	2011
CO	1,000.99	1,266.29	1,197.71	1,392.97
NO _x	1,612.73	2,101.09	2,027.81	2,563.40
PM	524.41	816.12	746.58	900.25
SO ₂	7,683.47	7,750.20	7,265.50	9,930.61
VOM	1.87	1.75	1.66	1.92
CO ₂	3,175,975.04	4,012,341.27	3,802,474.79	4,412,738.00
Mercury	0.071	0.092	0.047	0.10

¹⁴ Midwest Generation, LLC has voluntarily submitted data for actual emissions of GHGs from this source in its Annual Emission Reports (AER).

However, Waukegan Generating Station is not currently subject to any "applicable requirements," as defined by Section 39.5(1) of the Act, for GHG emissions, 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 Clean Air Act, the Act, or Illinois' SIP that apply to this source, including terms or conditions in a construction permit addressing GHG emissions or BACT for GHG emissions from a major project at this source under the PSD rules. In addition, 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 does not relieve Midwest Generation, LLC from its obligations for reporting under the Mandatory Reporting Rule.

Permit No.	Date Issued	Subject
99070068	09/13/1999	Dust Conveying System
95070011	09/25/1995	Waukegan 8 ESP Refurbish
02100061	01/14/2003	Baghouse
01090019	11/07/2002	Waukegan 7 ESP Refurbish
00070031	10/06/2000	Over Fire air system for Unit 6 Boiler

CHAPTER III - PLANNED CHANGES TO THE CAAPP PERMIT THAT WOULD BE MADE USING THE PROCEDURES FOR SIGNIFICANT MODIFICATIONS

3.1 Appeal Resolution

Introduction

In the planned permit action, the changes addressed below would be made using the CAAPP procedures for significant modification of permits, pursuant to Section 39.5(14)(c) of the Act. As previously discussed, every significant change in existing monitoring permit terms or conditions and every relaxation of reporting or recordkeeping requirements shall be considered significant. Pursuant to 39.5(14)(c)(iii) of the Act, significant permit modifications must meet all the requirements of public participation, review by affected States, and review by USEPA applicable to initial permit issuance and permit renewal.

Changes in Section 5: Overall Source Conditions

Conditions 5.6.1 and 5.7.2

Condition 5.6.1 of the initial CAAPP permit would have required Midwest Generation, LLC to maintain the records that are necessary for it to prepare its Annual Emission Reports. Pursuant to 35 IAC 254.203(b), Annual Emission Reports, among other things, must include "[s]ource-wide totals of actual emissions for all regulated air pollutants emitted by the source."

In addition, the initial permit would have explicitly required the source to maintain records of emissions of three pollutants, mercury (Hg), hydrogen chloride (HCl) and hydrogen fluoride (HF). The Illinois EPA included this requirement, in large part, because of public interest in emissions of these pollutants. In its appeal to the Board, Midwest Generation, LLC challenged the authority of the permit to require such recordkeeping. At the time the initial permit was issued, emissions of Hg, HCl, and HF from the coal-fired boilers at the Waukegan Generating Station were not yet regulated by any federal or state regulations. The appeal thus questioned the ability of the permit to impose recordkeeping requirements for which no underlying statutory or regulatory requirement existed at the time the permit was issued.

The explicit requirements for recordkeeping for emissions of Hg, HCl and HF would be removed from the permit. This is because these pollutants did not meet the relevant definition of "regulated pollutants" for purposes of Annual Emission Reports when the initial permit was issued (refer to 35 IAC 254.120). It should be noted that recordkeeping for emissions of Hg and HCl is now required by the general language of Condition 5.6.1. This is because both Hg and HCl are now "regulated pollutants" for purposes of Annual Emission Reports. In addition, in its Mercury and Oil-Filled Electric Utility Toxic Air Standards for Coal Generation Units, 40 CFR 63 Subpart UUUUU, the USEPA determined that HCl emissions can serve as a surrogate for emissions of hazardous acid gases, including HF. [77 FR 9367, February 16 2012]. Therefore the removal of recordkeeping requirements for HF from Condition 5.6.1 is of minor significance.

Conditions 5.6 and 5.6.2(a) and (b)

Various changes would be made to these conditions that address retention of required records by the source and the availability of required records for inspection and copying by the Illinois EPA and USEPA. In Condition 5.6.2., the introductory paragraph to these provisions, corrections would be made to the

sections of the Act that are identified as the origin and authority for Conditions 5.6.2(a) and (b), as well as Condition 5.6.2(c).

In Condition 5.6.2(a), changes would be made to allow records to be kept at an off-site location if the location is readily accessible to the Illinois EPA and USEPA, as well as the source. This is because Section 39.5(7)(p)(ii)(B) of the Act only provides that a CAAPP source must keep required records so they are available for inspection by the Illinois EPA.

In Condition 5.6.2(b), changes would be made to more fully address the possible circumstances surrounding requests for copies of records during an inspection of the source by the Illinois EPA or USEPA. This condition would now provide that copies of requested records may be provided in electronic form (e.g., a disk or flash drive), as well as in paper form. It would also provide that responses to voluminous requests for copies of records may be provided within 10 days of the date of a request unless a later date is agreed to by the Illinois EPA or USEPA.

Condition 5.6.2(d)

In the initial permit, this condition required the source to submit copies of certain records to the Illinois EPA. Those records would have identified the control practices used for certain emission units at the source as specifically identified in subsequent conditions of the permit. This requirement would now be moved into each of the unit-specific sections of the permit for which the source is required to submit copies of these records to the Illinois EPA. These are the unit-specific sections of the permit dealing with material handling and processing i.e., Sections 7.2, 7.3 and 7.4 of the permit. This change would make clearer the identity of the emission units for which this requirement is applicable.

Condition 5.9

New Condition 5.9 would require Midwest Generation, LLC to appropriately support the separate reopening of the CAAPP permit for the Waukegan Generating Station, in accordance with Section 39.5(15)(a)(i) of the Act and 35 IAC 270.503(a)(1). If triggered, this condition would require Midwest Generation, LLC to provide certain information to the Illinois EPA in advance of, or contemporaneous with, this permit reopening to assist the Illinois EPA in this reopening of the permit. This condition would be included in the revised permit to address a concern expressed by USEPA about the general approach that is being taken to the CAAPP appeals for Illinois' coal-fired power plants and avoid potential objection or other administrative action by USEPA.

Condition 5.10

Condition 5.10 would be added to the revised CAAPP permit to address the initial timing of certain requirements when the initial permit takes effect.

In particular, Conditions 7.2.8, 7.3.8 and 7.4.8 in the permit require Midwest Generation, LLC to conduct inspections of equipment and observations for visible emissions and/or opacity on a weekly, monthly, quarterly and annual or other basis.^{15, 16} However, the permit would be issued on a date in

¹⁵ For example, Conditions 7.2.8(a) requires the source to conduct inspections of coal-handling operations on at least a monthly basis to confirm proper implementation of the control measures for these operations.

¹⁶ The same concerns are posed for certain other requirements in the permit and are also addressed by Condition 5.10. For example, for the coal-fired boilers, Conditions

the future when the specified time periods would have begun and only a portion of these periods remain. Condition 5.10 would generally provide that the source must initially conduct the required actions in this "remaining time" if more than half of the specified time period is still available (e.g., four days in a week or 15 days in a month). Otherwise, the required actions must initially be completed by the end of the next complete time period. This approach reasonably accommodates the need of the source to have adequate time to conduct the initial inspections and observations that are required under the revised permit.¹⁷

Inspections of the railcar unloader baghouses required by Condition 7.2.8(d) which must be completed prior to commencing unloading of each train set are not required to commence before the 35th day after the effective date of the revised permit. This time was considered to be appropriate to allow the source time to develop appropriate procedures and train personnel to complete the inspection.

Condition 7.1.10-2(a) in the permit addresses content and submittal dates for quarterly reports. The quarterly reports must be submitted by a specific date or within 60 days after the end of the quarter for the first 12 months after the effective date of the permit. Condition 5.10(f) would be added to clearly specify, based on the effective date of the permit, when the first quarterly report must be submitted and the time period that must be addressed in the first quarterly report.

Changes in Section 6.1: Conditions for the NO_x Trading Program

Condition 6.1 - Footnote

A footnote would be added to recognize that the provisions in Section 6.1 of the permit, which relate to the NO_x Trading Program, 35 IAC Part 217 Subpart W, are no longer applicable. These provisions were applicable in 2006. These provisions generally were not appealed when the permit was initially issued. However, with the adoption of 35 IAC 217.751, these provisions ceased to apply beginning in 2009. These provisions would be removed from the permit in the future as part of the reopening of the permit. This is because it would not be appropriate for them to be removed as part of the current modification of the CAAPP permit. The scope of the current modification of the permit is narrowly limited to resolution of Midwest Generation, LLC's appeal of the initial CAAPP permit and these provisions of the initial permit were generally not challenged in that appeal.

7.1.6(a) requires the source to conduct combustion evaluations on a semi-annual basis. The required timing of the first combustion evaluations would depend upon how much time is available to conduct these evaluations when the permit is issued and becomes effective.

¹⁷ A similar but different issue is posed for certain emission testing required by the permit. For example, Condition 7.1.7(a)(ii) requires emission testing for a boiler to be conducted if a criterion is met that applies on a calendar quarter basis, i.e., the boiler operates for more than 72 hours in a calendar quarter at a load that is significantly higher than the load at which emission testing was last conducted. These types of requirements would not apply until after the first complete calendar quarter that the Waukegan Generating Station operates under the revised CAAPP Permit. This is necessary so that data for a complete quarter is available for comparison to the triggering criteria for testing in the condition when the condition becomes applicable.

Condition 6.1.4(a)

The condition would be revised so that it no longer imposes obligations on Midwest Generation, LLC under the NO_x Trading Program in 2004, before the initial CAAPP permit was issued. Midwest Generation, LLC did appeal this condition as it would have retroactively imposed obligations on the source prior to the date that the permit was issued. The revised permit only addresses the obligations under this program prospectively. As already discussed above, these obligations then ceased to apply beginning in 2009, prior to the effectiveness of the permit. As such, the obligations would not apply following the effectiveness of the permit.

Condition 6.1.5(a)

This condition dealing with the continuous monitoring of the NO_x emissions of the coal-fired boilers under the NO_x Trading Program would be revised to indicate that the Permittee must comply with "applicable" monitoring requirements. This recognizes that 40 CFR Part 96 Subpart H, which is referenced by this condition, has various requirements for such monitoring depending upon the circumstances of a subject unit and the approach to monitoring taken by the source. This change also accommodates the fact that the NO_x Trading Program is no longer applicable, as already discussed. However, this change does not allow continuous emission monitoring for NO_x to cease. Continuous monitoring for NO_x emissions is still required for the coal-fired boilers by other regulations, including the Acid Rain Program as addressed in Section 6.3 and Attachment 5 of the permit.

Changes in Section 7.1: Unit Specific Conditions for the Coal-Fired Boilers

Conditions 7.1.1 - Note

To improve clarity, a note would be added to this general description of the coal-fired boilers confirming that this description is only for informational purposes and does not establish any requirements or limitations.

Condition 7.1.6

This condition of the initial CAAPP Permit required the source to perform combustion evaluations on each of the coal-fired boilers. These evaluations would measure the carbon monoxide (CO) concentrations in the flue gas of the boilers and were required by the permit to address compliance with the state CO standard, 35 IAC 216.121. Among other things, this condition required a formalized procedure for obtaining "diagnostic" measurements, as well as "adjustments and preventative and corrective measures" of the boilers to ensure proper combustion.

Midwest Generation, LLC appealed the condition because the requirement for combustion evaluation appeared to require formalized emissions testing and its ability to make "adjustments and preventative and corrective measures" was constrained by the bounds of technical feasibility. In settlement negotiations, the Illinois EPA acknowledged that the original intent of this condition was not to require formal diagnostic testing, which is an engineering evaluation of systems to gather data beyond the standard operational measurements. Rather, the intent was to obtain quantitative information from the standard operational measurements on a continuous or periodic basis and thus serve as an assessment for the functioning of combustion systems in a boiler. The permit would be revised to clarify this aspect of the combustion evaluation.

The permit would also be revised to clarify that "adjustments and preventative and corrective measures" are not a compulsory requirement for each combustion

evaluation. The original intent was to ensure that adjustments or other corrective measures would occur if, depending upon the findings of a given evaluation, such changes are needed to restore combustion efficiency. The revised permit would now eliminate the ambiguity of the earlier condition by providing that combustion evaluations include "any adjustments and/or corrective measures" undertaken to maintain combustion efficiency. The source is still required, consistent with the existing recordkeeping requirements of the CAAPP permit, to maintain records of the adjustments and corrective measures resulting from the combustion evaluation.

Consistent with the above discussion, the revised permit would require combustion evaluations for the coal-fired boilers to be conducted semi-annually. The evaluations would still provide all the quantitative information needed and would be consistent with similar types of compliance requirements (other than those required by this permit) where semi-annual frequencies are typical.

Condition 7.1.7(a) (ii)

This condition requires that the source conduct testing for the coal-fired boilers for PM emissions if a boiler operates at a load that is significantly higher than the load at which testing was most recently conducted for the boiler for a significant amount of time. The condition would be revised to more appropriately address the circumstances of the coal-fired boilers at the Waukegan Generating Station. For this purpose, the criterion for load on the boiler would now be the greater of 10 Megawatts (MW) or 5 percent of the load at which testing was last conducted, rather than 2 percent of the load. The criterion for the duration of such higher-load operation would now be 72 hours per quarter rather than 30 hours per quarter. These criteria in the initial permit were not appropriately tailored to these particular boilers. The original criteria would potentially have required that testing for PM emissions be conducted in circumstances in which it would not be warranted. The changes to these criteria are not expected to enable the regular testing of the boilers for PM emissions to be conducted while operating at loads that are lower than the loads at which such testing would otherwise have been conducted. In any case, Condition 7.1.7(a) (vi) generally provides that the source must conduct testing for these boilers for PM emissions upon request by the Illinois EPA for such testing.

Condition 7.1.7(a) (ii) would also now provide that it takes effect after the first complete calendar quarter that the Waukegan Generating Station operates under the revised CAAPP Permit. This is necessary so that when this condition first becomes applicable, data for a complete calendar quarter is available for comparison to the triggering criteria in this condition.

Condition 7.1.7(a) (v)

Condition 7.1.7(a) (v) addresses certain emission testing of the coal-fired boilers that may be required as a result of firing or burning material other than standard fuel in the coal-fired boilers.¹⁸ As present in the initial permit, this condition generally requires that testing must be conducted for the coal-fired boilers for PM and CO emissions if in a calendar quarter standard fuel (i.e., coal, fuel oil and natural gas) make up less than 97

¹⁸ For the coal-fired boilers, as addressed in Condition 7.1.11, non-standard fuels or fuel materials include process wastes generated at the source, including used oil and boiler cleaning residue, and alternative fuel materials that do not constitute waste and were not generated from either municipal waste or hazardous waste.

percent, by weight, of the material burned in a boiler. Changes would be made to address aspects of this testing that were not considered or addressed during the development of the initial permit. This testing would not be required if testing has already been conducted for the boilers while burning non-standard fuel at a level that would satisfy the requirements established by this condition. This testing also would not be required to be conducted while burning non-standard fuel material at a rate that would exceed the rates at which the feed systems for such materials would be operated. In addition, various changes would be made to clarify the language of this condition.

In Condition 7.1.7(a) (v) (A), changes would be made so that this testing would not be required for the coal-fired boilers if testing has already been conducted while burning non-standard fuel at a level that would satisfy the requirements of this condition. For this purpose, this prior testing must have been conducted while burning non-standards fuels at a level that is equal to or greater than the level at which such material was burned in a calendar quarter or at the maximum rate at which the feed systems for these materials would be operated. This change was needed because the initial permit did not consider that the source might proactively conduct the emissions testing that would otherwise be required by this condition, before it was actually required by this condition. The initial permit was predicated upon this testing being conducted following a calendar quarter in which the amount of standard fuel burned in a boiler was less than 97 percent by weight.

Condition 7.1.7(a) (v) (A) would also now provide that it takes effect after the first complete calendar quarter that the Waukegan Generating Station operates under the revised CAAPP Permit. This is necessary so that when this condition first becomes applicable, data for a complete calendar quarter is available for comparison to the triggering criteria in this condition.

In Condition 7.1.7(a) (v) (B), changes would be made so that this testing would not be required to be conducted while burning non-standard fuel at a rate that would exceed the maximum rate at which the feed systems for such materials are operated. This change was needed because this condition in the initial permit provided that the percentage of non-standard fuel burned during this testing must be at least 1.25 times the percentage at which this material was burned in the calendar quarter that triggered the need to conduct this testing. This requirement was intended to assure that this testing would occur during appropriate operating conditions that would conservatively address the effect of burning non-standard fuel on emissions. The initial permit did not consider that this requirement might require that the feed systems for these materials be operated at rates that would be higher than the capacity of these systems or the rates at which these systems would ever be operated. The revised permit would still require this testing to be conducted under appropriate operating conditions. This is because this testing would still be required to be conducted at least at 1.25 times the percentage at which such material was burned in the quarter that triggered the need for testing or at the maximum rate at which the feed systems would be operated, whichever is lower. This addresses circumstance in which the use of non-standard fuel is constrained by the operation of the feed systems. It also addresses the circumstances if the use of these materials is far below the level at which the feed systems would be operated, so that the 1.25 time factor governs.

Various changes would also be made to Condition 7.1.7(a)(v) to clarify terminology. These provisions would no longer refer to the "fuel supply" for the boilers. It was unclear whether this phrase referred to the material that was actually burned in the boilers, as was intended, or the material that was supplied to the source and was available to be burned in the boiler. In addition, "burning" or "burned" would be used in place of the word "firing". This change was made to use terminology that is simpler and now more common.

Condition 7.1.7(b)(i)

In the initial CAAPP permit, this condition required that measurements of CO and PM emissions be performed at the maximum operating loads of the affected boilers that are representative of normal operation. This condition would be revised to allow these measurements to be performed at 90 percent or better of the seasonal maximum operating loads of the affected boilers or related turbines. This provision would now reflect current site configuration and is consistent with testing at maximum loads done during routine RATA testing.

Condition 7.1.7(b)(iii)

In the initial CAAPP permit, this condition includes requirements for testing emissions of condensable particulate¹⁹ from the coal-fired boilers. Midwest Generation, LLC challenged these requirements on appeal. It argued that they had no basis in law, questioning the authority of the CAAPP permit to require testing for condensable particulate when no underlying requirement existed in any applicable statutory or regulatory provision at the time of permit issuance.

The requirements for measurement of emissions of condensable particulate would be removed from this condition. This is because the underlying regulations did not provide support for such testing and it was beyond the scope of the Illinois EPA's express or implied permitting authority.

Condition 7.1.7(e)(iii)(C)

For the coal-fired boilers, Condition 7.1.7(e) specifies the required contents of final reports that the source must submit for emission testing. Condition 7.1.7(e)(iii)(C) addresses information that must be included in these reports related to the operation of the combustion system during testing. Changes would be made to simplify this condition and facilitate its implementation. These changes are associated with the appeal by Midwest Generation, LLC of Condition 7.1.6(a), which requires the source conduct combustion evaluations for the coal-fired boilers.

Settlement discussions revealed confusion about the nature of the operating information for the combustion system that Condition 7.1.7(e)(iii)(C) required to be provided in test reports.²⁰ Upon further consideration, it has been

¹⁹ Filterable particulate exists as a solid or liquid material at elevated temperature in the stack, while condensable particulate is a vapor or gas in the stack and condenses into a liquid or solid in the atmosphere after exiting the stack and cooling to ambient conditions. Method 202 is USEPA's reference test method for measuring condensable PM. Emissions testing for condensable particulate was not (and still is not) needed to confirm compliance with applicable emission standards for particulate, since current standards only address emissions of filterable particulate.

²⁰ In the initial permit, Condition 7.1.7(e)(iii)(C) required information for the settings for the distribution of primary and secondary combustion air, the target levels for oxygen in the flue gas, and the levels of CO, carbon dioxide or oxygen, as determined by diagnostic measurements.

concluded that this condition can be less prescriptive, to accommodate the various types of operating data that may be available for the combustion systems on the boilers. Accordingly, this condition would be revised to provide greater flexibility and clarify the type of information that would be acceptable. The changes would accommodate reporting of data for CO as measured by operational instrumentation on a boiler, rather than requiring separate diagnostic measurements of CO.²¹ The condition continues to require the source to provide meaningful information in emission test reports for the operation of the combustion system on a boiler during testing.

Condition 7.1.7(e) (iii) (F)

Condition 7.1.7(e) deals with required contents of test reports that the source must submit for emission testing conducted for the coal-fired boilers. Condition 7.1.7(e) (iii) (F) would be added to the information that must be provided in these reports for the operation of the boilers during testing. It requires that these reports include information on the amount of non-standard fuel burned during testing if the testing was conducted to address emissions while burning non-standard fuel, as is required by Condition 7.1.7(a) (v).

Condition 7.1.9(a) (vi)

This condition, which requires recordkeeping related to the combustion evaluations that must be conducted for the coal-fired boilers, would be revised to maintain consistency with the changes made in Condition 7.1.6(a) with respect to the nature of these evaluations, as already discussed. In particular, this condition would now recognize that these records would only include a description of adjustments of corrective measures that were undertaken if such actions took place as part of an evaluation. In addition, such evaluations need not include preventative measures.

Conditions 7.1.9(c) (ii) and (c) (iii) and 7.1.10-2(a) (i) (E)

Condition 7.1.9(c) sets forth recordkeeping requirements for the Continuous Opacity Monitoring Systems (COMS) on the coal-fired boilers. The initial CAAPP Permit relied upon a correlation between opacity and PM emissions, such that the level of opacity is indicative of whether PM emissions controls are being properly maintained and operated for compliance with the applicable PM standard. Among other things, the initial CAAPP Permit established a methodology by which Midwest Generation, LLC was to develop an opacity value, during the permit term and through on-going emissions testing, that would be set at the "upper bound of the 95% confidence interval". This process thus would develop a specified, albeit potentially mutable, value for opacity that would serve as an indicator of a potential problem with compliance assurance for PM and triggering the obligation for further recordkeeping and reporting established elsewhere in the permit.

Midwest Generation, LLC appealed this condition on grounds that it imposed an "unreasonable burden" to develop an upper bound correlation and would not generate information that could be used in conjunction with inspections and opacity reports to assure compliance with the applicable PM standard. Subsequent settlement discussions confirmed the difficulties in the condition

²¹ For the purpose of this discussion, "diagnostic measurements" are measurements that are made as part of a specific investigation to gather data that is not routinely collected or available for the boilers. "Operational measurements" are measurements that are taken on a regular basis, most commonly with instrumentation or devices that are permanently installed on the boilers.

as stated. Among other things, it required a correlation between opacity and PM emissions to meet a statistical criterion as related to the confidence interval that would not necessarily be able to be met given the nature of the correlation and the data that would be available to develop the correlation.

Instead of developing an opacity value in the future through the use of an established methodology, the revised permit would achieve the same result through the selection of a specific value of 30 percent opacity on a 3-hour average. This approach continues to rely on a relationship between opacity and PM compliance for the coal-fired boilers when the PM control technology is functioning properly and the opacity remains within 30 percent. Recent test data for the coal-fired boilers at two other coal-fired power plants, Kincaid Generating Station and Powerton Generating Station, supports a finding that opacity values above 30 percent reflect compliance with a PM emission rate of 0.10 lb/mmBtu. Since sufficient site specific data was not available, this data was considered to be supportive for the selection of a 30 percent, 3-hour average value for Waukegan Generating Station. For both ease and conservatism, the selected numerical value of opacity corresponds to the applicable state opacity standard in 35 IAC 212.123. This is adequate to assure compliance with the PM standard that applies to the boilers pursuant to 35 IAC 212.201 and 212.203, i.e., 0.10 lb/mmBtu for Unit 7 and 0.12 lb/mmBtu for Unit 8. Accordingly, compliance with the PM standard is reasonably assured if the opacity of emissions from the boilers does not exceed 30 percent on a 3-hour block average.

The revised language would require Midwest Generation, LLC to keep a record of all 3-hour block averages in which the average opacity exceeds 30 percent. The previous language in Condition 7.1.10-2(a)(i)(E), which required the source to undertake analysis and evaluation, and recordkeeping and reporting activities related to that condition, is no longer needed in light of the finding that the applicable state opacity standard adequately assures compliance with PM. It is also noteworthy that this approach would eventually be replaced by the approach required by the federal CAM Rule, 40 CFR Part 64, as discussed later in Section 3.2 of this Statement of Basis.

Condition 7.1.9(g)

This condition deals with recordkeeping associated with startup of the coal-fired boilers. The initial CAAPP Permit required that the source maintain basic information, such as a copy of the startup procedures for the boilers and the date, time, duration, and description of each startup. The permit also required more detailed recordkeeping for any startup that lasted longer than 4 hours for Unit 6, or longer than 6 hours for Unit 7 or 8. Midwest Generation, LLC appealed this latter part of the conditions because typical startups of these boilers actually take longer than 4 hours. Accordingly, the initial permit inappropriately required additional recordkeeping and explanation for all startups regardless of the duration or atypical nature of the startup.

The intent of this condition was to require additional documentation and explanation for boiler startups that are out of the ordinary (atypical nature). For startups that take longer than normal, this would include information for why the startup was prolonged and the additional emissions that may have occurred as a result. The revised condition uses a longer duration for normal startup of a boiler, i.e., 20 hours for Unit 7 or 23 hours for Unit 8, before more detailed recordkeeping is needed because of the duration of a startup. This reflects information provided by Midwest Generation, LLC during the settlement discussions showing that typical startups of these boilers can last as long as 20 hours or 23 hours, respectively.

Based on the information now provided by Midwest Generation, LLC, the information for and assumptions about the duration of typical startups of these boilers, which were the basis of the initial permit, were incorrect. As a result of evaluating several typical and atypical startups, up to 20 hours in duration for Unit 7 and 23 hours for Unit 8 should be considered typical for these boilers, given their design. This change addressed these errors in the development of the initial permit while still requiring the source to maintain additional records and reporting for atypical startups.

Conditions 7.1.9(h) (ii), (ii) (A), (ii) (B) and (ii) (D)

Various changes would be made to clarify these conditions dealing with the records that Midwest Generation, LLC must keep pursuant to 35 IAC 201.263 for incidents involving continued operation of the coal-fired boilers with excess opacity or emissions during malfunction or breakdown. In Condition 7.1.9(h) (ii), the phrase "including malfunction and breakdown" would be replaced with "during malfunction and breakdown". This change eliminates ambiguity in the scope of this condition. As originally written, this condition might have been incorrectly interpreted as generally applying to malfunctions and breakdowns of the boilers that result in excess emissions. In fact, this condition only applies to malfunctions and breakdowns of a boiler involving excess opacity or emissions of PM or CO. This is apparent as it requires records for "malfunctions or breakdowns as addressed by Condition 7.1.3(c)". Condition 7.1.3(c) only addresses exceedances of the opacity, PM and CO standards that apply to the coal-fired boilers. In this regard, as required by 35 IAC Part 201 Subpart I when appropriately requested by a source in its application, Condition 7.1.3(c) provides the first-stage of approval or "recognition" that in certain circumstances continued operation of an emission unit with particular state emissions standards being violated may occur during malfunction or breakdown.

In Condition 7.1.9(h) (ii), the phrase "at a minimum" would also be removed, so that the condition no longer suggests that the source must keep records of certain other information related to malfunctions and breakdowns that is not specifically identified or described in this condition. It is not appropriate for this condition to impose such an open-ended obligation on the source for the records that it must keep. It poses the potential for future disputes between the source and the Illinois EPA about the nature of the information that the source should have been keeping pursuant to this condition. In this regard, the obligation imposed by this condition is different from that imposed by other conditions in the permit that require that the source keep in logs or other similar records and then specify the minimum contents of such logs. In these other conditions, the phrase "at a minimum" does not impose an open-ended obligation on the contents of such logs. Rather, it merely recognizes that a source may also voluntarily include other information in such logs beyond the minimum information that is required.

In Condition 7.1.9(h) (ii) (A), a parenthetical would be added following "duration" to further define this term, "(i.e., the length of time during which operation continued with excess opacity or emissions until corrective actions were taken or the boiler was taken out of service)."

In Condition 7.1.9(h) (ii) (B), the phrase "to reduce the duration" would replace the word "duration". This clarifies that this provision addresses the records that must be kept by the source describing the actions that are taken during a malfunction or breakdown incident to reduce the duration of

the incidents. Records related to the actual duration of an incident are already separately required by Condition 7.1.9(h) (ii) (A).

Condition 7.1.9(h) (ii) (D) addresses certain additional records that must be kept for particular malfunctions and breakdowns involving the coal-fired boilers.²² As related to emissions, these records are required for incidents in which the applicable hourly standard for PM or CO was exceeded during the incident. These records are also required for incidents in which emissions "may have exceeded" the applicable standard during the incident. Changes would be made to clarify the circumstances in which the additional records must be kept for possible exceedances, when a standard may have been exceeded. The requirement for actual exceedances of standards is unchanged. For possible exceedances, the revised condition would now require that the additional records must be kept if the source "...believes that compliance with the PM standard likely was not maintained." In the initial CAAPP Permit, the phrase "may have exceeded" in this provision recognized that, the source would not be able to precisely determine PM emission rates during malfunction and breakdown incidents since continuous emission monitoring is not conducted for PM. The change to the provision clarifies that the additional records need not be kept simply because there is a possibility, perhaps only a hypothetical possibility, that the PM standard was exceeded. For CO, the change to this provision reflects further consideration by the Illinois EPA and a conclusion that the source may more readily determine compliance with the CO standard. This is because "add-on control equipment" is not used for CO and proper functioning of the combustion system is addressed by regular combustion tuning. Accordingly, for CO, the additional records need not be kept for possible exceedances of the applicable standard and need only be kept for known exceedances of the standard.

Condition 7.1.9(h) (ii) (D) (3) in the initial permit required the source to keep records for malfunction and breakdown incidents for the magnitude of the PM or CO during the incident. Changes would be made to clarify the nature of the information that must be included in these records that address the magnitude of emissions during incidents. To accomplish this, Condition 7.1.9(h) (ii) (d) (iii) would be replaced by two new conditions, Conditions 7.1.9(h) (ii) (E) and (F), dealing with PM and CO emissions, respectively. This separation was needed because of the difference in the approach to the exceedance of PM and CO standards, where possible exceedances must be addressed for PM. Both of these new conditions would now provide that the records must include "estimates of the magnitude of emissions ..., with magnitude estimated on a qualitative or, if available, quantitative basis." In the initial permit, Condition 7.1.9(h) (ii) (D) (III) simply required the source to keep "Estimates of the magnitude of emissions..." This change explicitly recognizes that the information for the magnitude of emissions that is required may either be qualitative in nature, e.g., small, moderate or large, or quantitative in nature. This was implicit in the initial permit as it referred to an estimate of the magnitude.²³ As a result of these changes, Condition 7.1.9(h) (ii) (D) (4)

²² For opacity exceedances, these additional records, which are related to the need for continued operation during exceedances and the preventative measures that were taken, are only required for incidents in which the opacity standard is exceeded for more than two hours. The source must address incidents in which the duration of opacity exceedances is two hours or less as a group in its quarterly compliance reports for the coal-fired boilers. For example, refer to Condition 7.1.10-2(d) (v).

²³ An "estimate" is an approximate calculation, a judgment, or the extent of a thing. The "magnitude" of a thing is its greatness of size, volume or extent, or its

in the initial permit regarding recordkeeping for excess NO_x emissions was reworded slightly and became Condition 7.1.9(h) (ii) (G).

Condition 7.1.10-1(a) (i), (ii) and (iii)

As already explained, Condition 7.1.10-1(a) deals with the prompt reporting of deviations for the coal-fired boilers. Conditions 7.1.10-1(a) (i), (ii) and (iii) delineate the applicable requirements for such reporting for different classes of deviations. Various changes would be made to these conditions to more clearly set forth what is required as prompt reporting for different classes of deviations. The changes respond to concerns that this condition in the initial permit was not entirely clear in how it relied upon certain other notifications and reports that must be provided for these boilers to fulfill the general obligation under the CAAPP that a source notify the Illinois EPA of all deviations that occur.

Condition 7.1.10-1(a) (i) (Conditions 7.1.10-1(a) (i) and (ii) in the initial CAAPP permit) addresses prompt reporting for "particular deviations" from the applicable standards for PM and opacity. These particular deviations are deviations for which reporting is separately required under Condition 7.1.10-3(a). For these boilers, Condition 7.1.10-3(a) requires immediate reporting and/or follow-up reporting for exceedances associated with malfunction or breakdown incidents, as provided for by 35 IAC 35 IAC 201.263.²⁴ In the revised permit, Condition 7.1.10-1(a) (i) would now address both PM and opacity exceedances, combining Conditions 7.1.10-1(a) (i) and (ii) in the initial permit. This condition continues to provide that prompt reporting for these particular deviations is to be made by reporting in accordance with Condition 7.1.10-3.

Condition 7.1.10-1(a) (ii) (Condition 7.1.10-1(a) (iii) in the initial CAAPP permit) addresses prompt reporting for deviations from the applicable standards for opacity, PM, SO₂ and NO_x and associated requirements for continuous monitoring. In the revised permit, this condition continues to generally provide that prompt reporting for these other deviations is to be made by reporting in the quarterly compliance reports for the boilers. The revised condition would now recognize the exception to this practice, i.e., the deviations from PM and opacity standards which must be separately reported under Condition 7.1.10-3(a), as addressed by Condition 7.1.10-1(a) (i), as has already been discussed.

Condition 7.1.10-1(a) (iii) (Condition 7.1.10-1(a) (iv) in the initial CAAPP permit) addresses prompt reporting for "other deviations", i.e., deviations that are not addressed in the preceding provisions of Conditions 7.1.10-1(a). In the revised permit, Condition 7.1.10-1(a) (iii) continues to provide that prompt reporting for other deviations is to be made by reporting in the

importance or significance. Accordingly, the original provision only required the source to conduct an evaluation for the level of emissions during an incident that potentially might conclude only that emissions were possibly noncompliant, slightly noncompliant, moderately noncompliant or seriously noncompliant. The provision did not require a precise numerical quantification for emissions of either PM or CO.

²⁴ As will be discussed in more detail later, Condition 7.1.10-3(a) requires follow-up reports within 15 days of malfunction/breakdown incidents that involved continued operation of a coal-fired boiler in violation of the PM standard. It also requires immediate reporting accompanied by follow-up reports for incidents in which the opacity standard is exceeded for eight or more six-minute averages in a two-hour period.

quarterly reports for the boilers. The provision would be made clearer by no longer defining these deviations by exclusion. That is, these other deviations are not described as being deviations that are not addressed by the preceding conditions. These other deviations are instead directly described as being deviations from work practice requirements and recordkeeping requirements.

Condition 7.1.10-1(b)

For the coal-fired boilers, Condition 7.1.10-1(b) sets forth requirements for "periodic reporting" of deviations.²⁵ Various changes would be made to clarify what is required as periodic reporting for deviations that have already been reported as part of prompt reporting. These "already reported deviations" are addressed in Condition 7.1.10-1(b)(i). These deviations would involve PM emissions or opacity and have been addressed in event-specific reporting pursuant to Condition 7.1.10-3(a). For these deviations, Condition 7.1.10-1(b)(i) would now provide that the source must provide a listing of the notifications and reports that have already been provided to the Illinois EPA. In the initial permit, the source was required to provide a listing of these deviations that would include identification of the notifications and reports that have already been provided for those deviations. In addition, because of the restructuring of Condition 7.1.10-1(a), which deals with prompt reporting of deviations, a change would be made to the cross-reference in Condition 7.1.10-1(b)(i). This condition would now refer to Condition 7.1.10-3(a), rather than Conditions 7.1.10-1(a)(i) and (ii). This is the condition in the revised CAAPP permit that, as part of prompt reporting of deviations, would now require notifications and reports for certain deviations separate from reporting in the quarterly reports.

A change would also be made in Condition 7.1.10-1(b)(ii), which deals with deviations that have not already been separately reported to the Illinois EPA. Because of the restructuring of Condition 7.1.10-1(a), a change would also be needed to the cross-reference in this permit. It would now refer to Conditions 7.1.10-1(a)(ii) and (iii) rather than Conditions 7.1.10-1(a)(iii) and (iv).

Condition 7.1.10-2(a)(iii)

The condition would be revised to specify deadlines for submittal of quarterly reports during the first year after the effective date of the permit consistent with the requirements in Condition 5.10(f).

Condition 7.1.10-2(d)(iv)

Condition 7.1.10-2(d)(iv) deals with the information that Midwest Generation, LLC must include in its quarterly compliance reports for the coal-fired boilers for periods of emissions in excess of the applicable PM emission standard, 35 IAC 212.202. In the revised permit, a change would be made to Condition 7.1.10-2(d)(iv)(A)(III) for purposes of clarification. For such exceedances, this condition would now require that these reports must include, in addition to other required information, information for "The qualitative or, if available, quantitative magnitude of the excess emissions." In the initial permit, this condition required the source to provide information for "The magnitude of the exceedance." As already discussed, this change explicitly recognizes that the information for the magnitude of emissions in excess of 35 IAC 212.202 that is required may be either qualitative or quantitative in nature.

²⁵ Under the CAAPP program, sources must provide both prompt reports for individual deviations and periodic, or comprehensive, reports for all deviations. (Refer to Sections 39.5(7)(f)(i) and (f)(ii) of the Act, respectively.)

A change would also be made so that these reports need not include information for the opacity of emissions on a 6-minute average, as was required by Condition 7.1.10-2(d)(iv)(A)(IV) of the initial permit. As already discussed, the revised permit would rely upon opacity of emissions on a 3-hour average, rather than on a 6-minute average, as the indicator of compliance of the coal-fired boilers with 35 IAC 212.202.

With the removal of Condition 7.1.10-2(d)(iv)(A)(IV) from the revised permit, the subsequent conditions in Condition 7.1.10-2(d)(iv) would be renumbered (i.e., Conditions 7.1.10-2(d)(iv)(A)(V) through (VII), became Conditions 7.1.10-2(d)(iv)(B)(IV) through (VI)). Certain other minor changes would also be made in these conditions for purposes of clarification. For example, in renumbered Condition 7.1.10-2(d)(iv)(A)(IV), which requires information on how an exceedance was identified, the phrase "in addition to the level of opacity" would be changed to "if other than the level of opacity".

Condition 7.1.10-2(d)(iii) and (v)

These conditions deal with information that must be included in quarterly reports related to opacity exceedances. These conditions would be revised to more clearly specify information that Midwest Generation, LLC must include in quarterly reports regarding all opacity exceedances during the quarter as well as further information that must be included in these reports regarding opacity exceedances or groups of opacity exceedances that resulted from the same or similar causes. The revised conditions better reflect the required contents of these reports, as specified by Section 39.5(7)(f)(ii) of the Act.

Specifically, Condition 7.1.10-2(d)(iii) would now clearly identify the items that Midwest Generation, LLC must include in a summary of information for each period of excess opacity during the quarter. The requirement to include a detailed explanation of the cause and corrective actions for each period of excess opacity would be removed from this condition because this information would be addressed in Condition 7.1.10-2(d)(v). This condition continues to require the Permittee to identify the cause for each period of excess opacity, if known, and any corrective actions taken.

Condition 7.1.10-2(d)(v) would now require the Permittee to provide further information for opacity exceedances or groups of opacity exceedances with "recurring" causes or "new" causes during the quarter. The conditions would define "recurring" causes as those that also resulted in exceedances during the previous quarter and "new" causes as those that did not result in opacity exceedances during the previous quarter.

For "recurring" cause opacity exceedances or groups of opacity exceedances each quarterly report shall include: an explanation of any particular circumstances or factors during the quarter that affected the number or magnitude of such exceedances; a discussion of any changes in the corrective actions taken in response to such exceedances during the quarter as compared to the previous quarter; and a discussion of any additional preventative measures that were taken during the quarter to reduce the number or magnitude of exceedance(s).

For "new" cause opacity exceedances or groups of opacity exceedances each quarterly report shall include: an explanation of the cause(s) or probable cause(s) of such exceedance(s), to the extent known; a discussion of any particular circumstances or factors during the quarter that resulted in such exceedance(s); the corrective action(s) taken, if any, with explanation of

how those action(s) functioned to end the exceedance(s); and a discussion of any preventive measures taken to reduce the number or magnitude of exceedance(s).

In order to provide the specified information for "recurring" and "new" cause exceedances the Permittee must complete a thorough review of all opacity exceedances during the quarter and compare results to previous quarters. IEPA would be provided with sufficient detail each quarter to determine if appropriate corrective and preventative actions have been taken or initiated.

The requirement to include PM exceedances in the Condition 7.1.10-2(d) would be removed because periods of excess PM emissions would now be adequately addressed in Condition 7.1.10-2(d) (iv) as previously addressed in the Statement of Basis.

Condition 7.1.10-3(a)

This condition deals with reporting in the case of continued operation of the coal-fired boilers during malfunctions and breakdowns. The condition requires the source to provide certain notifications and reports concerning incidents when the operation of a boiler continued with excess emissions during malfunction or breakdown of the boiler.²⁶ All such incidents must be reported by the source in its quarterly reports under Condition 7.1.10-1(b) (periodic reporting of deviations) as well as Condition 7.1.10-2(d) (reporting related to opacity and PM emissions). Condition 7.1.10-3(a) (i) further provides that the source must immediately notify the Illinois EPA for certain incidents. For example, as related to excess opacity, Midwest Generation, LLC must immediately notify the Illinois EPA when the opacity from a boiler exceeds the applicable opacity standard for the specified number of 6-minute averaging periods (unless it has begun shutdown of the boiler by that time). Condition 7.1.10-3(a) (ii) further provides that the source must provide incident-specific follow up reports for certain incidents. These provisions in Condition 7.1.10-3(a) implement 35 IAC 201.263, which provides that, unless otherwise specified in a permit, sources must immediately notify the Illinois EPA of continued operation with excess emissions during malfunctions or breakdowns when a permit provides first-stage preliminary approval for violations of state standards during malfunction or breakdown. Midwest Generation, LLC appealed various aspects of Condition 7.1.10-3(a), many of which have already been discussed.

In the introductory paragraph of Condition 7.1.10-3(a), Midwest Generation, LLC expressed concerns about the phrase "including continued operation during malfunction or breakdown". This phrase would be revised to "during malfunction or breakdown", to clarify the scope of the condition.

With respect to immediate reporting, as addressed in Condition 7.1.10-3(a) (i), Midwest Generation, LLC expressed concerns during the settlement discussions about providing immediate notification for opacity exceedances at a time when the circumstances surrounding the exceedance may still be unfolding or the investigation is only at an initial stage. It became apparent that some of the assumptions that the Illinois EPA had made when initially selecting a timeframe of 30 minutes (five 6-minute averaging periods) were incorrect. It had been assumed that 30 minutes would provide a reasonable opportunity for the source to complete corrective action so that the source would not need to undertake immediate reporting to the Illinois EPA for opacity exceedances that were

²⁶ Conditions 7.1.10-3(a) (ii) requires incidents in which the PM standard was exceeded to be reported to the Illinois EPA within 15 days.

relatively brief and accordingly likely minor in nature. In addition, it was believed that 30 minutes would provide adequate time for the source to conduct an initial evaluation for more serious incidents, for which immediate reporting would be needed, so that such reports would include useful information. Finally, it was also believed that 30 minutes would provide appropriate incentives for rapid implementation of corrective actions. However, it is now recognized that 30 minutes is not adequate for these purposes.²⁷ Accordingly, the time before the immediate notification requirement is triggered would be increased from five to eight 6-minute averaging periods (30 minutes to 48 minutes). The source would now have 18 additional minutes in which to correct the problem or begin to shut down a boiler before it needs to provide immediate notification. This would more effectively accomplish the underlying purposes of this requirement. The resulting consequences for compliance are expected to be trivial given the relatively small amount of additional time that the source would be provided.

With respect to immediate reporting for PM exceedances, as also addressed in Condition 7.1.10-3(a) (i), Midwest Generation, LLC generally expressed concerns during the settlement discussions about providing immediate notification for any exceedances. Upon further consideration, the Illinois EPA has concluded that it is more appropriate to address PM exceedances with follow-up notification. This is because it would be difficult to address PM compliance on a real-time basis. Moreover, notification for incidents that are likely of interest for PM would be provided by means of the provisions of the permit for immediate notification related to opacity.²⁸

With respect to follow-up reporting for PM exceedances, as addressed in Condition 7.1.10-3(a) (ii), Midwest Generation, LLC generally expressed concerns during the settlement discussions about providing any follow-up reports for possible exceedances of the PM standard. Upon further consideration, the Illinois EPA has concluded that it is more appropriate to address possible PM exceedances through the regular quarterly compliance reports rather than with follow-up reports. Accordingly, this condition would now only require incident specific reporting, with reporting to the Illinois EPA within 15 days of an incident, for actual exceedances of the PM standard. Other changes would also be made to simplify and clarify this condition. Rather than restating the required contents of these reports, this condition would now refer to the applicable records that must be kept for such incidents, as addressed in Condition 7.1.9(h) (ii).

Condition 7.1.12(a) (ii) (C), (D) and (E)

Certain changes would be made to simplify Condition 7.1.12(a) (ii), which sets forth additional compliance procedures for the coal-fired boilers if the source elects to rely on 35 IAC 212.123(b). This standard generally allows opacity greater than allowed by 35 IAC 212.123(a) under certain specified

²⁷ To illustrate, once an opacity exceedance occurs, staff would likely have to physically travel to the suspected location of the problem, then inspect and diagnose what is happening, and, if necessary, call in supervisory staff - all before the possibility of corrective action becomes available. This provides very little time to take corrective action within 30 minutes.

²⁸ It is noteworthy that immediate notification is required for incidents in which the aggregate duration of opacity exceedances is less than one hour. For opacity, immediate notification is required if the opacity standard is exceeded for eight or more 6-minute averages in a two-hour period, i.e., 48 minutes or more.

circumstances, limiting opacity in those circumstances to no more than 60 percent.²⁹

Condition 7.1.12(a) (ii) would be modified to require.

The various provisions in Condition 7.1.12(a) (ii) in the initial permit were developed to set forth the additional compliance procedures that the Illinois EPA believed at the time were needed to address the provisions of 35 IAC 212.123(b) if the source elects to rely on this rule. This was because the source must have appropriate information to be able to show compliance under 35 IAC 212.123(b) if it chooses to rely on this rule. These additional compliance procedures are needed because there are aspects of 35 IAC 212.123(b) that cannot be properly addressed using only the information that would be collected pursuant to the compliance procedures for 35 IAC 212.123(a). Among other things, to show compliance with 35 IAC 212.123(b) for an emission unit, a source needs to have "short-term data" for opacity, e.g., minute-by-minute data, for the unit as well as data for opacity of the unit on a 6-minute average.³⁰

In the revised permit, various changes would be made to simplify the provisions of Condition 7.1.12(a) (ii), thereby addressing aspects of these

²⁹ The alternative standard 35 IAC 212.123(b) is available to all emission units that are subject to 35 IAC 212.123(a). When originally adopting standards for opacity, the Board recognized that there would be certain circumstances in which the general 30 percent opacity standard should not be applicable for an emission unit. The Board specifically considered whether the alternative opacity standard that is now codified as 35 IAC 212.123(b) would accommodate soot blowing at existing coal-fired boilers. Soot-blowing is the process of periodically blowing deposits of soot and ash off the tubes of a coal-fired boiler by blasts of air or steam. Soot blowing must be performed on a regular basis while the boiler is operating to prevent accumulations of material in the boiler that would reduce the boiler's thermal efficiency or pose a safety risk. For the short periods when soot blowing occurs, the opacity of the emissions from a coal-fired boiler is higher. The Board concluded that the process of soot blowing would reasonably be accommodated in most cases by this standard (Illinois Pollution Control Board, *In the Matter of Emission Standards*, April 13, 1972, IPCB R-71-23A, p. 14). As soot blowing of a coal-fired boiler results in opacity greater than 30 percent, this standard would allow soot blowing to be conducted in three hours in a 24-hour period (once per eight-hour shift), with the aggregate duration of higher opacity in each such hour restricted to at most eight minutes. In addition, opacity during such soot-blowing is limited to no more than 60 percent. The standard in 35 IAC 212.123(b) is similar to the approach taken by USEPA in the opacity standards for new boilers in the New Source Performance Standards (NSPS), 40 CFR 60 Subparts D, Da, Db and Dc. These rules provide for short periods of higher opacity.

³⁰ The Board originally adopted the opacity standard that has now been codified as 35 IAC 212.123(b) in 1972. This was before USEPA adopted revised Reference Method 9 in 1974. The Ringelmann Chart was still an acceptable method for conducting observations for opacity in 1972. The Ringelmann Chart involved comparing the observed opacity from an emission unit to charts or cards that represented six levels of opacity, from clear to totally opaque. The 30 percent opacity standard in 35 IAC 212.123(a) was subsequently revised by the incorporation of Method 9 into Illinois' rules, converting the time-basis of this standard to a 6-minute average, consistent with Method 9. However, no such revisions were made to the rule that has now been codified as 35 IAC 212.123(b). Because 35 IAC 212.123(b) requires a determination whether opacity from a unit has been greater than 30 percent for a period or periods aggregating 8 minutes in any 60 minute period, the implementation of this rule requires that opacity be determined for the emission unit at issue for periods that are less than six minutes in duration. This is readily accomplished for the coal-fired boilers at the Waukegan Generating Station as continuous opacity monitoring is conducted for these boilers.

provisions that Midwest Generation, LLC had appealed. However, changes would not be made to Condition 7.1.12(a)(ii)(A), which addresses the need for the source to have records of short-term opacity data for the coal-fired boilers if it is relying on 35 IAC 212.123(b). Changes also would not be made to Condition 7.1.12(a)(ii)(B), which addresses the need for the source to be able to review this short-term opacity data to address whether all elements of this rule have been satisfied. In the revised permit, only the compliance procedures in Condition 7.1.12(a)(ii)(C), (D) and (E), which involve certain further aspects of implementation of 35 IAC 212.123(b), would be simplified.

Condition 7.1.12(a)(ii)(C) addresses information that the source must have for the opacity of emission units at the source other than the coal-fired boilers if it relies on 35 IAC 212.123(b). The revised permit would now simply provide that the source must have representative opacity data for such other units, as is required to be collected pursuant to the permit. Upon further consideration, it was concluded that more extensive requirements need not be set for this data for other emission units.³¹ The aspect of 35 IAC 212.123(b) that Condition 7.1.12(a)(ii)(C) addresses is that this rule is only available for one emission unit at a source in any hour, unless the emission units are located more than 1,000 feet apart. This aspect of this rule can be addressed using representative opacity data for emission units other than the coal-fired boilers. Short-term, concurrent opacity data need not be available for these other units since this rule is only likely to be relied upon for the coal-fired boilers. This is because coal-fired boilers can have transitory variation in the levels of opacity that would be such that they could potentially be covered by 35 IAC 212.123(b).

Condition 7.1.12(a)(ii)(D) addresses the information that must be included in quarterly compliance reports for the coal-fired boilers with respect to reliance on 35 IAC 212.123(b). If the source relies upon this rule, the revised permit would now simply require that the source confirm in the compliance report that the relevant short-term opacity data shows that the terms of this rule were met. It does not include other incidental language.³² Upon further consideration, it was determined that the other, incidental language in this provision in the initial permit, which could be construed as codifying a particular interpretation of 35 IAC 212.123(b), need not be included in the permit.

³¹ Condition 7.1.12(a)(ii)(C) in the initial permit required that the source: For other emission units at the source, have the ability to review short-term opacity data representative of such units during hours in which the opacity of the affected boilers on a short-term basis may exceed 30 percent, to confirm that the opacity of any other unit at the source did not exceed 30 percent in any minute during an hour in which the short-term opacity of the affected boilers may have exceeded 30 percent.

³² Condition 7.1.12(a)(ii)(D) in the revised permit simply requires that the source: In the reports required by Condition 7.1.10-2(d), confirm that the relevant short-term opacity data shows that the terms of 35 IAC 212.123(b) are satisfied when 35 IAC 212.123(b) is relied upon. Condition 7.1.12(a)(ii)(D) in the initial permit required that the source: In the reports required by Condition 7.1.10-2(d), confirm that the relevant short-term opacity data, reviewed as above, shows that the terms of 35 IAC 212.123(b) are satisfied, when 35 IAC 212.123(b) is relied upon as the basis to claim that the affected boilers did not violate Condition 7.1.4(a) even though opacity on a 6-minute average exceeded 30 percent.

Condition 7.1.12(a) (ii) (E) addresses the notice to the Illinois EPA that is appropriate if the source changes aspects of its procedures associated with reliance on 35 IAC 212.123(b). The revised permit would now simply provide that the source must notify the Illinois EPA if it changes the type of short-term opacity data that it is collecting for the coal-fired boiler. In addition, this notification is to be provided with the next quarterly report.³³ Upon further consideration, it was recognized that the specific aspect of the source's procedures that is of interest to the Illinois EPA is the type of short-term opacity data that is collected. In addition, any changes to the type of short-term data by a source can be appropriately considered by the Illinois EPA during the routine review of quarterly compliance reports. The Illinois EPA does not need to review proposed changes to the type of short-term data in advance of any such change since the source must continue to satisfy all elements of 35 IAC 212.123(b) if it is relied upon. For both the source and the Illinois EPA, the changes to Condition 7.1.12(a) (ii) (E) appropriately simplify this aspect of the compliance procedures associated with reliance on 35 IAC 212.123(b).

Changes in Sections 7.2, 7.3 and 7.4: Unit Specific Conditions for Coal Handling, Coal Processing and Fly Ash Handling

Conditions 7.2.6(a), 7.3.6(a) and 7.4.6(a)

Conditions 7.2.6(a), 7.3.6(a) and 7.4.6(a) address the control measures for handling and processing of coal and handling of fly ash, as well as the related requirements to "operate and maintain" these control measures on an on-going basis.³⁴ In its appeal, Midwest Generation, LLC, challenged various

³³ Condition 7.1.12(a) (ii) (E) in the initial permit required that the source: Notify the Illinois EPA at least 15 days prior to changing its procedures associated with reliance on 35 IAC 212.123(b), to allow the Illinois EPA to review the new recordkeeping and data handling practices planned by the Permittee.

³⁴ Various control measures have long been used by the source and would continue to be used for the subject units, independent of the CAAPP permit, for reasons related to worker safety, reliability of operation, and operational costs. The inclusion of the requirement for use of control measures in the CAAPP permit is significant in that it codifies this practice and is accompanied by provisions for verifications.

In general, the initial CAAPP permit did not identify the specific control measures that would be used for each subject unit but, rather, placed the responsibility for such identification upon the source. The revisions to the permit would retain the intent of the initial permit. They would continue to allow the source to select the control measures used for PM emissions and contain an illustrative list of the types of control measures that would be used for this purpose. In this regard, the permit provides for use of the control measures for dust that have historically been used by the source.

At the same time, consistent with the initial permit, the revised permit also retains requirements to make the use of the selected control measures enforceable as a practical matter. In this regard, the source must identify such measures within 60 days of the issuance of the permit. Thereafter, it must maintain a record identifying these measures and, if different measures would potentially be used depending upon the circumstances, the circumstances in which particular control measures would be used. The CAAPP permit generally identifies the control measures to be employed by the source, as they are described in both the equipment descriptions and equipment lists contained within the permit. When coupled with the requirement to implement and maintain control measures, the permit requires the source to use control measures as so described or listed in the accompanying condition. The permit also does not establish whether, or which, control measures must always be operated, as doing so would contradict the intended use of such controls. The planned revisions to the

elements of the Periodic Monitoring for the coal handling, coal processing and fly ash handling operations.

In Conditions 7.2.6(a)(i), 7.3.6(a)(i) and 7.4.6(a)(i), various changes to the language would be made. First, the revised language would now focus on PM emissions generally instead of simply visible emissions. The modifying language "minimize" and "provide assurance of compliance with" would be replaced with the language "to support periodic monitoring". Second, the word "minimize" is ambiguous and usually lacks regulatory meaning. The phrase "provide assurance..." is also vague and, in the context of a CAAPP Permit, could mean a requirement that is designed to substantiate compliance with a given requirement. The new language would more clearly reflect the objective for these conditions, consistent with the Illinois EPA's original intent at the time that the initial permit was issued. Moreover, given that there are no underlying state or federal regulatory requirements for these work practices, the revised language would more closely align with the supporting legal authority under the CAAPP to accomplish the purposes of the requirements for Periodic Monitoring in Section 39.5(7)(a) of the Act.

In Conditions 7.2.6(a)(ii), 7.3.6(a)(ii) and 7.4.6(a)(ii), minor wording changes would be made to address Midwest Generation, LLC's concern that these provisions may have inadvertently created stand-alone obligations separate from the preceding requirements to implement and maintain control measures. In addition, Midwest Generation, LLC sought assurance that compliance with the accompanying recordkeeping for the control measures (together with applicable testing and inspection) satisfied the over-arching work practices obligation in Conditions 7.2.6(a)(i), 7.3.6(a)(i) and 7.4.6(a)(i). Both changes to the relevant text are consistent with the original intent of the conditions.

The language of the relevant conditions still generally reflects the language in the initial permit, with the simplifying clarification that the "control measures" identified in the recordkeeping provisions would now be addressed in lieu of "established control measures".³⁵ In addition, the recordkeeping requirements for the control measures would be set out in more detail elsewhere in the permit to ensure both additional enforceability and consistency with settlement discussions regarding the nature of this required record. (See revised Conditions 7.2.9(b)(i), 7.3.9(b)(i) and 7.4.9(b)(i).)

Conditions 7.2.7(a), 7.2.8, 7.3.7(a), 7.3.8, 7.4.7(a) and 7.4.8

The revised permit would generally make various corrections and adjustments to the requirements for opacity observations and for inspections for the coal handling operations, coal processing processes and the fly ash handling processes. The objective was to maintain continuity with the initial permit and not alter the basic approach taken for these requirements.³⁶ At the same

permit would not alter these substantive requirements in the initial permit for use of control measures by the source.

³⁵ The use of the term "established" in the initial permit to describe the control measures is likely redundant and potentially confusing. This is because the permit requires the source to keep records identifying these control measures. Those records would necessarily reflect those measures selected or established by the Permittee for the subject units.

³⁶ The initial CAAPP permit established a comprehensive regimen for Periodic Monitoring for the subject operations and processes. In its consideration of Periodic

time, the Illinois EPA recognized the need to reconcile a revised permit secured through a negotiated settlement with changes to certain requirements in the initial permit. On balance, the changes are consistent with the Periodic Monitoring required by the initial permit, strengthening the robustness of the overall approach.

The initial CAAPP permit provided for Periodic Monitoring for these emission units through a variety of requirements. As already discussed, one aspect of these requirements was the use of control measures. This requirement is analogous to requirements under certain state rules and certain New Source Performance Standards.³⁷ Those rules generally require a subject source to identify best management practices or good engineering practices to reduce emissions of subject emission units as may be needed or as appropriate for site-specific conditions. Within the regulatory framework, subject sources retain considerable latitude in selecting the type and suitability of control measures relative to circumstances that directly bear upon the usefulness and/or performance capabilities of those measures. Such flexibility enables sources to appropriately address varying site conditions, mode of operation and changes in the characteristics of materials.

Conditions 7.2.7(a), 7.2.8, 7.3.7(a), 7.3.8, 7.4.7(a) and 7.4.8 set forth actions that the source must take to confirm implementation of control measures and assure compliance with applicable emission standards, including opacity observations and operational inspections. The combination of requirements in these conditions and in other conditions satisfies the need for Periodic Monitoring to assure compliance. For the subject operations, the initial permit required opacity observations by Method 9 at least annually (i.e., a minimum of five observations during the five-year permit term). The initial permit also required inspections of these emission units at least monthly to confirm proper functioning of control measures. These inspections were required to be performed by personnel "not directly involved" in day-to-day operation. Midwest Generation, LLC appealed these conditions on various grounds. These included the contention that inspections should be conducted or overseen by qualified personnel who possess the requisite knowledge, experience and training to conduct inspections in a safe manner.

The revised permit would change requirements for observations for opacity and visible emissions for the coal handling operations, coal processing processes and fly ash handling processes. The changes adjust the number of required opacity observations and add requirements for observations of visible emissions. If visible emissions are present based on observations for visible emissions using Method 22, Midwest Generation, LLC can either take corrective

Monitoring for these emission units, it was recognized that varying combinations of components could serve to establish sufficient periodic monitoring, depending upon the nature of the subject equipment and the applicable emissions control requirements. In the case of the coal handling, coal processing, and fly ash equipment, this consideration necessarily accounted for the type, function, placement and locations of these units and the straight-forward nature of the emission standards that apply to these units. See, Responsiveness Summary for the CAAPP Permit Applications for Midwest Generation, LLC, Waukegan Generating Station, at 31 (December 1, 2005) ("these requirements need not be identical for each unit" and "various combinations of the requirements will suffice depending on the nature of a unit and the emission control requirements to which it is subject.").

³⁷ See, 35 IAC 212.309, Operating Program.

See also, 40 CFR 60 Subpart Y, New Source Performance Standards for Coal Preparation Plants and Processing Plants.

action within a designated two-hour period or conduct a follow-up observation for opacity using Method 9. Observations for the presence of visible emissions, consistent with Method 22, would now be required on an annual basis, in place of the annual opacity observations by Method 9 that were previously required.^{38, 39} In these observations for visible emissions, the observer would determine the presence or absence of visible emissions. Method 22 observations must now be conducted annually, with observations for some operations conducted during the monthly inspection of the subject operations.⁴⁰ If visible emissions are present, as determined by observations in accordance with Method 22, the source can either take corrective action within two hours or conduct follow-up Method 9 observations to determine the level of opacity.⁴¹ These conditions would also allow observations for opacity to be directly conducted by Method 9 for an emission unit without first conducting observations for visible emissions by Method 22.⁴²

Although certain aspects of the Periodic Monitoring for the subject operations have changed, the basic components, including observations, recordkeeping and reporting, remain the same. More importantly, the overall approach to periodic

³⁸ Method 22 involves observations for a period of time, with the duration of observation either set by the applicable regulatory or permit provision, with a minimum observation period of one minute required by the text of Method 22. While Method 22 was initially developed to determine the frequency or duration of visible emissions during the operation of an emission unit, it may also be adapted for use to determine the presence of visible emissions, as provided by 35 IAC 212.107. Unlike opacity observations by Method 9, a person making observations for visible emissions by Method 22 does not have to be "certified" to be qualified to make such observations. The observer must only be knowledgeable about the various conditions that may affect the visibility of emissions, either through review of appropriate written training materials or by attending the lecture portion of a Method 9 certification course, commonly referred to as "smoke school".

³⁹ Unlike Method 22, Method 9 entails making a numerical determination of the opacity of emissions, as a percentage. In Method 9, a human observer makes an instantaneous determination of opacity every 15 seconds for a set period, with the value of opacity being the average of a set of observations. Method 9 includes procedures and specifications for training and periodic certification of individuals who may authoritatively conduct observations of opacity.

⁴⁰ Condition 7.4.8(a) sets forth inspection requirements for fly ash handling that are different in certain respects from those for handling and processing of coal. Those differences are discussed later in this Statement of Basis.

⁴¹ A further explanation follows for how monitoring would occur under the revised permit, using a conveyor for purposes of discussion. At least one monthly inspection of the control measures on the conveyor each year must now include observations for visible emissions by Method 22. Follow-up observations for opacity by Method 9 would then be required if visible emissions are present and the source cannot complete corrective actions to eliminate the visible emissions within two hours. Thus, the requirement for observations for visible emissions could result in as many as five opacity observations for the conveyor during the five-year term of the permit (one each year). In addition, the revised permit also requires that two observations specifically for opacity be conducted during the term of the permit. Accordingly, the revised permit requires a minimum of at least two opacity observations and could require as many as seven opacity observations during the term of the permit. In contrast, the initial permit only required five opacity observations for the conveyor over the term of the permit.

⁴² For certain operations, the Illinois EPA anticipates that Midwest Generation, LLC would choose to immediately undertake observations for opacity to confirm compliance with the opacity standard. This is because, for those operations, some level of visible emissions or opacity may be present and there simply may not be any corrective action that could be implemented to eliminate such emissions.

monitoring would be strengthened due to the overall increase in the frequency of required inspections and observations.⁴³

It should also be understood that the use of control measures for the subject units is required independently of the inspections and observations of these units that are required by the permit. Lapses in the use of such measures must be corrected by the source independent of the required inspections. Because the collective requirements relating to control measures should be adequate to verify use of the control measures, more frequent inspections are not necessary to provide Periodic Monitoring that satisfies the requirement of Title V of the Clean Air Act.⁴⁴

Various changes would be made in the revised permit to the conditions that set forth the requirements for observations for visible emissions/opacity and for inspections for the handling and processing of coal and the handling of fly ash. The changes that constitute significant modifications to provisions of the initial permit are discussed below.⁴⁵

Conditions 7.2.7(a) (i), 7.3.7(a) (i) and 7.4.7(a) (i)

The phrase "representative weather conditions" would be removed to avoid a potential conflict between the language of the permit and Method 9 with respect to the performance of opacity observations. These observations must be conducted using Method 9, which specifies acceptable weather conditions during which opacity observations can be conducted. The phrase during "representative weather conditions" in the condition could potentially be construed to require opacity observations be made during weather conditions that would be inconsistent with use of Method 9.

Conditions 7.2.7(a) (i) (A) & (B), 7.3.7(a) (i) (A) & (B) and 7.4.7(a) (i) (A) & (B)

Conditions 7.2.7(a), 7.3.7(a) and 7.4.7(a) require the source to conduct certain "mandatory" observations for opacity in accordance with Method 9 for all subject units to authoritatively address compliance with 35 IAC 212.123. In light of other changes to the requirements for subject units, the deadlines in Conditions 7.2.7(a) (i) (A), 7.3.7(a) (i) (A) and 7.4.7(a) (i) (A) for initially completing these mandatory opacity observations would be changed from three months to two years after the effectiveness of these conditions. Conditions 7.2.7(a) (i) (B), 7.3.7(a) (i) (B) and 7.4.7(a) (i) (B) would now require subsequent mandatory opacity observations to be conducted every three years, rather than annually. These changes were made because the requirements for regular inspections of these units in Condition 7.2.8, 7.3.8 and 7.4.8 would now provide for opacity observations to be conducted at least annually in conjunction with those inspections in circumstances where it is appropriate,

⁴³ It should be recognized that adequate Periodic Monitoring could be provided for these operations by combinations of requirements that apply on schedules or are subject to triggers that are different than those specified in the revised CAAPP permit.

⁴⁴ Formalized inspections of the coal handling equipment and coal processing equipment are required monthly pursuant to Conditions 7.2.8(a) and 7.3.8(a), respectively. It is also expected that visible emissions would normally not be present for a number of other pieces of equipment. The transfer point from the railcar loading pit to the coal transfer conveyor is located underground. Fly ash is transferred from the boilers with pneumatic conveying systems that operate under negative pressure.

⁴⁵ Other changes that would be made to clarify or correct these conditions, as would be made by administrative amendment or by minor modification, respectively, are discussed in Attachments 1 and 2, which accompany this Statement of Basis.

i.e., if visible emissions are observed and the source does not expeditiously take actions to eliminate those visible emissions.

Conditions 7.2.7(a) (iii), 7.3.7(a) (iii) and 7.4.7(a) (iii)

These conditions require the source to notify the Illinois EPA at least 7 days in advance of the mandatory opacity observations required by Conditions 7.2.7(a) (i), 7.3.7(a) (i) and 7.4.7(a) (i), as discussed above. The initial CAAPP permit would have required the source to notify the Illinois EPA for the observations for each individual emission unit when it conducts a set of observations for a group of emission units. Submittal of multiple notifications in such circumstances would have been unnecessary and unreasonable. The conditions would be changed so that if the source would be conducting a set of observations for a group of units, the source must only notify the Illinois EPA in advance of the observations for the first unit.

Conditions 7.2.7(a) (v), 7.3.7(a) (v) and 7.4.7(a) (v)

After completion of required opacity observations for a unit or group of units, as discussed above, the source is required to submit a written report to Illinois EPA pursuant to Conditions 7.2.7(a) (v), 7.3.7(a) (v) or 7.4.7(a) (v). The initial permit required these reports to be submitted within 15 days of the date of observations. Midwest Generation, LLC appealed these conditions and in settlement discussions argued that the timing was unreasonable and should be extended to be consistent with other similar types of reporting requirements.

The revised permit would now provide that these reports must be submitted within 30 days. These reports would address the mandatory opacity observations that are required for these emission units over the term of the permit. Importantly, these observations are required to be conducted during "representative operating conditions". This requires that these observations be conducted when an operation is actually handling material. It also requires that these observations be conducted when an operation is being used or is functioning as it is normally used or functions. Finally, it requires that the control measures for the operation be implemented in the manner that they are normally implemented. Accordingly, it is very unlikely that these reports would ever provide information for which the effort associated with submittal of reports in 15 days is warranted.

Conditions 7.2.8(a), 7.3.8(a) and 7.4.8(a)

Conditions 7.2.8(a), 7.3.8(a) and 7.4.8(a) require the source to conduct inspections of the subject units on a regular basis, generally monthly.^{46, 47} The revised permit would no longer require these inspections of these units to

⁴⁶ More frequent observations for visible emissions are not warranted. Neither the applicable standards nor the permit prohibit visible emissions from the subject units. For purposes of Periodic Monitoring, the absence of visible emissions is a criterion that would act to simplify the periodic inspections for certain units, such as the coal pulverizers which are located in a closed building. For such equipment, the absence of visible emissions would likely readily confirm proper implementation of control measures. If visible emissions are not present from such unit, either during initial observations for visible emissions or following timely repair, it would also be unproductive to require observations for the opacity of emissions by Method 9, as are necessary for units from which visible emissions are normally present.

⁴⁷ In the revised permit, except for the inspections for the load out of fly ash, which must be conducted on a weekly basis, all inspections must generally be conducted on a monthly basis. As will be discussed later, in the revised permit, unlike the initial permit, inspections of fly ash handling processes other than load out must be conducted on a monthly basis.

be conducted by personnel who are "... not directly involved in the day-to-day operation." Instead, these inspections must be overseen by management or supervisory personnel, who must sign off on these inspections. This addresses Midwest Generation, LLC's concern that it be able to have appropriate personnel, who possess the requisite knowledge, experience and training, conduct these inspections. It still addresses the concern, as reflected in the provisions of the initial permit, that these inspections be conducted in a manner that serves to confirm proper use of control measures separate from the routine actions taken by operational personnel on a day-to-day basis. This is provided for by the revised conditions as they provide that management or supervisory personnel must sign off on these inspections, thereby taking on responsibility for these inspections if they are performed by other personnel.

Other changes would also be made to clarify and simplify these conditions. For example, the conditions would now provide that if a unit is not in operation during an inspection, this shall be noted in the records for the inspection.

New Conditions 7.2.8(b), 7.3.8(b) and 7.4.8(b)

In the revised CAAPP permit, new Conditions 7.2.8(b), 7.3.8(b) and 7.4.8(b) address observations for visible emissions and/or opacity that must now be conducted in conjunction with inspections of the subject units. As already discussed, the revised permit would require the source to conduct observations for visible emissions and/or opacity in conjunction with the inspections of the subject units, so that observations are conducted for each subject unit at least once during each calendar year. Other requirements for these observations would also be addressed by these new conditions. For example, these conditions would provide that the observations for visible emissions must be conducted in accordance with 35 IAC 212.107, Measurement Methods for Visible Emissions. This provides an appropriate linkage in state rule to Method 22. In addition, 35 IAC 212.107 specifies a minimum duration, one minute, for observations for visible emissions from an emission unit. These conditions also explain that the purpose of these observations is to determine compliance with the applicable opacity standard, 35 IAC 212.123. These conditions also confirm that advance notice to the Illinois EPA would not be required for these observations, unlike the opacity observations required by Conditions 7.2.7(a), 7.3.7(a) and 7.4.7(a).

Conditions 7.2.8(b), 7.3.8(b) and 7.4.8(b) (in initial permit)

(Renumbered as Conditions 7.2.8(c) and (d), 7.3.8(c) and 7.4.8(d) in the draft permit)

These conditions in the initial permit include requirements for the source to conduct inspections of control devices while they are out of service, as needed to address the condition of the internal components of these devices. Midwest Generation, LLC appealed Conditions 7.2.8(b), 7.3.8(b), and 7.4.8(b) arguing that they were overly prescriptive about the timing and nature of the required inspections. As a general matter, the Illinois EPA agrees that various approaches to inspections and maintenance of control devices are possible. In the revised permit, these inspections would be periodically required to confirm proper condition and operation while the baghouse is in operation, rather than at least every 15 months for coal handling or processing and 9 months for ash handling while the operation or process is out-of-service. The inspections are required monthly for baghouses in routine operation and prior to unloading each coal unit train for railcar unloading baghouses. The inspections would verify and document that differential pressure is within specified operating range for each baghouse and that visible emissions are not observed in each baghouse exhaust. Other changes would be made to clarify the scope of these conditions. In particular, these conditions would now indicate that these inspections are

required for specific baghouses rather than more generically requiring these inspections for dust collection equipment. Redundant language would also been removed.

Conditions 7.3.7(b) and 7.4.7(b)

In the initial permit, Conditions 7.3.7(b) and 7.4.7(b) provided for testing of the PM emissions of the subject processes upon request from the Illinois EPA. Midwest Generation, LLC appealed these conditions on the grounds that these units did not discharge through stacks or vents and should not be subject to emission testing requirements intended for stack or non-fugitive emissions. For coal processing and fly ash handling, it was recognized in settlement discussions that control devices that would be amenable to emissions testing are present, in addition to control measures. The PM emissions from units controlled by those control devices would be able to be tested given that those stacks/vents would meet the criteria in Reference Method 1. Accordingly, Conditions 7.3.7(b) and 7.4.7(b) have been carried over into the revised permit. However, as in the initial permit, these conditions also recognize that not all coal processing and fly ash handling units exhaust through stacks and that it would be wholly impractical to directly measure emissions of those units. Therefore, Conditions 7.3.7(b) and 7.4.7(b) continue to only apply to units with stacks that can be tested.

Midwest Generation, LLC also argued that testing for PM should be able to be conducted at the actual temperature of the exhaust in the stack, i.e., ambient temperature, since these units do not involve combustion and elevated temperatures are not present in the stack. To address these concerns, revised Conditions 7.3.7(b) (ii) (A) and 7.4.7(b) (ii) (A) would allow for testing for PM emissions to be conducted using USEPA Method 17. Method 17 can be used for testing PM emissions when emissions over the normal range of stack temperature associated with a unit are independent of temperature, as would be case for these units.⁴⁸

Conditions 7.2.9(b) (i), 7.3.9(b) (i) and 7.4.9(b) (i)

The CAAPP permit requires Midwest Generation, LLC to create and maintain a list of various control measures being implemented,⁴⁹ which currently would be identified in the permit as natural surface moisture, dust suppression, enclosures and covers,⁵⁰ and to notify the Illinois EPA of revisions to the list.⁵¹ As already discussed, associated requirements for inspections and recordkeeping are designed to ensure that the control measures are being implemented.⁵² The combination of these requirements for control measures, inspections and recordkeeping establish the permit's approach to Periodic Monitoring for the subject units. The Illinois EPA established the use of control measures to facilitate Periodic Monitoring for the subject operations. Developed as work practice standards in the initial permit and

⁴⁸ In circumstances where it is appropriate, Method 17 significantly simplifies testing of PM emissions. The equipment for testing does not need to include a glass probe and heating systems. The filter used to collect the sample is simply located in the stack.

⁴⁹ See, Conditions 7.2.9(b), 7.3.9(b) and 7.4.9(b).

⁵⁰ See, Conditions 7.2.1 and 7.2.2, Conditions 7.3.1 and 7.3.2, and Conditions 7.4.1 and 7.4.2.

⁵¹ See, Conditions 7.2.9(b) (ii), 7.3.9(b) (iii) and 7.4.9(b) (iii).

⁵² See, Conditions 7.2.8 and 7.2.9, Conditions 7.3.8 and 7.3.9, and Conditions 7.4.8 and 7.4.9, respectively.

retained in the negotiated revisions to the permit,⁵³ the use of control measures was deemed appropriate as one component of Periodic Monitoring for the subject units.⁵⁴ This requirement provides a reliable means of verifying compliance with the emission standards that apply to these units.⁵⁵ The legal basis for the control measures is derived from the authority of Section 39.5(7) (a) of the Act but does not stem from applicable requirements expressly derived from underlying regulations.

The Illinois EPA's approach to Periodic Monitoring for the subject units is similar to the regulatory approach commonly taken for these types of units, as already mentioned. The Illinois EPA opted against a formal approval process for the selected control measures, or for subsequent changes to the list of established control measures. In the absence of underlying regulatory requirements in federal or state law, mandating these additional requirements is unnecessary given the limited purpose meant to be served by the control measures (i.e., periodic monitoring).⁵⁶ The revised CAAPP permit, like the initial permit, would require the source to keep a list of the control measures that would be operated and maintained for the subject units and to submit a copy of this record to the Illinois EPA. Once this record is submitted to the Illinois EPA, it would be available for public viewing and inspection under Illinois's Freedom of Information Act.⁵⁷

Conditions 7.3.9(b) (ii) and 7.4.9(b) (ii)

These conditions require the source to prepare demonstrations with its records for the control measures that are used for the subject units to show that these measures are sufficient to assure compliance with any applicable standards and permit limits for PM emissions. Changes would be made to these conditions so that they now more clearly indicate that these demonstrations must consider the results of any required testing that is conducted for the subject units for PM emissions. They also confirm that the operating rates of these units and the performance specifications of any control devices used on these units must also be considered. These conditions would also now specify that these

⁵³ As previously noted, the requirements for control measures in the revised CAAPP permit are substantially identical to those contained in the initial CAAPP permit. Many of the changes being made to these conditions reflect minor changes to the language and do not alter the substantive elements relating to control measures.

⁵⁴ The Illinois EPA acknowledged this reasoning in the Responsiveness Summary accompanying the issuance of the initial CAAPP permit, observing that it was requiring the on-going implementation of the work practices and that, together with inspection and recordkeeping, the requirements would assure compliance with periodic monitoring. See, Response to Public Comments for CAAPP Permit Applications for Midwest Generation *et al*, at 33 (September 29, 2005).

⁵⁵ See, Conditions 7.2.4, 7.3.4 and 7.4.4.

⁵⁶ In addition, an attempt to impose such requirements would potentially raise questions of legal authority, as federal courts have recognized the general principle that Title V permitting authorities may not create new substantive requirements. To replicate, through a Title V permit, principal elements of a regulatory program that could not otherwise be imposed on a source as an applicable requirement would likely exceed the scope of gap-filling and/or other implied authorities available to Title V permitting agencies. It can be noted that the Illinois EPA will be reviewing relevant material generated by the permit (e.g., record of control measures) to ensure, for purposes of any future permit action, that the use of control measures being implemented by the source is consistent with applicable permit requirements.

⁵⁷ Further, it is presently anticipated that the generated record will be incorporated by reference in the CAAPP permit by way of a future permit proceeding (e.g., permit reopening or significant modification) and would therefore be a part of any permit record regarding the same.

demonstrations may directly consider emission factors for controlled PM emissions, as well as the combination of emission factors for uncontrolled PM emissions and data for the efficiency of the control measures that are used. These conditions would now also provide for use of emission factors that are published by credible sources in addition to USEPA. The changes reasonably develop the information that may be considered in preparing these demonstrations.

Conditions 7.2.9(b) (ii), 7.3.9(b) (iii) and 7.4.9(b) (iii)

As already discussed, Condition 5.6.2(d) in the initial CAAPP permit, which specifically addressed the submittal to the Illinois EPA of the lists of control measures required by conditions in Section 7 of the permit, would no longer be in the revised permit. The relevant details for the submittal of those records, as had been addressed by Condition 5.6.2(d), would now be addressed in Conditions 7.2.9(b) (ii), 7.3.9(b) (iii) and 7.4.9(b) (iii). In the initial permit, these conditions (numbered 7.2.9(b), 7.3.9(b) (iii) and 7.4.9(b) (iii) would have only included a cross-reference back to Condition 5.6.2(d).

These conditions would also provide Midwest Generation, LLC with more time to submit these records to the Illinois EPA than would have been provided by Condition 5.6.2(d). For the initial records, the time increased to 60 days, from 30 days. For the revised records, the time increased to 30 days, from 10 days. Because these records do not involve matters for which the timing of review by the Illinois EPA would be critical, these minor changes in the timing for submittal of these records is not considered to be significant.

Conditions 7.2.9(e) (vii), 7.3.9(d) (vii) and 7.4.9(d) (vii) in the initial permit

These conditions in the initial permit would not be carried over into the revised permit. These conditions would have required records of certain information be kept for lapses in use of control measures. The information that is specified is not required to be kept for deviations. In addition, for material handling operations, the effort to generate this information would be excessive compared to the potential benefit that would result from such information.

Condition 7.2.10(a) & (b) and 7.3.10(a) & (b)

The notification and reporting requirements for continued operation of the coal handling and processing operations during malfunctions and breakdowns would be revised. Under these provisions, the source is required to immediately notify Illinois EPA of incidents when the opacity from an affected operation exceeds 30 percent for eight or more six-minute averaging periods (unless the source has begun to shut down the operation by that time), instead of five or more six-minute averaging periods, as required in the initial permit.

Conditions 7.2.10(a) and 7.3.10(a) involve reporting requirements in the case of continued operation of the subject operations and processes with excess emissions during malfunctions and breakdowns. The conditions require the source to provide certain notifications and reports to Illinois EPA concerning incidents when operation continued with excess emissions, including malfunction or breakdown.

The source must report all such incidents in its quarterly reports under Conditions 7.2.10(b) (ii) and 7.3.10(b) (ii). In addition, under Conditions 7.2.10(b) (i) (A) and 7.3.10(b) (i) (A), the source must immediately notify the Illinois EPA of such incidents when the opacity from a subject operation or process exceeds 30 percent for a certain number of 6-minute averaging periods

(unless the source has begun to shut down the operation or process by that time).

The revised CAAPP Permit would extend the number of 6-minute averaging periods from five to eight before the immediate notification requirement is triggered. In other words, for the subject coal handling and processing operations, the source would now have an additional 18 minutes to attempt to correct a problem at an operation or begin shutdown before it needs to provide immediate notification. For the fly ash processes, as discussed in more detail below, the source has an additional 24 minutes to attempt to correct the problem at a subject process or begin shutdown of the process before it needs to provide immediate notification. The circumstances are the same as those already discussed for the similar changes in Condition 7.1.10-3(a)(i), which involves requirements for immediate notification and reporting for the coal-fired boilers.

Certain Changes in Section 7.4: Unit Specific Conditions for Fly Ash Handling Equipment

Conditions 7.4.3(b)(iii) and 7.4.11(c)

Condition 7.4.3(b)(iii) required the Permittee to maintain a contingency plan for handling and temporary stockpiling of fly ash if an affected process must be taken out of service due to malfunction, breakdown or associated repairs. Midwest Generation, LLC indicated during the permit negotiations that having a separate plan for handling and temporary storage of fly ash during malfunction, breakdown or repair activities was burdensome and the conditions did not fully address their specific needs because such activity may also occur during times that are not considered malfunction, breakdown or repair events.

To address their specific needs, Condition 7.4.11(c) would be added to the permit to allow the Permittee operational flexibility for temporary stockpile storage of fly ash and handling of such fly ash for offsite shipment because such activities are addressed under the Fugitive Particulate Matter Operating Program required by Conditions 5.2.4. Since this option could also be used during malfunction or breakdown, or associated repairs, there was no longer a need for a separate contingency plan for these situations. Therefore, Condition 7.3.4(b)(iii) would be removed from the permit. Subsequent Conditions 7.4.3(b)(iv), (v) and (vi) would then be renumbered as Conditions 7.4.3(b)(iii), (iv) and (v).

Conditions 7.4.7(a)(ii), 7.4.8(a) and (b)

In the initial CAAPP permit, for the emission units that handle fly ash and the units that handle or process coal, there were differences in the approaches taken for the frequency of required inspections, the duration of required observations for opacity and the triggers for additional reporting. As a general matter, the differences in these elements of the Periodic Monitoring for these units reflected the Illinois EPA's assessment of the relevant factors upon which requirements for Periodic Monitoring are to be established, including the potential particulate emissions of the units, the nature of the control measures for these units and variability in the operation of these units and their control measures.

Condition 7.4.7(a)(ii)

Observations of opacity are required as part of Periodic Monitoring for the emission units that handle fly ash. The required duration for these observations is specified in Condition 7.4.7(a)(ii). For units that handle fly ash, like units that handle coal, the duration of

observations must be 30 minutes unless the opacity that is observed during the first 12 minutes are within a certain level. In the initial CAAPP Permit, Condition 7.4.7(a) (ii) provided that opacity observations for units handling fly ash could conclude after 12 minutes if the opacity during the first 12 minutes of observations (i.e., two non-overlapping 6-minute averages) were both less than 5 percent. In the revised permit, Condition 7.4.7(a) (ii) would provide that a required observation can conclude after 12 minutes if both values of opacity are each not greater than 10 percent. This makes this level the same as the level that was specified for the units handling or processing coal (See Condition 7.2.7(a) (ii)). Upon further consideration, the Illinois EPA has concluded that it is appropriate for the criterion for allowing shorter periods of opacity observations for fly ash to be identical to those for coal handling operations. While there are differences in the particulate generated from these units,⁵⁸ there are also differences in the control measures for these units, as discussed further below, that address or compensate for the differences in the potential emissions from these units. Moreover, even if there were differences in the emissions of these units, this would not necessarily justify use of a different criterion for allowing a shorter duration for opacity observations as they are subject to the same opacity standard, 35 IAC 212.123.

Condition 7.4.8(a)

For emission units that handle fly ash, weekly inspections were required by the initial CAAPP Permit. For emission units that handle or process coal, monthly inspections were required. In its appeal and in settlement discussions, Midwest Generation, LLC questioned this difference, suggesting that the frequency of inspections for units that handle fly ash should also be monthly.

Upon further consideration as part of the settlement negotiations, the Illinois EPA has concluded that weekly inspections are only needed for the loadout of fly ash. Monthly inspections would be adequate for other units handling fly ash. This is because these other units operate in a consistent manner. Their particulate emissions are controlled by metal ductwork and filters that are fixed in place, generally function reliably and are not exposed to potential damage during routine operation. As such, degradation of the performance of these control measures for these units should be able to be adequately identified and addressed with monthly inspections.

⁵⁸ Fly ash is a finer material than coal dust. Particle size and density play an important role in the control of particulate emissions. As a general matter, coal dust is larger and denser than fly ash. Fly ash particulate is generally very fine and lighter. Thus, although coal dust is captured and controlled by certain types of control measures, fly ash is different in that these systems tend to operate more consistently given the uniform nature and ease with which the material can flow.

Waukegan Generating Station currently handles fly ash in dry form, without adding water. The particulate emissions from handling of fly ash are controlled with enclosure to prevent direct emissions to the atmosphere. For coal handling operations, Waukegan Generating Station does not rely only upon complete enclosure to prevent direct emissions of particulate. Particulate emissions from handling of coal are controlled with a combination of measures, including the moisture content of coal as received and the application of dust suppressants, which act to prevent emissions of dust.

By contrast, the control of particulate emissions during loadout of fly ash depends upon both equipment and implementation of appropriate operating procedures by personnel. The equipment for loadout of fly ash is also subject to potential damage during operation. These circumstances continue to warrant more frequent, weekly inspections for the loadout of fly ash.

Accompanying this change to the required inspection frequency for units handling fly ash other than load out, the requirements of Condition 7.4.8(b) with respect to opacity observations would be made more stringent for load out of fly ash. The frequency of required opacity observations for loadout of fly ash would be changed from annual to quarterly.

Condition 7.4.10(a)

Condition 7.4.10(a) deals with reporting of deviations for the fly ash handling units. The condition requires the source to provide certain notifications and reports concerning deviations.

Condition 7.4.10(a) (ii) of the initial CAAPP permit required Midwest Generation, LLC to submit a written notice to Illinois EPA within 30 days of incidents when the control measures for an affected process were not present or were not operating for four or more hours. Midwest Generation, LLC expressed concerns that this condition did not focus on only excess emissions but rather on all incidents when control measures were not present or not operating. This is of concern as there may be periods longer than four hours when the control measures are not needed for compliance. In addition, Midwest Generation, LLC also had concerns why the reporting requirements for these units were more stringent than those for coal handling and processing.

As Midwest Generation, LLC provided information during settlement discussions regarding the operational status of such equipment and the dangers that could be posed as a result of operating such control measures, the Illinois EPA understood the need for additional time.⁵⁹ Moreover, there is not a substantial difference between coal dust and fly ash particulate in relation to establishing a timeframe for written notification. The characteristic differences between fly ash and coal dust emissions play a much more important role as it relates to monitoring and the type of monitoring as explained above. Given this condition does not focus in on excess emissions but rather the presence or absence of control measures, after detailed discussions with Midwest Generation, LLC, four hours was determined to be impractical for the purpose of this written notice. In fact, the source argued that the condition should focus on excess emissions alone. If this were the purpose of the condition, the Illinois EPA would be less agreeable to increasing this time period from 4 to 12 hours.

Accordingly, the length of time before the written notice requirement is triggered would be increased from 4 to 12 hours. In other words, the source would now have additional time (i.e., a total of 8 extra hours) in which to attempt to correct the problem or begin to shut down a unit that handles fly ash before it needs to go through the written notification process.

⁵⁹ Such situations could exist when the equipment is not needed to remove fly ash from the silos due to a boiler outage.

Condition 7.4.10(b)

Condition 7.4.10(b) deals with reporting requirements in the event of continued operation of fly ash handling equipment during malfunctions and breakdowns. The initial CAAPP permit required Midwest Generation, LLC to immediately notify Illinois EPA of such incidents when the opacity from an affected process exceeds 30 percent for four or more 6-minute averaging periods (unless the source has begun to shut down the operation by that time).

Midwest Generation, LLC appealed this condition and, in negotiations, expressed concerns about undertaking immediate notification at a time when events are still unfolding or being investigated. It became apparent that some of the assumptions the Illinois EPA had made in selecting a timeframe of 24 minutes (four 6-minute averaging periods) were incorrect. The Illinois EPA had assumed that 24 minutes would provide a reasonable opportunity for Midwest Generation, LLC to complete corrective action so that it would not need to undertake immediate reporting to the Illinois EPA for opacity exceedances that were relatively brief and accordingly likely minor in nature. In addition, it was believed that 24 minutes provides adequate time for Midwest Generation, LLC to conduct an initial evaluation for more serious incidents, for which immediate reporting would be needed, so that such reports would be able to include useful information. Finally, it was also believed that 24 minutes would provide appropriate incentives for rapid implementation of corrective actions. However, it is now recognized that 24 minutes is not adequate for these purposes.

Accordingly, the length of time before the immediate notification requirement is triggered would be increased from 24 to 48 minutes. In other words, the source would now have additional time (i.e., a total of 24 extra minutes) in which to attempt to correct the problem or begin to shut down a unit that handles fly ash before it needs to go through the immediate notification process. However, in light of striking an appropriate balance between incentivizing corrective action and immediate notification, this additional time should be considered trivial.⁶⁰ The additional time also would not have any effect on how the Illinois EPA may or may not respond to these notifications.

**Changes in Sections 7.5: Unit Specific Conditions for
Distillate Oil-Fired Turbines**

Conditions 7.5.3(b) (ii) (A), 7.5.6(b) and 7.5.7-1(a)

Condition 7.5.3(b) (ii) (A) was appealed by Midwest Generation, LLC because the condition presented practical problems because the turbines are usually started by remote operators responding to load demand making it difficult to observe each startup and operation of the turbines. An additional basis for appealing this condition was that it was found to be confusing by the source because it was located in a startup condition but appeared to address the operation of the turbine, rather than the startup; moreover, Condition 7.5.6(b) already required the operation and opacity of the turbines to be formally observed for proper operation on a regular basis. The Midwest Generation, LLC appeal also cited Condition 7.5.6(b) (i) and challenged Illinois EPA's authority to specifically require formal observations of turbine operations to be completed by operating personal for the turbine or a member of Permittee's environmental staff.

⁶⁰ It should also be noted that this provision does not affect whether any incident is treated as a violation of the emission standard.

As a result of Midwest Generation, LLC's specific concerns regarding these conditions and the possible redundant or conflicting requirements in these Conditions the Illinois EPA reviewed the applicable requirements cited by these conditions to ensure the rules were appropriately reflected in the permit. No specific regulatory requirement was found requiring a source to physically observe every startup of the affected turbines and it was not Illinois EPA's intent to observe every startup. Therefore, Condition 7.5.3(b) (ii) (A) would be removed from the permit and Condition 7.5.7-1(a) (i) would be revised to more clearly identify when observations must be completed.

Condition 7.5.6(b) did not cite any specific underlying regulatory requirements, however, the Illinois EPA's intentions of requirements in Condition 7.5.6(b) (i) and (ii) were to ensure proper operation of the turbines and provide the source with a compliance option when the turbines were not routinely operated. These intentions are also met by the revised language in Condition 7.5.7-1(a) (i) which clearly identifies that observations must be completed by a qualified observer, the observations must be completed in accordance with Reference Method 9, and the observations must be completed every 250 hours of operation but at least annually while the turbine is in operation. The condition also required observations to be completed upon written request of the Illinois EPA which is identical to the requirements in Condition 7.5.6(b) (iii) of the initial permit.

As a result of concerns raised by Midwest Generation, LLC in the appeal and the changes planned to Condition 7.5.7-1(a), Condition 7.5.6(b) would be removed from the permit and the title of Section 7.5.6 was changed to "Operational and Emission Limitations" because this section would no longer contain any work Practices or production Limits.

Conditions 7.5.6(a)

This condition relates to the approach to monitoring of emissions that Midwest Generation must implement for the four diesel fuel-fired peaking turbines for purposes of allowance trading. This condition addresses relevant criteria in 40 CFR 75.19(a) (i) that an electrical generating unit must meet to be considered a "low mass emissions unit" (LME unit).⁶¹ The owner or operator of a unit that meets these criteria may conservatively determine the emissions of SO₂ and NO_x of such unit for purposes of applicable allowance trading programs using emission factors and recordkeeping for the heat input to the units. LME status is only available for gas-fired or oil-fired units.⁶² For electrical generating units that qualify as peaking units,

⁶¹ 40 CFR 75.19 is part of 40 CFR Part 75, Continuous Emission Monitoring, which are the provisions in the Acid Rain Program that address monitoring of emissions of SO₂, NO_x, CO₂ and opacity. While USEPA originally adopted 40 CFR Part 75 as part of the Acid Rain Program, USEPA has relied upon its provisions for emissions monitoring when it adopted subsequent emission allowance trading programs for electrical generating units, including the NO_x Budget Trading Program, the Clean Air Interstate Rule (CAIR) and the Cross-State Air Pollution Rule (CSAPR).

⁶² Availability of status as an LME unit is generally restricted to gas-fired and oil-fired units by 40 CFR 75.19(i). This criterion for LME status is addressed in Condition 7.5.6(a) (i).

For these turbines, the emissions criterion for LME status is NO_x emissions of no more than 50 tons per ozone season pursuant to 40 CFR 75.19(i) (3), as addressed in Condition 7.5.6(a) (iii).

For these turbines, 50 tons of emissions is equivalent to operation for 150 hours per ozone season, as addressed in Condition 7.5.6(a) (ii). This value was calculated

the LME methodology is an alternative to the more rigorous optional monitoring protocols for peaking units or to continuous emissions monitoring. If the requirements for status as an LME unit cease to be met, the owner or operator must begin monitoring by one of these other monitoring methodologies.⁶³

In its appeal of the initial CAAPP permit for the Waukegan Station, Midwest Generation categorically challenged conditions of the initial permit that did not adequately specify or reference the origin of authority, as required by Section 39.5(7)(n) of the Act. In settlement discussions, Midwest Generation explained that this is relevant for Condition 7.5.6(a). In the absence of such regulatory references, Midwest Generation argued that this condition could be misunderstood as restricting the number of hours these turbines may operate rather than simply addressing the criteria that must continue to be met to maintain status as LME units. Any such restriction on the number of hours these turbines may operate would be inconsistent with the rules that underlie this condition. More importantly, it could act to interfere with the function of these peaking turbines as they serve to help meet the demand for electricity at times when other generating units are unable to meet this demand. While these turbines continue to meet the criteria for LME status, there could be unforeseen circumstances in the future where this would no longer be the case.

The Illinois EPA is proposing to make changes to Condition 7.5.6(a) to respond to Midwest Generation's concerns with this condition. The changes would clarify that the number of hours that these turbines operate and their emissions are not restricted to the levels needed to maintain status as LME units. However, language would also be added to make clear that if any of these turbines does ever cease to qualify for status as an LME unit, other requirements for monitoring would become applicable for that turbine, as provided for by 40 CFR 75.19(b). These changes to this condition would maintain consistency with the provisions of 40 CFR 75.19 while resolving Midwest Generation's concerns with this condition.

Conditions 7.5.7-1(c)(i) and (ii)

These conditions require the source to notify the Illinois EPA at least 7 days in advance of the mandatory opacity observations required by Condition 7.5.7-1(a)(i) or (ii). The initial CAAPP permit would have required the source to notify the Illinois EPA for the observations for each individual emission unit when it conducts a set of observations for a group of emission units. Submittal of multiple notifications in such circumstances would have been unnecessary and unreasonable. The conditions would be changed so that if the source would be conducting a set of observations for a group of units, the

from the maximum hourly firing rates of the turbines, 553 mmBtu/hour and the LME NO_x emissions factor of 1.2 lbs/mmBtu. (553 mmBtu/hour x 1.2 lbs NO_x/mmBtu x 150 hours/season ÷ 2,000 lbs/ton = 49.8 tons/season, ≈ 50.0 tons/season)

⁶³ Pursuant to 40 CFR 75.19(a)(1)(i)(A), the owner or operator of an electrical generating unit seeking status as an LME unit must submit an initial demonstration showing that the relevant criteria for an LME unit are met using the applicable conservative LME methodology for the unit. Pursuant to 40 CFR 75.19(a)(1)(i)(B) and (b), the owner or operator must then provide demonstrations of LME status on an annual basis thereafter using the specific LME methodology contained in its initial demonstration of LME status.

Condition 7.5.6(a) derives from the initial demonstration of LME status for these turbines and a request by Midwest Generation in its CAAPP application.

source must only notify the Illinois EPA in advance of the observations for the first unit.

Condition 7.5.7-1(d)

Refer to above explanation of changes to Conditions 7.2.7(a)(v), 7.3.7(a)(v) and 7.4.7(a)(v) for justification of changes to this condition.

Condition 7.5.9(a)(ii)

This condition that requires a separate log for maintenance and repair of each affected turbine would be removed from this section of the permit because the requirement was redundant to source wide requirements in Condition 9.6.

Condition 7.5.9(d)

These conditions regarding recordkeeping during startup of the affected turbines were revised to provide language consistent with the revised requirements for records to be maintained during startup of the affected boilers in Section 7.1.9(g).

Condition 7.5.10(a)

These conditions regarding deviation reporting for the affected turbines were revised to provide language consistent with the revised requirements for reporting of deviations for the affected boilers in Section 7.1.10-1(a) and 7.1.10-3(a).

Condition 7.5.12(b)

This condition was appealed by Midwest Generation, LLC because they believed the last sentence of this condition could restrict them to only using USEPA default emission factors in determining compliance with the noted SO₂ limitations. Midwest Generation, LLC argued that default factors should only be used when better data is not available and requested that they be allowed to rely upon data based on sampling and analysis of the fuel oil used at Waukegan Generating Station. IEPA noted that Condition 7.5.7-2 included requirements and protocols on how the source must determine the sulfur content of fuel oil through sampling and analysis or use of supplier data, and that Condition 7.5.7-2(a)(i)(B) referred to the SO₂ limitation in Condition 7.5.4(c). Therefore, Condition 7.2.12(b) would be revised to specify that compliance with the SO₂ limitations in Conditions 7.5.4(b) and 7.5.4(c) is addressed by the fuel oil sampling and analysis required by Condition 7.5.7-2 and the records required by 7.5.9(c). The last sentence of this condition would be deleted to avoid any confusion in interpretation.

3.2 Changes to the Permit Related to Compliance Assurance Monitoring (CAM)

Discussion

In the federal rules for Compliance Assurance Monitoring (the CAM Rule), 40 CFR Part 64, the requirement for compliance assurance monitoring in accordance with a Compliance Assurance Monitoring Plan (CAM Plan) is addressed separately for the various emission standards and limits that apply to an emission unit for different pollutants. For this purpose, the CAM Rule uses the term "Pollutant Specific Emission Unit" (PSEU) to distinguish an emission unit and a specific pollutant that must be considered when addressing whether a CAM Plan is needed for a unit for a particular pollutant.

In this regard, the coal-fired boilers at the Waukegan Generating Station emit a number of regulated pollutants subject to emission standards, including PM, SO₂,

NO_x and CO. Under the CAM Rule, these boilers are considered separate PSEUs for each such pollutant. CAM Plans are only required for these boilers as they are PSEUs for emissions of PM. Although these boilers are PSEUs for other pollutants, CAM Plans are not required for other pollutants. For SO₂ or NO_x this is because these boilers qualify for an exemption in the CAM Rule, i.e., continuous emissions monitoring must be conducted for SO₂ and NO_x. For CO, this is because the applicability criteria of the CAM Rule are not met since these boilers do not use add-on control equipment for CO.

As will be discussed further below, emission units at the Waukegan Generating Station other than the coal-fired boilers are not required to have CAM Plans for any pollutants. These other emission units either do not meet the applicability criteria to need a CAM Plan or meet an exemption from the need for a CAM Plan.

Changes for CAM in Section 5: Overall Source Conditions

Condition 5.2.9 (Removed)

In the initial CAAPP permit, Condition 5.2.9 required Midwest Generation, LLC to address the CAM Rule, 40 CFR Part 64, in the application for renewal of the permit or upon application for a significant modification of the permit. The current permitting action involves a significant modification of the permit and the CAM Rule would now be addressed for the emission units that are the subject of this action. As such, Condition 5.2.9 became obsolete and would be removed from the permit.

Changes for CAM in Section 7.1: Unit Specific Conditions for the Coal Boilers

Condition 7.1.5(c)

For the coal-fired boilers, a non-applicability statement would be added for the CAM Rule with respect to the federal Acid Rain Program. This program, which is applicable to the coal-fired boilers, addresses emissions of SO₂ and NO_x from electric generating units. This program requires subject sources to have continuous emissions monitoring for SO₂ and NO_x. The requirements of the CAM Rule do not apply because the standards and limitations under the Acid Rain program are specifically exempted from the requirements of the CAM Rule by 40 CFR 64.2(b) (1) (iii).

Condition 7.1.5(d)

For the coal-fired boilers, a non-applicability statement would be added for the CAM Rule with respect to applicable State emission standards for SO₂ and NO_x. The CAAPP permit specifies continuous compliance determination methods for these standards, relying on the continuous emission monitoring required by the Acid Rain program. Pursuant to CFR 64.2(b) (1) (vi), the requirements of the CAM Rule do not apply for standards or limitations for which a continuous compliance determination method is specified by the Title V permit, as is the case for the applicable state standards for SO₂ and NO_x.

Condition 7.1.5(e)

For the coal-fired boilers, a non-applicability statement would be added for the CAM Rule with respect to the applicable State emission standard for CO. Control devices, as defined by 40 CFR 64.1, are not used on these boilers for CO. As provided by 40 CFR 64.2(a) (2), to be subject to the CAM Rule for a standard or limitation, an emission unit must use a control device to achieve compliance with such standard or limitation.

Condition 7.1.8(e) - Monitoring, Recordkeeping & Reporting under the CAM Rule
The revised CAAPP permit must address the monitoring, recordkeeping and reporting that Midwest Generation, LLC must conduct for the coal-fired boilers in conjunction with its CAM Plan for PM. In the provisions of the permit that address monitoring for the coal-fired boilers, new Condition 7.1.8(e) would now indicate that the CAM Rule is applicable, with compliance assurance monitoring now required for PM. This condition would now refer to new Conditions 7.1.13-1 and 7.1.13-2 where the revised permit actually specifies the relevant requirements for monitoring, recordkeeping and reporting for subject PSEUs under the CAM Rules that are the subject of a CAM Plan.⁶⁴ As already discussed, this CAM Plan for the coal-fired boilers for PM emissions would "replace" certain requirements for Periodic Monitoring related to PM. This is provided for by new Condition 7.1.13-2(b), which states that "upon start of monitoring in accordance with the CAM Plan," those requirements would cease to apply.

Condition 7.1.9(c) (ii) (B)

In conjunction with the changes to the CAAPP permit to address compliance assurance monitoring for the coal-fired boilers for PM emissions, changes would be made to the Periodic Monitoring in Condition 7.1.9(c) (ii) (B) that would be applicable to the coal-fired boilers during the period before compliance assurance monitoring would actually start. The changes to this condition maintain consistency with 40 CFR 70.6(a) (3) (i) (B) (Section 39.5(7) (d) (ii) of the Act).

In Condition 7.1.9(c) (ii) (B), a specific value for the level of opacity, 30 percent, 3-hour average, is now set as part of the Periodic Monitoring to assure compliance with the PM standard for each boiler. This value takes the place of the statistical criterion or "method" that would have been required by the initial CAAPP Permit for the future establishment by Midwest Generation, LLC of value(s) of opacity that would serve to assure compliance with the PM standard for each boiler.⁶⁵ The "alternative" approach to Periodic Monitoring for PM that is now present in the revised permit is consistent with the relevant conclusion from the USEPA's decision in *In the Matter of Midwest Generation, LLC, Waukegan Generating Station*.⁶⁶ Because 35 IAC 212.123 generally constrains opacity of the boilers to no more 30 percent, it would have been of limited value to further consider the PM emission rates that might accompany higher levels of opacity. Such an

⁶⁴ For the requirements of CAM related to monitoring, refer to 40 CFR 64.7(c) and (d), for required recordkeeping refer to 40 CFR 64.9(b), and for required reporting refer to 40 CFR 64.9(a).

⁶⁵ By way of further explanation, Midwest Generation, LLC appealed Condition 7.1.9(c) (ii) in the initial CAAPP permit, which would have required it to develop a value for opacity based on the results of emissions testing, with a numerical value for opacity set at the "upper bound of the 95 percent confidence interval". Midwest Generation, LLC argued that this requirement imposed an "unreasonable burden" and would not generate information that could be used in conjunction with other actions to address compliance with the PM standard(s). Settlement discussions confirmed the difficulties in this condition of the initial permit. Among other things, it required the correlation between opacity and PM emissions to meet a statistical criterion as related to the confidence interval. This criterion would not necessarily be able to be met given the nature of the correlation between opacity and PM emissions and the data that would be available from emissions testing to develop the correlation.

⁶⁶ The USEPA's Order in *In the Matter of Midwest Generation, LLC, Waukegan Generating Station*, is considered appropriate guidance from USEPA for this proceeding. This is because it addresses Title V permitting of a coal-fired power plant in Illinois.

evaluation would have addressed circumstances in which opacity exceedances were occurring and Midwest Generation, LLC should already be taking corrective actions.⁶⁷

The last sentence in this condition would also be revised to clarify that records being maintained must include a description with explanation of any other information that shows PM emissions of an affected boiler exceeded or likely exceeded the PM limits in Condition 7.1.4(b). The condition previously had similar language that used the phrase "may have exceeded" which was considered to be vague and confusing by the Permittee.

Condition 7.1.13-1 - Conditional Approval of CAM Plan

In new Condition 7.1.13-1, the Illinois EPA is proposing to "conditionally approve" the CAM Plan submitted by Midwest Generation, LLC for the PM emissions of the coal-fired boilers, as discussed above.⁶⁸ This plan would be conditionally approved because there is currently not sufficient test data available from the coal-fired boiler for PM emissions with concurrent data for opacity. Therefore, Midwest Generation, LLC must conduct further testing for PM emissions to confirm the ability of the monitoring to provide data sufficient to satisfy 40 CFR Part 64 and/or confirm the appropriateness of indicator ranges or designated conditions to satisfy 40 CFR 64.3(a)(2) and (3).

In its CAM Plan, Midwest Generation, LLC submitted an implementation plan and schedule that contains appropriate milestones for completing necessary testing for PM emissions, consistent with the requirements in 40 CFR 64.4(d)(1) and (e). This implementation plan and enforceable schedule have been included in the revised CAAPP permit as Condition 7.1.13-1.

The revised CAAPP permit would make clear that the future incorporation into the CAAPP permit of ranges for opacity would constitute a permit modification. Condition 7.1.13-1(b)(ii) provides that Midwest Generation, LLC, no later than 60 days following completion of CAM testing, shall submit an application for a proposed modification to the permit to "incorporate information for the opacity value that was derived from testing" As such, it is not necessary for the revised CAAPP permit to specify that the future incorporation into the permit of the specific ranges for indicators⁶⁹ would constitute a significant or other type of permit modification. Because of the conditional approval of the CAM Plan, the future approval of actual indicator ranges by the Illinois EPA must be preceded by an opportunity for

⁶⁷ The nature of the relationship between opacity and PM emissions also means that a level of opacity at which compliance with the PM standard is reasonably assured can be more readily determined than a level of opacity that constitutes clear evidence of a real violation of the PM standard. In this regard, the fact that levels of opacity from the boilers at or below 30 percent reasonably assure compliance with the PM standard does not mean that the converse also applies, i.e., that opacity above 30 percent indicates real violations of the PM standard. At the present time, it is not appropriate to draw additional conclusions beyond the narrow conclusion that opacity within 30 percent should assure compliance with the PM standard.

⁶⁸ Conditional approval of CAM Plans is provided for by the CAM Rule. See 40 CFR 64.4(d)(1), 64.4(e) and 64.6(b).

⁶⁹ The CAM Plan currently does not specify an indicator range because Midwest Generation, LLC does not have data available over the anticipated operating conditions to reliably set this numerical indicator range. This is the reason for a conditional approval to provide a strict timeframe to gather this data.

public comment.⁷⁰ These indicator ranges could be incorporated into the permit through a significant modification of the permit as well as any other type of permitting action that includes an opportunity for public comment, including a reopening. Permit proceedings are governed by the applicable laws and rules that govern the CAAPP and their requirements cannot be established by a provision in the revised permit.

Condition 7.1.13-2 - Requirements for Compliance Assurance Monitoring

New Condition 7.1.3-2 and associated Table 7.1.13 address relevant elements of the CAM Rule and the CAM Plan submitted by Midwest Generation, LLC and that must now be included in the revised CAAPP permit for the Waukegan Generating Station.

Midwest Generation, LLC's CAM Plan would use opacity as the indicator for PM emissions of the coal-fired boilers. Opacity is monitored by the existing Continuous Opacity Monitoring Systems (COMS) for these boilers. The COMS must continue to be operated to meet the specifications for opacity monitoring systems per 40 CFR Part 75 and Performance Specification 1 in 40 CFR Part 60, Appendix B.

As the CAM Plan would only be conditionally approved, as discussed above, testing for PM emissions would be conducted to determine appropriate indicator ranges for assuring compliance with the PM emissions limit under various operating conditions for the boilers. Testing would determine the upper limit of opacity, as measured in the flue gas stream, which assures compliance with the PM limit.⁷¹

Changes for CAM in Sections 7.2, 7.3, 7.4 and 7.5: Unit Specific Conditions for Coal Handling Equipment, Coal Processing Equipment, Fly Ash Handling Equipment and Distillate Oil-Fired Turbines

Condition 7.2.5(b)

For the coal handling equipment, which consists of various transfer and storage operations, a non-applicability statement would be added relative to the CAM Rule. Certain coal handling equipment is subject to limits for PM emissions set in a construction permit. However, the pre-control potential PM emissions of these units are less than the major source threshold. Therefore, these units do not meet the applicability criterion in 40 CFR 64.2(a) (3) and the requirements of the CAM Rule are not applicable.

Condition 7.3.5(a)

For the coal processing equipment, a non-applicability statement would be added relative to the CAM Rule. The coal processing equipment, which consists of coal crushing, is subject to a state emission standard for PM. However,

⁷⁰ It is also relevant that the CAM Plan submitted by Midwest Generation, LLC did not include a specific procedure by which the value of indicators would be established or re-established. The CAAPP permit also does not include provisions setting forth how Midwest Generation, LLC must notify the Illinois EPA of changes to the values of the indicator ranges. As such, after required testing for PM is completed, specific values for the indicator must be included in a modified CAAPP permit, as provided for by 40 CFR 64.6(c) (2).

⁷¹ The permit does not specify how PM and opacity would be correlated because CAM does not require a correlation or regression analysis. Rather, the permit would require Midwest Generation, LLC to perform testing as specified in 40 CFR 64.6(d) to collect the necessary data consistent with 40 CFR 64.4(e).

control device(s), as defined by 40 CFR 64.1, are not used. Therefore, the applicability criterion in 40 CFR 64.2(a)(3) is not met for these emission units and the requirements of the CAM Rule are not applicable.

Condition 7.4.5(b)

For the fly ash handling equipment, a non-applicability statement would be added relative to CAM. The fly ash handling operation, which consists of various transfer and storage equipment, is subject to a state emission standard for PM emissions. However, control device(s), as defined by 40 CFR 64.1, are not used. Therefore, the applicability criterion in 40 CFR 64.2(a)(2) is not met for these emission units and the requirements of the CAM Rule are not applicable.

Condition 7.5.5(e)

For the combustion turbines, a non-applicability statement would be added relative to the CAM rule. The combustion turbines are subject to state emission limitations for SO₂ and NO_x. However, control device(s), as defined by 40 CFR 64.1, are not used to achieve compliance with an emission limitation or standard. Therefore, the applicability criterion in 40 CFR 64.2(a)(2) is not met for these emission units and the requirements of the CAM Rule are not applicable.

Further Discussion of the Rationale for Use of Opacity As the Indicator Parameter in the CAM Plan for the Coal-Fired Boilers:

For purposes of air pollution control, opacity is the degree to which the transmission of light through the exhaust from an emission unit is reduced by the presence of particulate in the exhaust. In simpler terms, it is the "obscuring power" of the exhaust, expressed as a percent. As particulate in the exhaust from an emission unit acts to interfere with the passage of light through that exhaust, the level of opacity from an emission unit is indicative of the level of particulate in the exhaust. Accordingly, opacity readily serves as an indicator of PM emissions and the performance of PM control devices. Higher levels of opacity generally may be associated with higher rates of emissions. Lower levels of opacity indicate lower rates of emissions.

As a general matter, opacity monitoring is well established as a means to address PM emissions. Numerical values of opacity can be reliably determined by observations of the exhaust from emission units by individuals who have been properly trained and demonstrated their ability to make such observations.⁷² Numerical measurements of observations can also be made with

⁷² The determination of opacity by human observations is addressed by USEPA Reference Method 9, *Visual Determination of the Opacity of Emissions from Stationary Sources*. This method addresses the training and certification of individuals to make such determinations by means of a smoke generator. This is a device that can be readily adjusted to generate both white and black smoke with opacity ranging from zero to 100 percent. The stack of the smoke generator is equipped with a "smoke meter" to provide instrumental opacity measurements for the smoke that is being generated. Individuals seeking to become certified opacity observers must demonstrate their ability to match the instrumental measurement of opacity over a run of 50 plumes of differing opacity. To be certified, the candidate must not have an error greater than 15 percent on any reading and must be within 7.5 percent for the average of all his or her readings. The certification process must be repeated every six months. Method 9 also addresses the procedures that must be made by certified observers when making actual determinations of opacity for emission units.

monitoring instruments that are installed in the stack or duct work of an emission unit, in which case opacity can be determined on a continuous basis. Standards and limits for opacity commonly address average opacity over a period of six minutes, based on a number of individual readings or measurements during such period. Accordingly, data for opacity is commonly reported as six minute averages, consistent with the terms in which opacity is commonly regulated. However, opacity can also be determined for shorter or longer averaging periods, including on a three hour block average basis, as proposed by Midwest Generation, LLC in its CAM Plan.

For the coal-fired boilers at the Waukegan Generating Station, the use of opacity as the CAM indicator would provide an effective means of assuring compliance with the applicable PM standard on an ongoing basis between the periodic stack tests for PM emissions. Indeed, for these boilers, continuous opacity monitoring is currently required by both federal rules (40 CFR 75.14) and state rules (35 IAC Part 201 Subpart M). Moreover, 40 CFR 64.3(d)(1) specifically provides that if a COMS is required for an emission unit pursuant to the Clean Air Act or regulations thereunder, the COMS shall be used to satisfy the CAM Rule. 40 CFR 64.3(d)(2) further provides that a COMS that satisfies the monitoring requirements of 40 CFR Part 75, like the COMS on these boilers, shall be deemed to satisfy the general design criteria for a CAM Plan, provided that monitoring with a COMS may be subject to the criteria for establishing indicator ranges.^{73, 74}

Given these circumstances, it is wholly appropriate for Midwest Generation, LLC in its proposed CAM Plan to have selected opacity as the sole indicator for PM emissions. Midwest Generation, LLC has not proposed to use other secondary indicators in this plan. Midwest Generation, LLC could have proposed in this plan to also use actual operating parameters of the ESPs on the boilers. This would have made the CAM Plan far more complicated than the proposed plan. This is because an ESP for a coal-fired utility boiler is composed of many sections, each with its own electrical system. The overall performance of the ESP is affected by how each section in the ESP is performing and the position of the ESP sections relative to each other.⁷⁵ If Midwest Generation, LLC had proposed in its CAM Plan to use ESP operating parameters, it would have been reasonable for it to address both these

⁷³ In addition, 40 CFR 64.4(b) provides that a COMS that satisfies the requirements and specifications in 40 CFR 64.3(d), as the COMS on these coal-fired boilers do, is "presumptively acceptable monitoring" for purposes of CAM. As Waukegan Generating Station's CAM Plan would use presumptively acceptable monitoring, Midwest Generation, LLC did not have to provide justification for the appropriateness of the use of continuous opacity monitoring in its CAM Plan other than an explanation of the applicability of such monitoring to these boilers, unless data or information is brought forward to rebut that assumption.

⁷⁴ As explained by USEPA in the preamble to the adoption of CAM, CAM monitoring with a required COMS must be conducted using an appropriate indicator range for opacity that satisfies 40 CFR 64.3(a)(2) and (3). See 62 FR 54923, October 22, 1997.

⁷⁵ In an ESP for a coal-fired boiler, the exhaust flow is divided and passes through the ESP in separate "gas paths", each path having several ESP sections in series. The control efficiency of the ESP depends on the aggregate performance of all the sections in the ESP. Reduced performance of the ESP sections in the same gas path has a larger effect on overall ESP efficiency than the same reduction in performance spread across different gas paths. In the first case, the control efficiency for a portion of the exhaust flow is greatly impacted. In the second case, while more of the gas flow is affected, the overall impact is less.

factors.⁷⁶ Use of ESP operating parameters in the CAM Plan also would not necessarily have provided additional assurance of compliance with the applicable PM standards. This is because the ESP is only one factor in influencing the PM emissions of the boilers. ESP operating parameters would also only address certain aspects of the operation of an ESP, e.g., the electrical power consumption of the ESP. In contrast, opacity serves as a direct indicator of the overall performance of the ESP. This is because opacity also addresses aspects of ESP operation for which there is not instrumentation, such as proper operation of the ash hoppers.⁷⁷

3.3 Changes to the Permit Related to the Future Reopening (New Condition 5.9)

As already discussed, upon the effectiveness of an initial CAAPP permit for the Waukegan Generating Station following dismissal of the appeal and/or lifting of the current stay, the Illinois EPA will be initiating a formal reopening of this CAAPP permit. The permit will be reopened to add additional requirements to this CAAPP permit, i.e., requirements under the Clean Air Act that have become applicable for the Waukegan Generating Station since the initial permit was issued in 2006. This reopening proceeding will be carried out under Section 39.5(15)(a)(i) of the Act, which sets forth the procedures for the reopening of CAAPP permits.

New Condition 5.9 would be included in the revised permit to explicitly require Midwest Generation, LLC to appropriately assist the Illinois EPA in this

⁷⁶ For example, in 2003 when developing its CAM Technical Guidance to assist subject sources and permit authorities, USEPA recognized that ESP operating parameters could not readily be used to address the performance of an ESP on a coal-fired boiler. In its proposed CAM Protocol for ESPs on coal-fired boilers, USEPA suggested a two-stage approach to CAM monitoring for coal-fired boilers. The first stage relied on opacity. The second stage, which would involve ESP operating parameters, would only come into play when opacity exceeded a threshold value. However, the ESP operating parameters would not be directly used as indicators of compliance. The indicator under the CAM Plan would be the "required" efficiency of the ESP as set based on emission testing. When the opacity threshold for a boiler was exceeded, the relevant operational data for its ESP would then be used with an appropriately tailored computerized ESP model. Finally, the control efficiency of the ESP calculated by the computer would be compared to the indicator value or range of control efficiency established under the CAM Plan, to determine whether an exceedance actually occurred. As explained by USEPA, a less accurate indication of ESP performance (opacity) would be used to warn a source that ESP performance had deteriorated to a level that required the source to run a computer model to confirm a reasonable assurance of compliance. Refer to *Compliance Assurance Monitoring (CAM) Protocol or an Electrostatic Precipitator (ESP) Controlling Particulate Matter (PM) Emissions from a Coal-Fired Boiler* (proposed), USEPA, April 2003.

⁷⁷ The fact that the initial CAAPP permit required Midwest Generation, LLC to conduct operational monitoring for various operating parameters of the ESP does not show that the CAM Plan should be based on these operating parameters. It is appropriate that such operating records be required for the ESP for several reasons. These records would help assure that the ESP is properly operated and maintained. This is because they may directly reveal deterioration in the operational condition of a particular section in the ESP, which should be addressed as part of periodic maintenance and repair of the ESP. These records would also facilitate corrective action in the event of opacity excursions. In particular, when an opacity excursion is caused by an electrical problem with the ESP, as is often the case, these records would enable the source to readily determine this and assist in the diagnosis of such problems. If electrical problems at the ESP are not the cause of an excursion, it would also enable the source to focus on other aspects of the operation of the ESP and associated boiler.

reopening proceeding, in accordance with Section 39.5(15)(a)(i) of the Act and 35 IAC 270.503(a)(1), unless the permit has been reopened within 32 days after the issuance of the revised CAAPP permit. This condition would be included in the revised permit in order to address a concern expressed by USEPA concerning the resolution of a CAAPP appeal for another source and avoid potential objection or other administrative action by USEPA in this permitting action.

Condition 5.9 would require Midwest Generation, LLC to provide certain information to the Illinois EPA, as specified by the condition, to assist the Illinois EPA in this reopening proceeding. Condition 5.9(a) would require Midwest Generation, LLC to submit information identifying all additional Clean Air Act requirements that have become applicable to the Waukegan Generating Station since February 7, 2006. This identification must adhere to the definition of "applicable Clean Air Act requirement", as set forth in Section 39.5(1) of the Act. Condition 5.9(b) would require Midwest Generation, LLC to submit information identifying any noncompliance associated with these new applicable Clean Air Act requirements, including the identification of the requirement and affected emission unit(s), the nature of the noncompliance, an explanation of the source's failure to comply with the requirement and a proposed compliance plan and schedule for the subject emission unit(s). The information must be submitted as part of a revised CAAPP permit application.

Condition 5.9 would also address the timing of submittal of this information, if it is required. Midwest Generation, LLC would be required to submit the specified information to the Illinois EPA no later than 90 days after the issuance of the revised permit.

CHAPTER IV - SUPPLEMENTAL INFORMATION

This chapter provides supplemental information that may assist interested individuals in understanding the permitting action that is now planned as it provides background on the CAAPP permit that was initially issued for this source and certain provisions included in the CAAPP permits issued for coal-fired power plants.

4.1 Discussion of Monitoring for Significant Emission Units

a. Coal-Fired Boilers

This source has coal-fired boilers whose steam output is used for generation of electricity.

CO emissions from the boilers are addressed by good combustion practices. NO_x emissions from the boilers are controlled by combustion control measures including over fire air systems (OFA) and low NO_x burners. PM emissions are controlled by electrostatic precipitators (ESP). Additional controls have been added since 2005 and will be addressed through reopening.

The boilers are subject to emission standards for CO, NO_x, PM and SO₂. They are also subject to standards for the opacity of emissions. The boilers are also subject to the federal Acid Rain Program, which imposes requirements on SO₂ and NO_x emissions and requires that the boilers be equipped with continuous emissions monitoring systems (CEMS) for SO₂ and NO_x with computerized systems for collection of emission data.

For PM, for which continuous emissions monitoring is not performed, emissions testing is required. Initial PM testing under the CAAPP is to be performed within one year of Condition 7.1.7(a) becoming effective. The time interval between subsequent stack testing is, in part, dictated by the results of the prior test. CO testing is also required for the boilers and shall be performed in conjunction with PM testing unless a CO test was completed during a prior relative accuracy test audit (RATA) for the continuous emissions monitoring systems. Required testing is to be conducted at 90 percent or better of the seasonal maximum operating loads of the affected boilers or related turbines and other operating conditions that are representative of normal operation.

The boilers are operated pursuant to formal operating procedures. The permit requires that the boilers must be started up in accordance with procedures that are developed and maintained to minimize emissions.

The boilers have the potential to exceed the applicable emission standards during malfunction and breakdown. As provided by applicable state rules, subject to certain terms and conditions, the permit authorizes Midwest Generation, LLC to make certain claims related to continued operation with emissions in excess of applicable state emission standards during such events. In particular, such continued operation must be necessary to provide essential service or to prevent injury to personnel or severe damage to equipment. In addition, upon occurrence of excess emissions, Midwest Generation, LLC must, as soon as practicable, reduce boiler load, repair the affected boiler, remove the affected boiler from service, or undertake other action so that exceedances of state emission standards cease.

The source must keep a variety of operational records for each boiler and its control equipment. For startup, records must be kept with the date, description, and duration of each startup. Further records are required if a startup does not progress in a routine manner to normal operation and compliance with applicable standards or if the source's startup procedures are not followed.

For malfunction/breakdown events, records must be kept for each incident when operation of a boiler continued with excess emissions. These records must include the date, duration, and description of the malfunction/breakdown; the corrective actions used to reduce the quantity of emissions and the duration of the incident; information on whether opacity exceeded the applicable standard for two or more hours; whether PM, CO, or NO_x emissions exceeded the applicable standard; a detailed explanation of why continued operation of the affected boiler was necessary; the preventative measures that have been or will be taken to prevent similar malfunctions or breakdowns in the future including any repairs to the affected boilers and associated equipment; and an estimate of the magnitude of PM and or CO emissions during the incident. Maintenance and repair records must also be kept.

The provisions of the permits for notification and reporting provide a hierarchy of reports. Excess PM emissions, which would be associated with malfunction/breakdown of equipment, must be followed by a written report within 15 days of the event. Extended opacity exceedances, in which the total duration of exceedances is greater than the specified time period are also to be reported immediately and then followed with a written report within 15 days if they persist for more than 120 minutes. The source is also required to submit quarterly reports that address exceedances, along with certain data from the continuous monitoring systems for SO₂ and NO_x.

The source is required to provide information in the quarterly reports addressing all deviations from applicable requirements of the permit, including both emission control requirements and requirements for monitoring and recordkeeping. Such reports would also include information on the total operating hours; the greatest hourly load achieved by each boiler; a discussion of significant changes in the fuel supply; the number, total duration, and description of startups; information for SO₂, NO_x, and PM emissions and opacity; and operational information for continuous monitoring systems. These reports must include the following information for each period when emissions were in excess of an applicable limitation: the starting date and time of the excess emissions; the duration of the excess emissions; the measured emissions rate, if any; and a detailed explanation of the cause of the excess emissions with a discussion of any corrective actions taken. Similar information would be required in the unlikely event that CO emissions exceeded the applicable standard, as would be determined from operational data for a boiler.

For opacity and PM exceedances, the quarterly reports must also contain summary information. For each period when opacity is in excess of applicable standards, the reports must include a summary of information for each period of excess opacity that includes starting date and time of the excess opacity, duration of the excess opacity, magnitude of the excess opacity based on six-minute average, a detailed explanation of the cause of the excess opacity, a detailed explanation of corrective actions taken, identification of any previous report identifying excess opacity and information regarding incidents when operation continued during malfunction or breakdown with excess opacity. These reports must also contain a completed "Summary Report" as specified by 40 CFR 60.7(d). In addition, in certain situations, the reports must also

identify the operating time of the affected boiler and the operating status of the opacity monitoring system.

b. Coal Handling and Coal Processing

The source handles, transfers, and stores coal in a series of operations. Coal processing is also conducted to reduce the size of the coal to meet the fuel size requirements of the boilers. PM from coal-handling and coal processing equipment is controlled by various measures including a dust collection device(s), natural moisture content of the coal, application of dust suppressant and water spray, as well as with enclosures and covers. The PM emission from coal handling and processing are subject to an opacity limit and various regulations that address fugitive PM emissions. The PM emissions from coal processing operations are also subject to PM emission standards for process emission units.

For coal handling and processing, monthly inspections of control measures are to be performed at least while the equipment is in use. These inspections are to confirm implementation of the work practices to control dust (PM emissions).

For coal handling and processing, visible emissions observations are to be performed on an annual basis with initial observations required within two years of the permit condition becoming effective and subsequent observations shall be performed every third year.

For both coal handling and processing, records shall be maintained for, among other things, the control measures that are being used, operational data, maintenance and repair activities, and any malfunction/breakdown of equipment. Records of the required inspections shall also be kept.

Reporting of deviations from the control measures required by the record that last more than 12 hours shall occur within 30 days. All deviations from applicable standards or limitations in the permit must be addressed in a quarterly report, submitted with the quarterly report for the coal-fired boilers.

c. Ash Handling Process

The source operates ash removal systems that handle ash collected at the coal-fired boilers in a dry state. PM is controlled by enclosure and vent filters.

Regular monthly inspections of control measures are required of the operation while the equipment is in use. In addition, a weekly inspection is required for the fly ash load out operations.⁷⁸

Visible emissions observations are required at least annually except for fly ash load out operations, for which observations are required quarterly. Such observations are only required for ash handling equipment from which visible emissions, i.e., any visible emission, are normally observed.

The source shall keep records of, among other things, the specific control measures that are used, operational data, required inspections, and times when the control measures are not utilized.

⁷⁸ See the discussion on what a Fly Ash Load Out system is in Section 3.1 above.

Extended deviations from the identified control measures must be reported within 30 days. All deviations must be addressed in quarterly reports that accompany the quarterly reports for the coal-fired boilers.

d. Distillate Oil-Fired Turbines

The source operates four distillate oil fired turbines to provide electricity to meet peak power demands.

Observations of opacity of each affected turbine using Reference Method 9 must be conducted once for every 250 hours of operation but at least one observation must be conducted each calendar year while the turbine is in operation. Initial observations must be completed within the first 50 hours of operation of the turbine after the date the permit condition becomes effective.

Certain shipments of distillate oil used in the turbines are sampled and analyzed to verify sulfur dioxide emissions are within established emission limitations.

Emissions of NO_x are based on heat input determined from metered fuel usage or hours of operation and maximum hourly heat input for the turbines.

The source must keep records related to the above noted visible emission observations and actual emission determinations as well as an operation log and startup records for the affected turbines.

4.2 Discussion of Reporting Required by CAAPP Permits

The effectiveness of the CAAPP relies in part upon accurate and timely reporting by sources. The Illinois EPA, USEPA, and the public rely on reports submitted by sources for information about the compliance status of sources and to help guide their investigations and actions. CAAPP permits generally contain four types of reporting requirements to address and facilitate compliance with applicable requirements. CAAPP permits contain "regulatory" reporting requirements that are carried over from applicable state and federal rules. CAAPP permits require prompt reporting of any deviations that occur from the applicable requirements in the permit. CAAPP permits also require reports on the monitoring that is required under the permit. Finally, CAAPP permits require annual compliance reports or "compliance certifications" in which a source must report on its compliance status during the preceding calendar year. All these reports must be certified by the responsible official for the source for their truth and accuracy. These four types of reporting are all present in the initial CAAPP permit for this source.

Regulatory Reports

As provided by Section 39.5(7)(b) of the Act, CAAPP permits must address reporting requirements under applicable rules. Many state and federal air pollution control rules contain reporting requirements. The regulatory reporting requirements contained in any CAAPP permit are source-specific as they depend upon the nature of the emission units at a source and the applicable rules to which these units are subject. The actual reporting requirements vary from rule to rule, with different trigger events, reporting frequency, required content, etc. Depending on the nature of these requirements, these regulatory reports may also constitute a deviation report as described below.

The initial CAAPP Permit for this source addresses all regulatory reporting requirements under federal and state rules under the Clean Air Act and the Act as of the date that the permit was issued. Because of their required content and timing, some of these regulatory reports may also serve for prompt reporting of deviations or monitoring reports.

Deviation Reports (Prompt Reporting)

Section 39.5(7)(f)(ii) of the Act mandates that each CAAPP permit require prompt reporting of deviations from permit requirements. The reporting of deviations directly facilitates timely actions by CAAPP sources to address any deviations that may occur. This includes timely implementation by sources of corrective actions for the deviations and appropriate actions to prevent similar incidents. Prompt reporting of deviations is also essential for the Illinois EPA and others to have timely notice of deviations and the opportunity to respond as appropriate. Any excursion from a standard, emission limit, operating requirement or work practice standard, as specified by a CAAPP permit, is a deviation subject to prompt reporting. Additionally, any failure to comply with any permit term or condition is a deviation that must be reported as a deviation. A deviation may or may not constitute a violation of an applicable emission limit or standard. A deviation can occur even though other indicators of compliance suggest that an emission violation or exceedance has not occurred.

The CAAPP and the federal rules upon which the CAAPP is based do not define the term "prompt". Rather, 40 CFR Part 70.6(a)(3)(iii)(B) provides permitting authorities, in this case, the Illinois EPA, with the authority to define "prompt" in relation to the degree and types of deviation likely to occur at particular emission units. Accordingly, the Illinois EPA must set the timing of prompt reporting on a case-by-case basis. As a general matter, where an underlying applicable regulatory requirement specifies "prompt reporting" (e.g., exceedance reporting under the NSPS), the Illinois EPA typically uses that pre-established timeframe in a CAAPP permit. Where the underlying applicable requirement does not specify a timeframe for reporting deviations, the Illinois EPA commonly uses a timeframe of 30 days for prompt reporting.

This approach to prompt reporting of deviations is consistent with Section 39.5(7)(f)(ii) of the Act as well as the Clean Air Act and 40 CFR Part 70. The requirements in CAAPP permits for deviation reporting are developed so that sources will appropriately notify the Illinois EPA of those events that might warrant individual attention. The timing for these event-specific reports is set to give sources adequate time to conduct a reasonable 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 report for a deviation. At the same time, the timing for these reports is also set to provide the Illinois EPA and others with relevant information in a timely manner. This is necessary so that the Illinois EPA and USEPA have the ability to expeditiously initiate investigations and make follow-up compliance and enforcement decisions.

The CAAPP permit for this source requires prompt reporting of deviations in accordance with the Act. In addition, pursuant to Section 39.5(7)(f)(i) of the Act, this CAAPP permit requires the source to provide a summary of all deviations in quarterly reports. The requirements for reporting deviations for each group of emission units are generally found in "reporting conditions" for those units.

Monitoring Reports

Section 39.5(7)(f)(i) of the Act mandates that each CAAPP permit require periodic reports relative to the monitoring required by the permit. For this purpose, monitoring includes instrumental and non-instrumental emissions monitoring, emissions analyses, and emissions testing established by state or federal rules or as established in the CAAPP permit. Monitoring also includes recordkeeping. Depending upon the monitoring that is at issue, the monitoring reports may also constitute deviation reports, as already discussed. In addition, deviations from monitoring requirements must be identified in these reports. If deviations from monitoring requirements have not occurred, these reports must still be submitted confirming that monitoring was conducted properly. These monitoring reports are commonly required on a semi-annual basis, addressing the periods of January 1 through June 30 or July 1 through December 31 of a year. Each report is due within 30 days after the close of reporting period.

Annual Compliance Certifications

Section 39.5(7)(p)(v) of the Act mandates that each CAAPP permit require the source to submit annual certifications of its compliance status for each term and condition in its CAAPP permit. These reports afford a broad assessment of a CAAPP source's compliance status. The CAAPP requires that these reports be submitted on an annual basis, even if a source has complied with all requirements. These reports must be submitted by May 1 of the year immediately following the calendar year that is addressed by a report.

4.3 Discussions of Start-up and Malfunction/Breakdown

As related to state emissions standards under Illinois' State Implementation Plan (SIP), this CAAPP permit addresses excess emissions during startups or periods of malfunction or breakdown in a manner that is consistent with Illinois' SIP. 35 IAC 201.149, which is part of Illinois' SIP, 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 an applicable state emission standard or limitation absent express permit authorization.⁷⁹

The provisions governing such permit authorizations are in 35 IAC Part 201 Subpart I, which is also part of Illinois' SIP. These provisions make clear that the process in Illinois for addressing compliance with state emission standards during malfunction/breakdown and startup is in two steps. The first step, as set forth at 35 IAC 201.261, consists of a source seeking authorization by means of a permit application to make a future claim of malfunction/breakdown or startup.⁸⁰ Absent a request for authorization in a

⁷⁹ 35 IAC 201.149 and 35 IAC Part 201 Subpart I only address violations of state emission standards and limitations, as found in 35 IAC Subtitle B: Air Pollution, Chapter I: Pollution Control Board, Subchapter c: Emission Standards and Limitations for Stationary Sources. "Subchapter c" includes Illinois emissions standards for various pollutants, including particulate emissions (35 IAC Part 212), sulfur dioxide emissions (35 IAC Part 214), and nitrogen oxide emissions (35 IAC Part 217).

⁸⁰ Pursuant to 35 IAC 201.261, a request related to malfunction/breakdown should include an explanation of why continued operation is necessary; the anticipated nature, quantity and duration of emissions; and measures that would be taken to minimize the quantity and duration of emissions. A request related to startup should include a description of the startup procedure, duration, and frequencies of startups,

permit application, followed by express grant of such authorization in an issued permit, a source cannot make a claim of malfunction/breakdown or startup under Illinois rules in the event of a future exceedance of a state emission standard during such periods. These regulatory provisions are specifically recognized by the CAAPP, pursuant to Section 39.5(5)(s) of the Act.

The second step in Illinois' process related to excess emissions during malfunction/breakdown or startup, as addressed by 35 IAC 201.262, addresses the showing that a source must make for a viable claim of malfunction/breakdown or startup. For malfunction/breakdown, this showing consists of a demonstration that continued operation was necessary to prevent injury to persons or severe damage to equipment, or was required to provide essential services. For startup, this showing consists 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. In some respects, this showing for startups may be evaluated based on past practice when considering whether a permit should provide authorization to make claims related to startup. However, this showing also continues to be relevant on an ongoing basis, like the showing required for malfunction/breakdown events, which may never actually occur. This is because the showing for startups also relates to future activities whose exact circumstances are not known.⁸¹

For certain emission units at this source, malfunction and breakdown and/or startup authorization was sought under Illinois' rules. The application for a CAAPP permit contained, as applicable, completed Form 204-CAAPP, *Request To Continue To Operate During Malfunction and Breakdown*, and Form 203-CAAPP, *Request To Operate During Startup of Equipment*. This provided the relevant information specified by the applicable state rules.⁸² The Illinois EPA reviewed these requests and granted authorization to the source in the CAAPP permit to make claims of malfunction and breakdown and/or startup, as appropriate. The issued CAAPP permit clearly sets forth the emission units, types of authorization provided (i.e., malfunction/breakdown and/or startup), and the requirements that have been imposed in conjunction with such authorizations.

type, and quantity of emissions during startups and efforts to minimize emissions, duration, and frequency.

⁸¹ The approach taken by Illinois' rules can be distinguished from the historical approach taken by USEPA in the federal NESHAP rules, 40 CFR Part 63. USEPA generally addressed excess emissions during startup and malfunction of subject units without the initial step required by Illinois' rules. This is because sources were generally able to claim exclusion from an otherwise applicable standard during a malfunction event or during startup, as well as during shutdown, unless otherwise specifically precluded by the applicable NESHAP standard. The validity of such claims was then subject to scrutiny by USEPA and the state or local 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, so that the excess emissions were in fact violations. In fact, this case-by-case scrutiny of excess emission is the second step that is provided for by Illinois' rules. However, exceedances of Illinois' emissions standards at 35 IAC Subtitle B Chapter I Subchapter c that are related to startup and malfunction/breakdown are governed by the approach in Illinois' SIP.

⁸² For malfunction and breakdown of a unit, this information includes an explanation of why continued operation is necessary; the anticipated nature, quantity and duration of emissions; and measures that would be taken to minimize the quantity and duration of emissions. For startup, it is a description of the startup procedure for the unit, duration and frequencies of startups, type and quantity of emissions during startups, and efforts to minimize emissions, duration and frequency of startups.

These authorizations in the CAAPP permit do not equate to an "automatic exemption" from otherwise applicable state emission standards. The grant of these initial authorizations was fully consistent with long standing practice in Illinois for permitting and enforcement. Due to the nature of power plants and the inability to simply shutdown coal-fired boilers and the nature of the start-up of coal-fired boilers, excess emissions may occur during startup or malfunction and breakdown that the source cannot readily anticipate or reasonably avoid. However, as the source should be fully aware, it may be held accountable for any excess emissions that occur regardless of any authorization in the CAAPP permit related to malfunction and breakdown events and startup.

In summary, the provisions in the SIP and the CAAPP permit that delineate the elements for a viable claim of malfunction/breakdown or startup do not translate into any advance determination related to actual occurrences of excess emissions. Rather, together they provide a framework whereby a source is provided with the ability to make a claim of malfunction/breakdown or startup, with the viability of any such claim subject to specific review against the relevant requirements. In this regard, 35 IAC 201.265 clearly states that violating an applicable state standard even if consistent with any express authorization regarding malfunction/breakdown or startup in a permit shall only constitute a prima facie defense to an enforcement action for the violation of such standard.

4.4 Discussion for Emissions of Greenhouse Gases (GHG)

On June 3, 2010, USEPA adopted rules for the initial permitting of major sources of emissions of greenhouse gases (GHG).⁸³ This action was prompted by the earlier adoption of GHG emissions standards for motor vehicles under Title II of the federal Clean Air Act. The Annual Emission Reports submitted by Midwest Generation, LLC confirm that the Waukegan Generating Station is a major source of GHG emissions.⁸⁴ Based on general knowledge, emission standards or other regulatory obligations relating to GHG currently do not exist as "applicable requirements" for this source. There are no GHG-related requirements under the Act or contained in Illinois' SIP that apply at this time. Projects triggering such requirements that are major projects under the federal PSD rules have not been carried out at the Waukegan Generating Station. The mandatory reporting rule for GHG, promulgated by USEPA in 2009 [See *generally*, 40 CFR Part 98], also need not be addressed as an applicable requirement under the CAAPP.⁸⁵

⁸³ Certain aspects of USEPA's Tailoring Rule were recently determined to be invalid by the U.S. Supreme Court in *UARG v. EPA*, 134 S. Ct. 2427 (2014). Per the *UARG* decision and subsequent USEPA guidance, PSD cannot be triggered as a result of an increase in emissions of GHG; however, if a project triggers PSD as a result of an increase of another regulated NSR pollutant, then Best Available Control Technology (BACT) for GHG could be required if the project results in a GHG emissions increase and net emissions increase equal to or greater than 75,000 tons per year on a carbon dioxide equivalent (CO₂e) basis and greater than zero on a mass basis.

⁸⁴ This fact is noted here merely for informational purposes and does not form the basis of any proposed changes to the CAAPP permit.

⁸⁵ These observations are also made here merely for information and do provide the basis of any proposed changes to the permit.

ATTACHMENTS

Attachment 1: Planned Changes by Administrative Amendment⁸⁶

Discussion

Pursuant to Section 39.5(13) of the Act, the changes listed below are all administrative changes to the permit.⁸⁷ Pursuant to Section 39.5(13)(a) of the Act, neither notice nor an opportunity for public and affected State comment is required for the Illinois EPA to make these changes to the permit, provided that these revisions are designated as having been made pursuant to the CAAPP's procedures for administrative amendments to CAAPP permits. The source may also implement the changes addressed in its request for an administrative amendment of the permit immediately upon submittal of the request. These changes are not covered by any permit shield pursuant to Section 39.5(7)(j) of the Act.

Changes in Section 1 of the Permit: Introduction

Condition 1.2, 1.3 and 1.4

The owner and operator information would be updated to reflect current information and source contacts.

Condition 1.4

Additional detail would be added to General Source Description to clarify boiler configuration and use of natural gas during startup, shutdown and for flame stabilization. Footnote was added to this condition to clarify that Waukegan Unit 6 was retired on December 31, 2007 and conditions in the permit no longer impose obligations on this unit.

Changes in Section 4: Listing of Significant Emission Units

Condition 4.0

The description and associated emission control equipment/measures would be updated to accurately reflect the configuration and equipment designations at the source in 2006 when the permit was initially issued and to be consistent with this information in Section 7.0 of the permit.

Changes in Section 5: Overall Source Conditions

Condition 5.2.3(a)

Language would be revised to further recite the regulatory requirement in the 35 IAC 212.304(a) by adding "as needed", to the first sentence.

⁸⁶ Certain other changes to the initial CAAPP permit, specifically, changes that would require more frequent monitoring or reporting by Midwest Generation, LLC, would arguably also constitute administrative amendments. However, based on discussions with USEPA Region V, the Illinois EPA has proceeded conservatively and is approaching these changes as minor or significant modifications.

⁸⁷ Section 39.5(13) of the Act defines "administrative permit amendments" as a permit revision that can accomplish one or more of the changes listed in Section 39.5(13)(c) of the Act. All the planned administrative changes to the CAAPP permit for this source fall into the following categories: Correct typographical errors; identify a change in the name, address, or phone number of any person identified in the permit, or provide a similar minor administrative change at the source; or any other type of change which has been determined to be similar to those above.

Condition 5.2.5

For clarity, "Subpart F" would be added to the introductory sentence.

Changes in Section 6: Emission Control Programs

Condition 6.1.2

To correct grammar, "existing" would be added to the first sentence.

Changes in Section 7.1: Unit Specific Conditions for the Coal-Fired Boiler

Condition 7.1.1

The description of the coal-fired boilers would be revised to accurately reflect their configuration in 2006 when the permit was initially issued.

Condition 7.1.2

The list of emission units and associated control equipment would be revised to correctly reflect their configuration in 2006 when the permit was initially issued.

Condition 7.1.3(b)

The relevant rule would now be correctly identified, 35 IAC 201.261 and not 35 IAC 201.161.

Conditions 7.1.3(b) (iii)

The cross reference to recordkeeping requirements for Continuous Opacity Monitoring Systems (COMS) in Condition 7.1.9(c) and (e) would be deleted because the recordkeeping requirements during startup of the coal-fired boilers in Condition 7.1.9(g) would be extensively revised to clarify recordkeeping requirements for startups.

Condition 7.1.3(c)

The condition would be revised to correctly identify the applicable rule, 35 IAC 201.261 and not 35 IAC 201.161.

Condition 7.1.3(c) (iii)

The cross reference to recordkeeping and reporting requirements for Continuous Opacity Monitoring Systems (COMS) and Continuous NO_x Monitoring in Condition 7.1.9(c), 7.1.10-2(c), 7.1.9(e) and 7.1.10-2(d), respectively, would be deleted because the recordkeeping requirements in Condition 7.1.9(h) and reporting requirements in 7.1.10-3(a) for continued operation during malfunctions and breakdowns of the coal-fired boilers would be extensively revised to clarify recordkeeping and reporting requirements for during these events.

Condition 7.1.4(f)

To improve clarity, the phrase "affected boilers are each" would be replaced with appropriate language to specify requirements applicable to EGUs.

Condition 7.1.4(f) (ii) (B)

To correct grammar, the acronym "EGU" would be changed to "EGUs" in the first sentence.

Condition 7.1.5 (b)

To improve clarity, the phrase "solid fuel (coal)" would be replaced with "coal or other solid fuel".

Condition 7.1.5(b) (i)

To improve clarity, the condition would now refer to the incidental use of "natural gas or liquid fuels," rather than the incidental use of "other fuels".

Condition 7.1.6 - Title

To eliminate possible confusion, the title of this condition would be changed to "Work Practices" because this condition does not contain any operational or production limits or emission limits.

Conditions 7.1.7(b) (iii)

To be consistent with terminology elsewhere in this permit, the term "test methods" would be replaced with "Reference Methods." Also, Condition 7.1.7(b) (iii) (B) would be added to be consistent with language in Conditions 7.2.7(b) (ii) (B) and 7.4.7(b) (ii) (B). This would result in 7.1.7(b) (iii) being re-numbered as 7.1.7(b) (iii) (A).

Condition 7.1.7(e) (iii) (D)

Language would be revised to clarify that the operating parameters of control equipment during testing of the coal-fired boilers must be included in reports for testing submitted to the Illinois EPA.

Condition 7.1.7(e) (v)

Language would be revised to clarify the hourly average emissions of SO₂, NO_x, O₂ and CO₂ and 6-minute average opacity data measured by certified continuous emission monitors or opacity monitors must be included in the final report for any required emissions testing.

Condition 7.1.9(a)

The word "operational" would be replaced with "operating."

Condition 7.1.9(h) (i)

The word "log(s)" would be changed to "records".

Condition 7.1.10-2(a) (i) (B)

Condition would be revised to clarify that the source must include in quarterly reports the maximum hourly load achieved by each affected boiler or unit in steam flow, gross megawatts or heat input.

Condition 7.1.10-2(c) (ii)

To correct grammar the word "boiler" would be replaced with "boilers".

Condition 7.1.10-2(d) (iv)

For clarification, the word "exceedance" would be replaced with "periods of excess emissions". Also, the word "exceedance" would be replaced with "excess emissions" throughout this condition.

Condition 7.1.10-2(e) (i)

For clarification, the phrase "on a unit specific basis" would be added and "affected boilers" would be replaced with "units".

Condition 7.1.10-2(e) (ii)

The cross-reference would be corrected, now referring to Condition 7.1.4(f) (ii) (B) rather than Condition 7.1.4(f) (i) (B).

Condition 7.1.12

The word "limit" would be replaced with "limitation" to be consistent with other conditions in the permit.

Condition 7.1.12(a) (i)

To correct grammar, the word "Conditions" would be replaced with "Condition".

Changes in Sections 7.2, 7.3 and 7.4: Unit Specific Conditions for Coal Handling Equipment, Coal Processing Equipment and Fly Ash Handling Equipment

Conditions 7.2.1, 7.3.1 and 7.4.1

The description of the emission units would be revised to identify the presence or absence of dust collection devices.

Conditions 7.2.2, 7.3.2 and 7.4.2

The list of emission units would be revised to more clearly and accurately reflect their configuration when this permit was initially issued in 2006.

Conditions 7.2.3(b), 7.3.3(b) and 7.4.3(b)

The relevant rule would now be correctly identified, 35 IAC 201.261 and not 35 IAC 201.161. Also, cross-references would be corrected, i.e., Condition 7.3.4(c) rather than Condition 7.3.4(d) and Conditions 7.2.9(e), 7.3.9(d) and 7.4.9(d) rather than Conditions 7.2.9(f), 7.3.9(f) and 7.4.9(e).

Conditions 7.2.4(a), 7.3.4(a) and 7.4.4(a)

To improve clarity, the phrase "defined by ..." would be moved from the end of these conditions to their beginning.

Conditions 7.2.6, 7.3.6 and 7.4.6 - Titles

The titles of Conditions 7.2.6, 7.3.6 and 7.4.6 would be shortened to correctly match the actual contents of these conditions. The title of Condition 7.2.6 would become "Work Practices and Emission Limitations". This is because this condition would not contain any "operational or production limitations". The titles of Conditions 7.3.6 and 7.4.6 would be changed to simply "Work Practices". This is because these conditions would not contain any "operational or production limitations" or any "emission limitations".

Conditions 7.2.7(a) (ii), 7.3.7(a) (ii) and 7.4.7(a) (ii)

To improve clarity, the words "both less than" would be replaced with the words "each not greater than."

Conditions 7.2.7(a) (v) (D), 7.3.7(a) (v) (D) and 7.4.7(a) (v) (D) (in initial draft)

The phrase "...including recent weather" would be changed to "...including weather" to ensure weather conditions at the time of the opacity observations were documented in the report.

Conditions 7.2.7(b) (ii), and 7.4.7(a) (i)

To be consistent with terminology elsewhere in this permit, the term "USEPA Reference Test Methods" would be replaced with "Reference Methods".

Conditions 7.2.9 and 7.3.9

To improve clarity, the word "items" would be removed from the first sentence of these conditions.

Conditions 7.2.11 and 7.3.11

To correct grammar, the word "change" would be replaced with "changes".

Condition 7.4.11

To use terminology that is consistent with that elsewhere in the permit, the term "control measures" would be substituted for "suppressant systems". Also, to correct grammar, the word "change" would be replaced with "changes".

**Changes in Sections 7.5: Unit Specific Conditions for
Distillate Oil-Fired Turbines**

Conditions 7.5.2

The Table would be revised to consistently provide information regarding the turbines and any associated control equipment in 2006 when the initial permit was issued.

Condition 7.5.3(b)

The relevant rule would now be correctly identified, 35 IAC 201.261 and not 35 IAC 201.161. Grammatical errors corrected.

Condition 7.5.4(d) (ii) (B)

To correct grammar, the acronym "EGU" would be changed to "EGUs" in the first sentence.

Condition 7.5.5(c)

For clarity, the sentence was restructured and regulatory citation added.

Condition 7.5.7-1(b)

To improve clarity, the words "both less than" would be replaced with the words "each not greater than".

Condition 7.5.7-1(d) (iv) (in initial draft)

The phrase "...including weather" would be added to ensure weather conditions at the time of the opacity observations were documented in the report.

Conditions 7.5.9(e)

To be consistent with terminology elsewhere in this permit, the term "USEPA Methods" would be replaced with "Reference Methods".

Conditions 7.5.12(c)

To be revised to correctly identify Condition 7.5.9(f) that contains the recordkeeping requirements for compliance with NO_x emission limitations.

Change in Section 8: General Permit Conditions

Condition 8.6.4(b) (ii)

The address of the Illinois EPA's Field Office in Peoria would be changed because this office has moved.

Change in Section 9: Standard Permit Conditions

Condition 9.7

This condition would now indicate that Annual Emission Reports should be sent to the Air Quality Planning Section at the Illinois EPA, rather than the Air Compliance Section. This corrects an error in the initial permit.

Change in Section 10: Attachments

Condition 10.1 and 10.2 - Attachment 1 and 2

These attachments to the CAAPP permit, which provide regulatory language from 35 IAC 212.321 and 212.322, would be revised to more fully address actual language of these rules.

Attachment 2: Planned Revisions to the Permit by Minor Modification

Introduction

Pursuant to Section 39.5(14)(a) of the Act, the planned changes listed below are all minor modifications.⁸⁸ Pursuant to Section 39.5(14)(a)(v) of the Act, the Illinois EPA may not issue a revised CAAPP permit by minor modification until after a 45-day period for USEPA review has passed or USEPA has notified the Illinois EPA that it will not object to the issuance of the revised permit, whichever comes first. However, the Illinois EPA can approve the permit modification prior to that time. Pursuant to Section 39.5(14)(a)(vi) of the Act, the source may make the change proposed in its minor permit modification application immediately after it files such application. After the source makes the changes, and until the Illinois EPA takes final action, the source must comply with both the applicable requirements governing the change and the proposed permit terms and conditions. During this time period, the source need not comply with the existing permit terms and conditions that it seeks to modify. If the source fails to comply with its proposed permit terms and conditions during this period, the relevant existing permit terms and conditions may be enforced. Pursuant to Section 39.5(14)(a)(vii) of the Act, changes that are minor modifications are not covered by any permit shield pursuant to Section 39.5(7)(j) of the Act.⁸⁹

Change in Section 5 of the Permit: Overall Source Conditions

Condition 5.5.1

The current maximum fee amount that Midwest Generation, LLC must pay would no longer be specified because the amount of the fee has changed.

⁸⁸ The Act defines "minor permit modification" to mean a permit modification as listed in Section 39.5(14)(a)(i) of the Act. All the planned minor modification changes to the CAAPP permit for this source are not administrative amendments and meet the following criteria:

- Do not violate any applicable requirement;
- Do not involve significant changes to existing monitoring, reporting, or recordkeeping requirements in the permit;
- Do not require a case-by-case determination of an emission limitation or other standard, or a source-specific determination of ambient impacts, or a visibility or increment analysis;
- Do not seek to establish or change a permit term or condition for which there is no corresponding underlying requirement and which avoids an applicable requirement to which the source would otherwise be subject (i.e., a federally enforceable emissions cap assumed to avoid classification as a modification under any provision of Title I of the Clean Air Act; and an alternative emissions limit approved pursuant to regulations promulgated under Section 112(i)(5) of the Clean Air Act);
- Are not modifications under any provision of Title I of the Clean Air Act; and
- Are not required to be processed as a significant modification.

⁸⁹ It should be noted that the Illinois EPA did identify other changes to the initial CAAPP permit for the source that would arguably also be minor modifications, specifically, changes relating to reporting and recordkeeping. However, based on discussions with USEPA, a more conservative approach has been taken, addressing those changes as significant modifications to the permit.

Change in Section 6: Conditions for Emission Control Programs

Condition 6.1.1 - Note

To improve clarity, a note would be added to this general description of the NO_x Trading Program confirming that it is only for informational purposes and does not establish any requirements.

Changes in Section 7.1: Unit Specific Conditions for the Coal-Fired Boilers

Condition 7.1.4(e)

This condition would be revised to clarify that the specified emission limit is applicable to each affected boiler.

Condition 7.1.4(f) (i) (B)

Additional wording would be included so the condition reflects the relevant language in 35 IAC Part 217 Subpart V. In the initial permit, the paraphrased language in this condition could have been incorrectly construed as barring the source from taking advantage of the provisions in these rules for compliance by averaging. The additional wording included also clarified that the affected boilers addressed in Section 7.1 and the affected turbines in Section 7.5 are authorized by this permit to participate in averaging demonstrations. As a result the "Note" in the initial permit was no longer needed and existing wording in the permit condition was revised into a new "Note".

Condition 7.1.5(b)

The phrase "must conduct" would be replaced with "conducts" to reflect the fact that the source is already conducting the required monitoring. The condition would also be revised to enhance the language that the source is conducting monitoring consistent with Performance Specification 1 in Appendix B to 40 CFR Part 60 as specified in the federal Acid Rain Program. It should be noted that this condition does not make the boilers subject to the NSPS.

Condition 7.1.7(a) (i)

A change would be made to this condition dealing with the required timing of the testing of the coal-fired boilers for PM emissions under the permit. The phrase "the effective date of the condition" would be replaced with "the effectiveness of this condition". This change would not change the substance of this condition, as this condition would still generally require that PM testing be conducted for the coal-fired boilers within one year. However, the new terminology is more correct because this condition does not include an "effective date". Rather, this condition would become "effective" when the revised permit is issued assuming, of course, that this condition is not again appealed and then stayed. Incidentally, it is because of this possibility that this condition could again be stayed that a specific effective date cannot be included in this condition. It would also not be good practice to include such a date in this condition or in similar conditions of the revised permit where it is expected that the relevant date would simply be the date that the revised permit is issued.

Condition 7.1.7(c) (i)

This condition would be revised to eliminate any possible redundancies with the test plan submittal requirements in Condition 8.6.2.

Condition 7.1.9(a) (i) (A)

The phrase "or unit" would be added at the end of this recordkeeping requirement because the source tracks load in megawatts output by unit and not for each affected boiler.

Condition 7.1.9(a) (ii), (a) (iii), (a) (iv) (B) and (a) (v) (A) & (B)

Various changes would be made to clarify these conditions that require recordkeeping related to burning of materials other than standard fuel in the boilers. The revised conditions would more clearly differentiate between the two categories of materials, i.e., alternative fuels and process wastes, for which these conditions require certain records be kept.⁹⁰

Condition 7.1.9(b) (ii)

To clarify recordkeeping requirements for electrostatic precipitators (ESP) that control the particulate emissions of the coal-fired boilers, the phrase "When an affected boiler is in operation:" would be changed to "When the affected boiler served by the ESP is in operation:". The phrase "The status of each ESP field..." would be changed to "The status of each field in the ESP...".

Condition 7.1.9(c) (i) (A)

The recordkeeping requirements for the continuous opacity monitoring system would be revised to specify that the records for the monitored opacity of the coal-fired boilers must include data for 6-minute, one-hour, and three-hour block averages.

Conditions 7.1.9(c) (i), (d) (i), and (e) (i)

Various changes would be made to simplify Conditions 7.1.9(c) (i), (d) (i), and (e) (i). Conditions in (B), (C) and (D) in the initial permit for each of these conditions addressed recordkeeping for quality assurance and control activities for the continuous emission monitoring systems for opacity, SO₂ and NO_x emissions from the boilers. In the revised permit, the relevant records would be consolidated into a single condition, Condition 7.1.9(c) (i) (B), (d) (i) (B) and (e) (i) (B). (Subsequent conditions would also be appropriately renumbered.)

Condition 7.1.10-1(a)

Condition 7.1.10-1(a) generally sets forth the requirements for promptly notifying Illinois EPA of deviations for the coal-fired boilers. Various corrections would be made to the language of the introductory provision of this condition to correct errors in wording and content as compared to the statutory requirements in Section 39.5(f) (i) of the Act. In particular, as related to the cause for a deviation, the phrase "probable cause" would be used in the revised condition rather than "possible cause" to reflect statutory wording. As this condition describes the information that the source must provide, the condition would no longer include the phrase "at a minimum". This is because the required information specified in the condition would include all information that the Act specifies must be in such reports.⁹¹ In addition, a grammatical error in this condition would be corrected.

⁹⁰ Revised Condition 7.1.9(a) (ii) would now clearly require the source to keep records that identify each day when process waste was burned, as well days when an alternative fuel (i.e., a fuel material other than coal, gas or oil) was burned. Revised Condition 7.1.9(a) (iv) (B) would now clearly require records on a quarterly basis for the amounts of process wastes burned, as well as the amounts of each alternative fuel burned. Revised Condition 7.1.9(a) (v) would now clearly only address recordkeeping for alternative fuels, which would be provided to Midwest Generation, LLC by a supplier of such material.

⁹¹ While the source may elect to provide other information in these reports, this condition should not suggest that such information may be appropriate since this is not suggested by the statutory language.

Conditions 7.1.10-2(a)(i) and (ii)

Condition 7.1.10-2(a)(ii) would be restructured to improve clarity. Condition 7.1.10-2(a) generally addresses the required contents of the quarterly compliance reports that are required for the coal-fired boilers. Along with the information listed in Condition 7.1.10-2(a)(i), these quarterly reports must include detailed information related to SO₂ emissions, NO_x emissions and emissions of PM and opacity from each affected boiler as specified in Conditions 7.1.10-2(b), (c) and (d), respectively. Condition 7.1.10-2(a)(ii) would now provide a cross-reference to these subsequent provisions in Condition 7.1.10-2.

Condition 7.1.10-2(b)(i)

The phrase "...except for zero and span checks..." would be removed for consistency with the cited regulatory requirements in 40 CFR 60.7(c)(4). Also, the phrase "this shall be stated in the report" would be changed to "such information shall be stated in the report as specified by 40 CFR 60.7(c)(4)".

Condition 7.1.10-2(b)(iii)(C)

The condition would be revised to specify that the one-hour and three-hour average SO₂ emissions for each three hour block of excess emissions is to be included in quarterly reports.

Condition 7.1.10-2(b)(iii)(D)

The phrase "if known, including whether such excess emissions occurred during startup, malfunction or breakdown of a boiler" would be added at the end of this condition so the requirements for reporting cause of excess SO₂ emissions would be consistent with the requirements for reporting cause of excess opacity in Condition 7.1.10-2(d)(iii)(A)(IV).

Condition 7.1.10-2(b)(iii)(E)

To clarify the reporting requirement, the phrase "A detailed explanation of corrective actions and actions taken to lessen the emissions" would be changed to "A detailed explanation of any corrective actions taken".

Condition 7.1.10-2(c)(i)

The phrase "...except for zero and span checks..." would be removed for consistency with the cited regulatory requirements in 40 CFR 60.7(c)(4). Also, the phrase "this shall be stated in the report" would be changed to "such information shall be stated in the report as specified by 40 CFR 60.7(C)(4)".

Condition 7.1.10-2(d)(i)

The phrase "...except for zero and span checks..." would be removed for consistency with the cited regulatory requirements in 40 CFR 60.7(c)(4). The phrase "this shall be stated in the report" would be changed to "such information shall be stated in the report as specified by 40 CFR 60.7(C)(4)".

Condition 7.1.10-2(d)(ii)

Condition would be revised to accurately cite the regulatory requirements in 40 CFR 60.7(d). However, the option to exclude "zero and span checks" of the continuous opacity monitoring system in the quarterly report would not be included in this condition due to current reporting practices by the source.

Condition 7.1.10-2(d) (iii) - Note

The note accompanying this condition would be revised to remove wording that could be read to mean that these boilers are subject to an NSPS standard. While the source is conducting reporting for these boilers for opacity in accordance with the NSPS, this is not because the boilers are subject to an NSPS standard. Rather, it is because the Acid Rain Program requires opacity monitoring for these boilers. The provisions of the NSPS for reporting of opacity data are commonly used for the reporting of such data, including data collected under the Acid Rain program.

Condition 7.1.10-2(d) (iv) (A) (V) (in draft permit)

Condition would be revised so requirements for reporting cause of excess PM emissions are consistent with the requirements for reporting cause of excess opacity in Condition 7.1.10-2(d) (iii) (A) (IV).

Condition 7.1.10-2(d) (iv) (A) (VI) (in draft permit)

To clarify the reporting requirement, the phrase "A detailed explanation of corrective actions and actions taken to lessen the emissions" would be changed to "A detailed explanation of any corrective actions taken".

Condition 7.1.10-2(d) (vi)

This condition would be revised to better specify the scope of the required glossary of terms that the source is to prepare and attach to its periodic reports concerning opacity and PM emissions. The condition would now provide that this glossary is to address "specialized technical terms" used by the Permittee in those reports rather than "common technical terms". This would result in a more useful glossary with definitions for term that might otherwise be unfamiliar to or misunderstood by individuals that review these reports.

Condition 7.1.10-2(e) (ii)

This condition would be revised to clarify that its reporting requirements are applicable for the coal-fired boilers covered by this permit if Waukegan Generating Station is showing compliance with 35 IAC Part 217 Subpart V by participating in a NO_x averaging demonstration.

Condition 7.1.11

This condition addresses anticipated operating scenarios and operating flexibility for the coal-fired boilers. In the provisions of this condition, the word "burning" would be used in place of the word of "firing". This change was made for consistency with terminology used elsewhere in the permit.

In addition, Condition 7.1.11(c) (ii) would be rearranged to improve clarity. This condition addresses burning fuel in boilers that contain some alternative fuels, along with standard fuels. The criteria that apply to such alternative fuels are not changed. Any alternative fuels cannot constitute waste and must still be shipped to the source in homogenous form prepared for use as fuel. In addition, the amount of material fired in the boilers other than standard fuels continues to be limited to no more than 10 percent by weight on a quarterly basis.

**Changes in Sections 7.2, 7.3 and 7.4: Unit Specific Conditions for
Coal Handling Equipment, Coal Processing Equipment and Fly Ash Handling
Equipment**

Conditions 7.2.1, 7.3.1 and 7.4.1 - Notes

To improve clarity, notes would be added to these general descriptions of emission units in the permit confirming these descriptions are only for informational purposes and do not establish any requirements or limitations.

Conditions 7.2.7, 7.3.7 and 7.4.7 - Titles

The titles of Conditions 7.2.7, 7.3.7 and 7.4.7 would be changed to refer to "Opacity Observation," rather than simply "Opacity". This would make it clearer that these conditions address the opacity observation requirements that the source must conduct for the subject emission units.⁹²

Conditions 7.2.7(a) (iv), 7.3.7(a) (iv) and 7.4.7(a) (iv)

In these conditions addressing formal determination of opacity, the word "testing" would be replaced with the word "observations". This change would improve clarity because the term "observations," rather than "testing," is commonly used to refer to a formal determination of opacity by a human observer in accordance with USEPA Method 9, as is addressed by these conditions. (For an example of use of this terminology by USEPA, refer to 40 CFR 60.11(b).)

Conditions 7.2.7(b) (i) and 7.4.7(b) (i)

These conditions would be revised to clarify that the 90 day period for the source to complete emission testing when testing is requested by the Illinois EPA begins when the source receives the written request.⁹³ This 90 day period would not begin on the day that the Illinois EPA sends its request to the source.

Conditions 7.2.7(b) (iii) and 7.4.7(b) (iii)

To improve clarity, these conditions would be revised to eliminate possible redundancies with the general requirements in Condition 8.6.2 for submittal of test plans to the Illinois EPA in advance of emission testing.

Conditions 7.2.7(b) (v) and 7.4.7(b) (v)

These conditions would be revised to eliminate possible redundancies with the requirements in Condition 8.6.3 for content and timing of final reports for emission testing.

Condition 7.2.9(a), 7.3.9(a) and 7.4.9(a)

The requirements in these conditions in the initial permit to keep records for the performance specifications of dust collection equipment and to also keep maintenance and repair logs for this equipment would be changed.⁹⁴ Similarly,

⁹² Conditions 7.3.7 and 7.4.7 also continue to refer to "Emission Testing", as these conditions continue to include certain requirements for emission testing.

⁹³ These conditions also continue to provide that the Illinois EPA can provide additional time for the required testing to be completed.

⁹⁴ In the initial permit, records for the performance specifications of control devices were required by Conditions 7.2.9(a) (i) (A), 7.3.9(a) (i) (A) and 7.4.9(a) (i) (A) for coal handling, coal processing and fly ash handling, respectively. In the revised permit, due to shifting of conditions, these requirements would now be addressed in Conditions 7.2.9(a) (ii), 7.3.9(a) (ii) and 7.4.9(a) (ii) for coal handling, coal processing, and fly ash handling respectively.

In the initial permit, maintenance and repair logs for control devices were required by Conditions 7.2.9(a) (ii), 7.3.9(a) (ii), and 7.4.9(a) (ii) for coal handling, coal

Conditions 7.2.9(a) (ii), 7.3.9(a) (ii) and 7.4.9(a) (ii) would require the source to keep records for the performance specifications for the "baghouses" associated with certain coal handling, coal processing and fly ash handling units. In the initial permit, these records were required for the "dust collection equipment" associated with these units. Baghouses are the type of dust collection equipment associated with some of these units for which these records must be kept. These changes make clear that these records are not required for the other control measures for the subject units, which are not dust collections equipment.

Similarly, Conditions 7.2.9(a) (iii), 7.3.9(a) (iii) and 7.4.9(a) (iii) would now also require the source to keep maintenance and repair logs for the baghouses associated with these material handling and processing units. In the initial permit, these conditions required such logs for the "air pollution control equipment" associated with these units, including dust suppressant systems. Baghouses are the type of air pollution control equipment associated with some of these units for which these logs must be kept. These changes make clear that these logs are not required for the other control measures for the subject units, which are not considered air pollution control equipment.

Conditions 7.2.9(d), 7.3.9(c) and 7.4.9(c)

These conditions, which address the recordkeeping required for the periodic inspections of the subject units, would be revised to remove redundant recordkeeping requirements and clarify recordkeeping requirements for the inspections. In particular, separate records are not required for the annual equipment inspections of the baghouse for these units that must be conducted pursuant to Conditions 7.2.8(b), 7.3.8(b) and 7.4.8(b). This is because the records for the regular inspections for the operation of these units are also sufficient to address the annual equipment inspections.

Conditions 7.2.9(e), 7.3.9(d) and 7.4.9(d)

(Conditions 7.2.9(e) & (f), 7.3.9(d) & (e) and 7.4.9(d) & (e) in the initial permit)

In the initial permit, each of these pairs of conditions addressed recordkeeping for incidents when units operated without required control measures and recordkeeping for malfunction or breakdown incidents with excess emissions, respectively. In the revised permit, each pair of conditions would be combined and revised to eliminate duplicative requirements. Additionally, the required records for incidents involving lapses in control measures would be more fully delineated.

Conditions 7.2.9(f)*, 7.3.9(e)* and 7.4.9(e)

The phrase "opacity measurement" would be replaced with "opacity observations" throughout these conditions to improve clarity. The condition would also be revised to include records for the reason for these observations as these observations must now be conducted more frequently and for various reasons. This was necessary since observations for visible emissions would now be provided for by Conditions 7.2.8(b), 7.3.8(b) and 7.4.8(b).

* Conditions 7.2.9(g) and 7.3.9(f), and 7.4.9(f) in the initial permit. These conditions would be renumbered because of the removal of Conditions 7.2.9(f), 7.3.9(e), and 7.4.9(e) from the initial permit.

processing, and fly ash handling, respectively. In the revised permit, these logs are required by Conditions 7.2.9(a) (iii), 7.3.9(a) (iii), and 7.4.9(a) (iii) for coal handling, coal processing, and fly ash handling, respectively.

Condition 7.2.9(g) (Condition 7.2.9(h) in the initial permit)

This condition would be revised to clarify that it requires records for the actual PM emissions from the coal silos whose emissions were limited by Construction Permit 04030053.

Condition 7.2.11(d) and 7.3.11(d), and 7.4.11(c)

These conditions would be revised to correctly refer to visible emissions, rather than to PM emissions.

Conditions 7.2.12(a), (b) and (c), 7.3.12(a) and (b), and 7.4.12(a) and (b)

These conditions, which very broadly summarize compliance procedures for the subject units by reference to other conditions in the permit, would be revised to address changes in these procedures, as already discussed.

Conditions 7.3.4(c) and 7.4.4(c)

These conditions, which included certain paraphrasing in the initial permit, would be revised to track 35 IAC 212.321(a) as written.

**Changes in Section 7.5: Unit Specific Conditions for the
Distillate Oil-Fired Turbines**

Condition 7.5.1 - Notes

To improve clarity, a note would be added to the general description of emission units in this condition. This note confirms that the description is only for informational purposes and does not establish any requirements or limitations.

Condition 7.5.4(d) (i) (B)

Additional wording would be included so the condition reflects the relevant language in 35 IAC Part 217 Subpart V. In the initial permit, the paraphrased language in this condition could have been incorrectly construed as barring the source from taking advantage of the provisions in these rules for compliance by averaging. The additional wording included also clarified that the affected boilers addressed in Section 7.1 and the affected turbines in Section 7.5 are authorized by this permit to participate in averaging demonstrations. As a result the "Note" in the initial permit was no longer needed and existing wording in the permit condition was revised into a new "Note".

Condition 7.5.7-1 - Title

The title of Conditions 7.5.7-1 would be changed to refer to "Opacity Observation Requirements," rather than "Opacity Testing Requirements". This would make it clearer that these conditions address the opacity observations that the source must conduct for the subject emission units.

Condition 7.5.7-1(c) (iii)

In this condition addressing formal determination of opacity, the word "testing" would be replaced with the word "observations." This change would improve clarity because the term "observations", rather than "testing", is commonly used to refer to a formal determination of opacity by a human observer in accordance with USEPA Method 9, as is addressed by these conditions. (For an example of use of this terminology by USEPA, refer to 40 CFR 60.11(b).)

Condition 7.5.10(c)

This condition would be revised to clarify that its reporting requirements are applicable for the turbines covered by this permit if Waukegan Generating

Station is showing compliance with 35 IAC Part 217 Subpart V by participating in a NO_x averaging demonstration.

Conditions 7.5.12(a)

This condition, which very broadly summarizes compliance procedures for the affected turbines by reference to other conditions in the permit, would be revised to address changes in these procedures, as already discussed.

Change in Section 9: Standard Permit Conditions

Condition 9.3

The wording of Condition 9.3 would be changed to match the language in Sections 4(b), 39.5(7) (a), and 39.5(7) (p) (ii) of the Act.