

Illinois Environmental Protection Agency  
Bureau of Air  
Permit Section

October 2013

Response to Comments on the  
Planned Significant Modification of the  
Clean Air Act Permit Program (CAAPP) Permit Issued to  
City, Water, Light and Power  
Springfield, Illinois

Source I.D. No.: 167120AAO  
Permit No.: 95090091

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## DECISION

On October 18, 2013, the Illinois EPA issued a modified Clean Air Act Permit Program (CAAPP) permit to City, Water, Light, and Power for the Dallman Generating Station.

## BACKGROUND

The Dallman Generating Station is a coal-fired electric power plant owned and operated by City, Water, Light, and Power (CWLP). The plant has three coal-fired boilers<sup>1</sup> that produce steam that is then used to generate electricity. Dallman Generating Station qualifies as a major source of emissions under Illinois' Clean Air Act Permit Program (CAAPP).

The CAAPP is Illinois' operating permit program for sources of emissions pursuant to Title V of the federal Clean Air Act. The CAAPP is administered by the Illinois EPA. It generally requires that the owner or operator of a major stationary source of emissions in Illinois apply for and obtain a CAAPP permit for the operation of such source. CAAPP permits contain conditions identifying applicable air pollution control requirements under the federal Clean Air Act and Illinois' Environmental Protection Act (Act). Compliance procedures, including testing, monitoring, recordkeeping and reporting requirements, are also established as required or necessary to assure compliance and accomplish the purposes of the CAAPP. The conditions of a CAAPP permit are enforceable by the Illinois EPA, USEPA and the public.

The Illinois EPA issued the initial CAAPP permit for CWLP on September 29, 2005. CWLP appealed this permit to Illinois' Pollution Control Board (Board), contending that a number of conditions in the permit were erroneous or unwarranted. On February 16, 2006, the Board accepted CWLP's petition for appeal and granted an administrative stay of the issued CAAPP permit in its entirety.

CWLP and the Illinois EPA, with the assistance of the Office of the Illinois Attorney General, have successfully undertaken discussions to resolve or settle this appeal. There are three steps in the process for the settlement of the appeal that have been agreed to by the Illinois EPA and CWLP. The first step was to lift the administrative stay of the initial CAAPP permit for Dallman Generating Station. The Illinois EPA and CWLP jointly filed a motion with the Board on May 3, 2013, requesting that the stay of the initial CAAPP permit be lifted with respect to conditions of the permit that were not being contested in the appeal. On May 16, 2013 the Board granted this motion and the initial CAAPP permit for CWLP took effect, as requested by the motion.<sup>2</sup>

The next step for the resolution of the appeal, as has now occurred, was for the Illinois EPA to issue a modified CAAPP permit for Dallman Generating Station to resolve certain contested permit conditions. This involved certain changes to the initial permit, which have been made in the current permit

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<sup>1</sup> There are actually four operational boilers; however the permit only covers three. Dallman 34 will be permitted during the reopening. The two Lakeside units in the permit are shutdown and will be removed during the reopening.

<sup>2</sup> This permit now has a five-year term that will end on May 16, 2018.

action, using the procedures for significant modifications to CAAPP permits.<sup>3</sup> These changes were discussed in Chapter III in the Statement of Basis that the Illinois EPA prepared to accompany the draft of the modified permit that the Illinois EPA prepared for review by the public.

Because a significant modification of this CAAPP permit triggered the applicable requirements of USEPA's rules for Compliance Assurance Monitoring (CAM), 40 CFR Part 64, CWLP submitted the information required by these rules, including a "Compliance Assurance Monitoring Plan" (CAM Plan) for Dallman Generating Station for emissions of particulate matter (PM). Along with the modifications to the initial CAAPP permit that were made as part of resolution of the appeal, other appropriate conditions have been added in the modified permit to address CAM.

The third step in the settlement of the appeal, which has already been initiated, is the formal reopening of the CAAPP permit for Dallman Generating Station using the procedures for reopening of CAAPP permits. In this step, new requirements that have been adopted under the Clean Air Act since the original permit was issued, which are now applicable to Dallman Generating Station, will be added into the permit.<sup>4</sup>

#### **OPPORTUNITY FOR PUBLIC COMMENTS**

The issuance of this modified permit was preceded by a public comment period, in accordance with Section 39.5(8) of the Act and 35 IAC Part 252. A draft of the modified permit and the accompanying Statement of Basis prepared by the Illinois EPA were available at the Lincoln Library, the public library in Springfield and the Illinois EPA's Headquarters in Springfield for review by the public. This comment period began on May 25, 2013. A public hearing was held on July 9, 2013 at the Illinois Department of Transportation in Springfield. The comment period ended on August 8, 2013.

#### **AVAILABILITY OF DOCUMENTS**

Copies of this responsiveness summary and the modified permit that has been issued are being made available for viewing by the public at the Illinois EPA's Headquarters at 1021 North Grand Avenue East in Springfield and at the Lincoln Library at 326 S. 7th St in Springfield. Printed copies of these documents are also available free of charge by contacting Brad Frost at the Illinois EPA's Office of Community Relations by telephone (888/372-1996 - Toll Free Environmental Helpline; 217/782-7027 - desk line; or 217/782-9143 - TDD), by facsimile (217/524-5023) or by email ([brad.frost@illinois.gov](mailto:brad.frost@illinois.gov)).

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<sup>3</sup> Concurrent with the various modifications to the CAAPP permit that have been made by means of the procedures for significant modification to CAAPP permits, certain other modifications to the permit were also made by the procedures for administrative amendments and minor modifications to CAAPP permits.

<sup>4</sup> Key rules for the emissions of coal-fired utility boilers that have been adopted since the CAAPP Permit for CWLP was initially issued that would be addressed in the reopening proceeding include the Clean Air Interstate Rule (CAIR) and the Mercury and Air Toxics Standards (MATS). CWLP is already subject to and complying with the relevant requirements of CAIR. The compliance date for MATS is in the future.

COMMENTS WITH RESPONSES BY THE ILLINOIS EPA

Comment I (page 1) - Procedural Flaw

The Citizen Groups note that there are serious deficiencies with the process IEPA has undertaken to issue a CAAPP permit for the Dallman Generating Station. IEPA has put in place until 2018 a CAAPP permit that omits many legally applicable requirements, based on an application submitted *eighteen years ago* and an initial permit that should have expired five years after it was first issued, in 2010. This has left unacceptable gaps in the permit's conditions. The Statement of Basis notes that the United States Environmental Protection Agency ("USEPA") expressed concern in a similar CAAPP permit appeal that IEPA's stated intent to reopen the permit "lacks a sufficiently enforceable commitment". (*Id.* at 7). The Citizen Groups share USEPA's concern, and IEPA's statement that it "considers the reopening provision to constitute an unambiguous statutory duty on the part of [IEPA] that is fully enforceable under the CAAPP" addresses but does not fully resolve that concern. (*Id.* n. 6). A more appropriate process would have been a full-scale permit renewal as opposed to the current process for the Dallman Generating Station. A permit renewal would have been more consistent with and supported by the Illinois SIP and the timelines provided by Title V of the CAA, 42 U.S.C. § 7661b.

Response:

The Illinois EPA's objective in this permitting action has been to achieve permit effectiveness and resolve the related CAAPP permit appeal involving the CWLP coal-fired power plant. The legal process for doing so is set forth in CAAPP's procedures, which the Illinois EPA is obliged to follow. The Illinois EPA disagrees that there are deficiencies with the process set forth in the applicable laws and regulations. However, if any such deficiencies with the process exist, it is a product of the statutory and/or regulatory framework of the Title V permitting program, which largely derive from the Clean Air Act and federal regulations implementing the same, and cannot be cured by way of this permitting action.

As explained in the Statement of Basis that accompanied the draft permit, the Illinois EPA did exercise limited discretion in choosing between the procedures available under CAAPP to accomplish the goals identified above. To be more specific, the Illinois EPA declined to initiate a comprehensive review of the initial CAAPP permit, as doing so would have delayed resolution of the appeals and prolonged the period during which the Dallman Generating Station operate without an effective CAAPP permit. It would also have been repetitious for a large body of the permit that was not challenged in this or the other appeals. The Illinois EPA did not consider the permit renewal process, as suggested by the comment. Permit renewal procedures are not a viable legal option in the present context, as they can only become applicable after an initial CAAPP permit has run its full term.

The Illinois EPA opted instead to use the CAAPP's modification procedures to make the CAAPP permit for the Dallman Generating Station effective and to resolve the related appeal. This decision reflected a considered judgment of the permit authority and was subsequently endorsed by USEPA/Region V. Further, in recognizing that the 2005 permit does not currently reflect recent regulatory developments, the Illinois EPA has committed to reopen the permit in the future to incorporate Clean Air Act requirements that have become

applicable to the source since the 2005 permit issuance. Although such requirements have and will continue to remain independently enforceable, a permit reopening incorporating such requirements into a Title V permit should adequately address the concern expressed by the comment regarding perceived gaps in the CAAPP permit.

**Comment III The Proposed CAM Plan is Inadequate to Assure Compliance with PM Emission Limits.**

**Footnote for Comment III**

The Statement of Basis is seemingly contradicted on ... by Attachment 6, which provides that "the data averaging period for determining whether an excursion or exceedance has occurred" is "three hour block averages". IEPA should clarify the correct averaging period. Given that the Dallman Plant's PM emission limits are based on one-hour block averages, the CAM plan's opacity indicator should be based on, at most, one-hour averaging periods.

Response:

The three hour block average was mistakenly left in the CAM plan from earlier negotiations with CWLP. The footnote for the comment is correct in that there is a contradiction. The permit has been corrected to reflect the indicator range averaging period is 1 hour.

**Comment III.A. The CAM Plan's Monitoring of the ESPs is Not Designed to Assure Their Proper Operation.**

There are two central problems with the CAM plan's approach to monitoring the operation of the ESPs. First, the approved opacity indicator range of 20 percent does not reflect the proper operation and maintenance of the ESPs or assure compliance with PM limits, because it far exceeds the opacity of the Boilers' emissions under normal operating conditions and, in the case of Boiler 33, actually would allow presumptive PM violations to occur before any responsive action is triggered. Second, opacity is the only monitored parameter, which is problematic given 1) the lack of a sufficient margin of compliance and 2) that the connection between opacity and PM emissions is particularly attenuated at the Dallman Plant because they are measured at different locations in the flue gas stream.

Response:

*The Illinois EPA believes that the CAM Plan submitted by CWLP satisfies the criteria and requirements in 40 CFR 64.3 for the plan to be approved in accordance with 40 CFR 64.6(a). In particular, there is nothing in the comment that would demonstrate the parameter chosen (opacity) and the corresponding indicator range (less than 20% on an hourly block average) fails to fulfill the criteria in 40 CFR 64.3(a) for CAM plans. In addition, the materials cited by the comment do not provide specific evidence, related to the operations at CWLP that would suggest the CAM Plan submitted is not approvable.*

### Comment III.A.1

#### The CAM Plan Does Not Contain An Acceptable Opacity Indicator.

To issue a legally sufficient CAM plan, IEPA "must explain how the indicator range in the CAM plan provides a reasonable assurance of ongoing compliance with the underlying PM limits in accordance with 40 C.F.R. § 64.3(a)(2)". *In the Matter of WE Energies Oak Creek Power Plant*, EPA Administrator Order at 18 (June 12, 2009). The permit record here demonstrates that the opacity indicator range of 20 percent *does not* provide a reasonable assurance of ongoing compliance because it is completely unrelated to the opacity of the Dallman Plant's emissions during regular operations, and actually would allow presumptive PM violations before requiring any responsive action.

The CAM rule provides that indicator ranges "shall reflect the proper operation and maintenance of the control device (and associated capture system), in accordance with applicable design properties, for minimizing emissions over the anticipated range of operation conditions at least to the level required to achieve compliance with the applicable requirements." 40 C.F.R. § 64.3(a)(2). As set out in Section II, above, the basic approach of the CAM rule is to determine what parametric indicator ranges reflect the proper operation and maintenance of the relevant pollution control device, and to make sure that the Permittee promptly addresses any deviance from those ranges with responsive actions. In this manner, compliance with the associated emission limit is assured because operational problems that otherwise would cause violations are promptly corrected.

Describing indicator ranges generally, USEPA has stated that selected ranges "should be indicative of the *normal operating range* under good operation and maintenance practices". USEPA, *Technical Guidance Document: Compliance Assurance Monitoring, Revised Draft* (Aug. 1998), at 2-27 (emphasis added).<sup>3</sup> As USEPA recognized in the preamble to the CAM rule, this approach can lead to the setting of indicator ranges well below the "upper limit" of the indicator that would assure compliance with the monitored emission limit:

The Agency understands that many sources operate well within permitted limits over a range of process and pollution control device operating parameters. Depending on the nature of pollution control devices installed and the specific compliance strategy adopted by the source or the permitting authority, part 64 indicator ranges may be established that generally represent emission levels *significantly below* the applicable underlying emission limit.

62 Fed. Reg. at 54,907 (emphasis added).

USEPA also has directly addressed the issue of setting opacity indicator ranges in CAM plans designed to assure compliance with PM emission limits at coal-fired power plants. USEPA, *Compliance Assurance Monitoring (CAM) Protocol for an Electrostatic Precipitator (ESP) Controlling Particulate Matter (PM) Emissions from a Coal-Fired Boiler, Proposed* (Apr. 2003) (attached hereto as Exhibit A) ("ESP CAM Protocol"). In its Statement of Basis, IEPA cites to the ESP CAM Protocol. (Statement of Basis 26 n. 33.) IEPA has not complied with the ESP CAM Protocol, though. In that document, USEPA made clear that the approved indicator should not exceed the opacity of emissions that actually were observed in performance testing.

Specifically, the ESP CAM Protocol provides:

You will establish the opacity indicator range at a level equal to or less than an opacity at which the source has demonstrated a margin of compliance with the PM emissions limit of at least 10 percent at normal operating conditions . . . . *You should not select an opacity higher than the maximum opacity you observed during the calibration test program.*

*Id.* (emphasis added).

Recent PM performance test results for the Plant, cited in the Statement of Basis, demonstrate that the opacity indicator ranges that reflect proper operation and maintenance of the ESP are well below 20 percent. (Statement of Basis at 27-28 n. 35). The test results showed opacity ranging between 5.2 and 11.3 percent for Boilers 31 and 32, and between 8.0 and 11.4 percent for Boiler 33. As IEPA stated at a public hearing on the Significant Modification, these test results demonstrate the Plant's performance during normal operating conditions. (See July 9, 2013 Hearing Transcript at 36, lines 18-22) ("The test results do suggest the normal operation of the boilers, and those would appear to be the normal opacity levels that these boilers would operate on any given day.")

These levels of opacity well below twenty percent represent the opacity of the Dallman Plant's emissions when the Boilers and associated ESPs are being properly operated and maintained. Based on the testing, then, any level higher than 12 percent opacity, at either COMS, demonstrates that the relevant Boiler(s) and associated ESPs are not being operated in a proper manner. As such, the CAM plan's opacity indicator range to trigger responsive action should begin no higher than 12 percent.

There is an additional basis to conclude that the 20 percent opacity indicator range is set far too high. Under the Illinois SIP, an exceedance of 20 percent opacity for Boiler 33 is presumed to signal a violation of the applicable PM emission limit.

As USEPA noted in the preamble to the CAM rule, opacity standards are often established at a level which represents a likely significant exceedance of the particulate matter standard. In those circumstances, an opacity level below a required opacity standard would be more appropriate as a CAM indicator.

62 Fed. Reg. at 54,923. Such is the case with the Illinois SIP, which provides that a source's violation of its opacity limit also is presumed to be a violation of its PM emission limit, unless contemporaneous stack testing under the same operating conditions shows that the unit is in compliance with the PM limit. 35 Ill. Adm. Code § 212.124(d)(2)(A). As such, the opacity indicator ranges for Boiler 33 should be set well below its SIP opacity limit of 20 percent. See Condition 5.2.2(b). Under IEPA's current approach, no responsive action is ever triggered before a PM violation occurs. That result departs completely from the intent behind the CAM plan: to provide "assurance that the emission unit will remain in compliance." 62 Fed. Reg. at 54,926.

Accordingly, IEPA must revise the CAM plan to include an appropriate opacity indicator range. Because performance tests of the Boilers have demonstrated that "proper operation and maintenance" of the Boilers results in emissions with opacity no higher than 12 percent, that should be the level of opacity that triggers responsive action.

#### RESPONSE

##### One Parameter is not sufficient (specifically Opacity only for an ESP)

The comment states that the Illinois EPA should revise the CAM Plan to include additional parameters that are indicative of ESP performance. The evidence provided to support this assertion is US EPA guidance suggesting that the monitoring should also include voltage and current (corona power) for each ESP field. The comment further states that the correlation is particularly attenuated because the opacity and PM are measured at different locations in the flue gas path. However, the addition of corona power would not strengthen the correlation anymore than would measuring opacity at the same location as PM. In fact, the corona power is not measured at the same location as PM just as in the case for opacity. Thus, the addition of corona power is not justifiable.

In addition, the comment goes on to state that because of the lack of a linear relationship between opacity and PM, there is not a "robust" correlation overall operating conditions and thus additional monitoring of other ESP parameters must be included in the Plan. Particularly, the comment relies on four points, 1) a statement in US EPA guidance regarding the inadequacy of opacity alone, 2) presumptively acceptable monitoring in 40 § 64.4(b)(5), 3) an example in the US EPA CAM Technical Guidance document and 4) the theoretical concept that PM emissions are impacted significantly by a wet flue gas desulfurization system. Each of these points is not sufficient either alone or in combination to adequately justify the need to add a second parameter for CAM purposes.

With regard to the ESP CAM Example, USEPA clearly indicates in the CAM Technical Guidance Document, Appendix A, that the examples of approaches to CAM that are attached to that document are merely examples and are not prescriptive.<sup>5</sup> As such, the use of corona power in the ESP CAM Example as another indicator for performance of an ESP does not mean that opacity, alone, is not acceptable in a CAM plan. Thus, the ESP CAM Example does not address on an appropriate approach to CAM for the ESPs on the Dallman boilers, for which continuous opacity monitoring is required. In fact, the "proposed" ESP CAM Protocol referenced in the comment actually suggests just the opposite as it states that "...for any given ESP and boiler, opacity can serve as a very useful indicator to initiate additional action..."

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<sup>5</sup> As stated in the introduction to Appendix A (Example Monitoring Approach Submittals) of the *CAM Technical Guidance Document*, "Note that the resulting examples are not necessarily the only acceptable monitoring approaches for the facility or similar facilities; they are simply examples of different approaches used by particular facilities. The owner or operator of a similar facility may propose a different approach that satisfies part 64 requirements." *CAM Technical Guidance Document*, September 2004, p A-vii.



In this regard, opacity monitoring is a well-established means to address emissions of PM.<sup>6</sup>

Regarding the argument that PM emissions are variable given that the wet FGD system can potentially increase/decrease PM emissions, thereby skewing any useful information that could be obtained from opacity, is a flawed one. In particular, PM emissions across a normally functioning and well maintained scrubber does not vary significantly to the levels that would cause any correlation with opacity to become no longer robust. Likewise, robust statistics do not mean that in all cases the indicator will accurately predict the parameter being estimated. Robustness is mainly driven by the influence of outliers and assumptions. The robust estimators can still have a reasonable efficiency even when the assumptions are only approximately met. In addition, most outliers are removed from the statistical evaluation as abnormal conditions that are not being modeled (i.e., malfunctions that affect PM emissions as used in the comment). Referencing to the technical document in the permit record that discusses Illinois EPA's verification methods to assure the reasonableness of the indicator chosen and the value of the indicator range, it is noted that although the relationship is not linear, the range of opacity during normal operations can be approximated with a linear model. In this document it is demonstrated, clearly, that the correlation is sufficient to provide a reasonable assurance of compliance.

Lastly, pertaining to presumptively acceptable CAM approaches found in the regulations, simply because a particular approach has been deemed by USEPA to be presumptively acceptable such that a rationale is not necessary to demonstrate that the requirements of 40 § 64.3 have been met, does not mean that the CAM Plan is unacceptable. In fact, the regulation at 40 § 64.3(a)(i) states that an owner or operator only obtain data from one or more parameters. There is no argument that one parameter is not sufficient for an acceptable CAM Plan.

For the Dallman boilers, the use of opacity as the CAM indicator will provide an effective means of assuring compliance with the applicable PM standards on an ongoing basis between the periodic emissions testing.

Comment III.A.2

**The CAM Plan Should Include Additional Parametric Monitoring of the ESPs.**

IEPA also should revise the CAM plan to include monitoring of other parameters of ESP performance in addition to opacity. Specifically, pursuant to USEPA guidance, the CAM plan should include monitoring of voltage and current for each ESP field. This additional monitoring is particularly appropriate for the Dallman Plant because opacity and PM are measured at different points in the Plant's flue gas stream, making the correlation between them especially attenuated.

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<sup>6</sup> 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 in accordance with USEPA Method 9. Numerical measurements of observations can also be made with monitoring instruments that are installed in the stack or ductwork of an emission unit, in which case opacity can be determined on a continuous basis.

In the ESP CAM Protocol, USEPA described the difficulties of using opacity as an indicator for PM emissions, in general, due to the lack of a linear relationship between opacity and PM:

[O]pacity, a commonly used parameter, can indicate ESP performance. If the opacity is increasing, you can reasonably assume that PM emissions are increasing. What generally is not known on a quantitative basis is the magnitude of the mass emissions relative to any one opacity value or the increase in mass emissions relative to the increase in opacity. In addition, and perhaps most importantly, the relationship between opacity and mass emissions can vary significantly with the particle size distribution and refractive index of the ash particles. The properties of the particulate matter can be influenced by fuel changes and the number and location of ESP electrical sections in service.

Ex. D, ESP CAM Protocol at 3. Because the relationship between opacity and PM "is not robust overall operating conditions," USEPA's monitoring protocol for CAM plans at coal plants provides that monitoring opacity alone is not sufficient. *Id.* at 14. Instead, USEPA's "presumptively acceptable" approach, see 40 C.F.R. 64.4(b)(5), provides that the source also should monitor other ESP operating parameters—specifically, voltage and current for each ESP field—and run a calibrated computer model to calculate ESP efficiency when the opacity excursion level is triggered. Ex. A, ESP CAM Protocol at 4. See also USEPA, *CAM Technical Guidance Document, App. A.25, Electrostatic Precipitator (ESP) For PM Control—Facility FF* (June 2002), at A.25-2 (model CAM plan providing that "ESP secondary voltage and current are measured for each field to determine the total power to each ESP").

In the case of the Dallman Plant, the correlation of opacity to PM emissions becomes even less robust because of the intervening effect of the FGDs in the stream. While opacity is measured at the output of the ESPs, PM is measured through stack tests that occur after the flue gas stream also has passed through the FGDs. This will further complicate establishing a relationship between opacity and PM. While the ESPs are the primary pollution control device, the FGDs also will impact PM emissions. If the FGDs are performing at a high level during testing, the testing will correlate a relatively higher level of opacity to a relatively lower level of PM, thus leading to the conclusion that a relatively higher level of opacity is sufficient to assure compliance with the PM emission limit. Also, the scrubbers can, under some conditions, increase PM loading in the flue gas stream. See U.S. EPA, *Reconsideration of the National Emission Standards for Hazardous Air Pollutants (NESHAP) Maximum Achievable Control Technology (MACT) Floor Analysis for Coal- and Oil-fired Electric Utility Steam Generating Units, Proposed Rule* (Nov. 16, 2012) at 3 ("[S]tate-of-the-art FGD systems can add PM to the flue gas stream"). For instance, malfunction of the FGD could result in an increase in particulate emissions from the stack. Malfunctions that could increase PM loading include scrubber liquor pH being too low, indicating CaCO<sub>3</sub> in the scrubbing solution being too low; gas low velocity through the mist elimination zone being too high, allowing for aerosol carryover; and poor scrubber slurry solids control, such that there is too much or too little CaCO<sub>3</sub> for optimum SO<sub>2</sub> removal. Malfunctions such as these further skew the correlation between PM and opacity such that there would be an increase in PM emissions, without a related increase in opacity, and opacity monitoring could fail to indicate a potential PM violation. Because of the particularly attenuated relationship between opacity and PM at the Plant, IEPA should

follow USEPA guidance and require monitoring of the ESP fields' voltage and current in addition to opacity, in order to assure that the ESPs are properly operated and maintained.

RESPONSE:

Unacceptable Opacity Indicator Range (20%)

The second part of this comment is in regards to the acceptability of 20% as the indicator range that would trigger corrective response. The comment relies heavily on two basic points which are, 1) the range is not indicative of normal operations and thus must be no higher than 12% and 2) the SIP provides evidence that 20% is not acceptable and would demonstrate a PM violation. Illinois EPA disagrees on both points, as discussed below.

While standards or 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, opacity can also be determined for shorter or longer periods, including on an hourly basis, as proposed by CWLP in the CAM Plan. In fact, 40 § 64.3(d)(3)(ii) states that the indicator range can be consistent with the opacity standard applicable to a source unless such indicator range fails to meet the criteria in 40 §64.3(a) upon consideration of the type of control device and site specific factors. Given the comment provides no detail of how 20% opacity at the outlet of the ESP (inlet to the FGD) would establish a definitive violation of the PM standard, it is not clear how the development of the CAM plan for CWLP is inconsistent with the CAM rule. Moreover, while this comment suggests that the SIP treats opacity exceedances as a PM violation, this is a legal presumption that only operates in the context of an enforcement proceeding and should not be considered prescriptive for purposes of the CAM rule.<sup>7</sup> Even in the enforcement context, the presumption ceases to apply where a compliance test is conducted under representative conditions. A similar construct is accomplished through the CAM plan, in the absence of a formal emissions test. A statistical analysis, prepared by the Illinois EPA as part of its consideration of the CAM plan, confirms the reasonableness of CWLP's approach to monitoring compliance with the PM limits. This is what the CAM Plan sets out to do in the absence of a formal emissions test. As demonstrated through a valid statistical analysis presented in the technical support document created by Illinois EPA, there is nothing to suggest that 20% would be a definitive PM violation or unacceptable to reasonably demonstrate compliance with the PM limits established by CWLP.

An additional point that was brought up in the comment is that US EPA states that any approved indicator range should not exceed the maximum opacity observed during the performance testing. However, it must be noted that this is specific to the ESP CAM Protocol which relies on a computer model to calculate an ESP control efficiency. The protocol actually says (as identified in the comment) that the opacity indicator that would trigger the use of the computer model should not exceed that which was observed during the calibration of the computer model. This would make sense given the opacity at any other level would simply mean that the modeling would not provide any further detailed information.

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<sup>7</sup> Additionally, one 6 minute average of 20% opacity at the outlet of the ESP (inlet to the FGD) is not equivalent to 20% opacity 1 hour average.

Moreover, a more careful reading of USEPA's preamble for the adoption of the CAM Rule shows that USEPA determined that the CAM Rule will act to support or facilitate the proper operation and maintenance of emission units and their control devices by sources. This is because the CAM Rule requires that indicator ranges be established that provide a reasonable assurance of compliance with the applicable emission limitations or standards.<sup>8</sup> It is relevant that USEPA focuses upon the demonstration of compliance made for an emission unit without any mention of "proper operation and maintenance" of control devices. As specifically related to the establishment of indicator ranges for purposes of CAM, USEPA stated the following.

...the presumptive approach for establishing indicator ranges in part 64 is to establish the ranges in the context of performance testing. To assure that conditions represented by performance testing are also generally representative of anticipated operating conditions, a performance test should be conducted under conditions specified by the applicable rule or, if not specified, generally under conditions representative of maximum emission potential under anticipated operating conditions. In addition, the rule allows for adjusting the baseline values recorded during a performance test to account for the inappropriateness of requiring that indicator conditions stay exactly the same as during a test. The use of operational data collected during performance testing is a key element in establishing indicator ranges; however, other relevant information in establishing indicator ranges would be engineering assessments, historical data, and vendor data. Indicator ranges do not need to be correlated across the whole range of potential emissions.

62 FR 54,926 (Oct. 22, 1997)

In addition, with respect to indicator ranges and proper operation and maintenance, the CAM Rule only provides that:

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8 As explained by USEPA in the preamble to the adoption of the CAM Rule, "These examples point to the underlying assumption that there is a reasonable assurance of compliance with emission limits so long as the emission unit is operated under the conditions anticipated and the control equipment that has been proven capable of complying continues to be operated and maintained properly. In most cases, this relationship can be shown to exist through the performance testing without additional site-specific correlation of operational indicators with actual emission values. The monitoring design criteria in Sec. 64.3(a) build on this fundamental premise of the regulatory structure.

Thus, Sec. 64.3(a) states that units with control devices must meet certain general monitoring design criteria in order to provide a reasonable assurance of compliance with emission limitations or standards for the anticipated range of operations at a pollutant-specific emissions unit. These criteria mandate the monitoring of one or more indicators of the performance of the applicable control device, associated capture system, and/or any processes significant to achieving compliance. The owner or operator shall establish appropriate ranges or designated conditions for the selected indicators such that operating within the established ranges will provide a reasonable assurance of compliance for the anticipated range of operating conditions. The requirement to establish an indicator range provides the objective screening measure to indicate proper operation and maintenance of the emissions unit and the control technology, i.e., operation and maintenance such that there is a reasonable assurance of compliance with emission limitations or standards." [62 FR 54918 (Oct. 22, 1997)]

...Such range(s) or conditions(s) shall reflect the proper operation and maintenance of the control device (and associated capture system), in accordance with applicable design properties, for minimizing emissions over the anticipated range of operation conditions at least to the level required to achieve compliance with the applicable requirements. ...

40 CFR 64.3(a)(2) (emphasis added)

Given these provisions of the CAM rules, it was wholly appropriate for CWLP to have selected opacity as the sole indicator related to the ESPs on the boilers. It was not necessary for CWLP to include a second parameter (particularly corona power) in the CAM plan. Likewise, the available data representing normal operation of the control devices results in an acceptable indicator range that will ensure ongoing compliance with the limitation. The basic criterion for an acceptable CAM Plan, as specified by 40 CFR 64.3(a), is that the plan will provide "a reasonable assurance of compliance" with the applicable standard or emission limitation. Therefore, the Illinois EPA cannot justify the addition of any additional monitoring parameters at this time given the criterion has been satisfied.

**Comment III.B The CAM Plan Does Not Include Sufficient Responsive Actions.**

The draft Permit sets out the actions that Springfield CWLP is to take in response to excursions of indicator ranges. Essentially, the plan requires Springfield CWLP to "restore operation of the [Boilers] (including the control device and associated capture system) to [their] normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions." Conditions 7.1.8(e)(ii)(A) and 7.2.8(e)(ii)(A). This standard does not provide enough detail to assure prompt correction of improper operation, and should be revised to include site-specific description of required responsive actions.

USEPA has emphasized the importance of responsive actions within a CAM plan: [T]he Agency believes it is critical to underscore the need to maintain operation within the established indicator ranges. Therefore, the rule includes the requirement to take prompt and effective corrective action when the monitored indicators of compliance show that there may be a problem. Requiring that owners and operators are attentive and respond to the data gathered by part 64 monitoring has always been central to the CAM approach.

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[I]t is essential to the CAM goal of ongoing compliance operation that part 64 require that owners or operators respond to the data so that any problems indicated by the monitoring are corrected as soon as possible.

62 Fed. Reg. at 54,931.

One example of effective responsive actions can be found in the Title V permit for the Huntley Steam Generating Station, issued by the New York Department of Environmental Conservation and attached hereto as Exhibit C. The Huntley

permit incorporates tiered responsive actions for the opacity indicator. (Ex. C, Huntley Permit, at 73-74). Under this approach, increasing levels of opacity trigger requirements of more aggressive responsive actions, culminating with a requirement that the unit be removed from service if rolling 24-hour opacity exceeds 19%, or rolling 168-hour opacity exceeds 18%. (*Id.*).

The CAM plan for the Dallman Plant should include a similarly tiered requirement for responsive action, beginning with inspection requirements at lower levels of opacity, and culminating with required shutdown of the affected Boiler at a level near the upper bound of opacity within which compliance with the PM emission limit can be assured. (In the case of Boiler 33, this should be no higher than the 20 percent SIP opacity limit.) This site-specific description of necessary responsive actions will be more enforceable than the currently vague reference to returning Boilers to their normal manner of operation as quickly as possible.

**Response:**

**This comment did not justify any changes to the conditions in the modified permit. This condition simply reiterates the relevant language in 40 CFR 64.7(d) (1) with respect to how CWLP must respond to excursions or exceedances identified pursuant to its CAM monitoring.<sup>9</sup> As such, it is fully appropriate that this condition be included in the modified permit in the form in which it was set out in the draft permit without any changes.**

**The inclusion of "tiered response requirements" in the Title V Permit for the Huntley Station does not support development and imposition of similar requirements for the Dallman boilers. A basic question posed by such requirements is whether they are consistent with the basic requirements for a CAM Plan, i.e., that they work to provide a reasonable assurance of compliance. In this regard, it is unclear whether the "Level One" actions required for the Huntley boilers even constitute a response to an excursion or exceedance.<sup>10</sup> Moreover, when an exceedance or excursion is identified, a CAM**

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<sup>9</sup> 40 CFR 64.7(d) provides:

"(d) *Response to excursions or exceedances.* (1) Upon detecting an excursion or exceedance, the owner or operator shall restore operation of the pollutant-specific emissions unit (including the control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. The response shall include minimizing the period of any startup, shutdown or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions). Such actions may include initial inspection and evaluation, recording that operations returned to normal without operator action (such as through response by a computerized distribution control system), or any necessary follow-up actions to return operation to within the indicator range, designated condition, or below the applicable emission limitation or standard, as applicable.

(2) Determination of whether the owner or operator has used acceptable procedures in response to an excursion or exceedance will be based on information available, which may include but is not limited to, monitoring results, review of operation and maintenance procedures and records, and inspection of the control device, associated capture system, and the process."

<sup>10</sup> Condition 72.2 .II.2.a of the Huntley permit, which addresses "Level One" actions, addresses certain actions that the source must take when "...the 24-hour or 168-hour

Plan, as approved by the permitting authority, should not predetermine the source's response based on the magnitude of the occurrence. As confirmed by 40 CFR 64.7(d) (2), the adequacy of a source's response to an exceedance or excursion is to be evaluated by a regulatory authority on a case-by-case basis.<sup>11, 12</sup>

**Comment III.C. Other Conditions of the Permit Must Be Revised Because They Are Legally Insufficient or Unclear.**

Aside from the CAM plan, several other proposed modifications are unsupported under federal and state law and should be revised:

**Comment III.C.1**

- **Conditions 7.1.9(c)(ii) and (iii) and 7.2.9(c)(ii) and (iii)**—relating to records to address compliance with opacity and PM emission limits.

IEPA proposes to delete the requirement in Conditions 7.1.9(c)(ii) and 7.2.9(c)(ii) to identify the "upper bound of the 95% confidence interval (using a normal distribution and 1- minute averages) for opacity measurements from the boiler[s], considering an hour of operation, within which compliance with [PM emission limits] is assured . . . ." IEPA also proposes to delete the corresponding recordkeeping requirement in Conditions 7.1.9(c)(iii) and 7.2.9(c)(iii), that Springfield CWLP keep records for "[e]ach hour when the measured opacity of an affected boiler was above the upper bound . . . ."

The revised Conditions do not meet the Title V/Part 70 requirement that monitoring must provide data representative of the source's compliance with the underlying permit limits, 40 C.F.R. § 70.6(a)(3)(i)(B), (c)(1). As USEPA has determined numerous times in orders, where opacity is used as a parameter to ensure compliance with a PM limit, the opacity range correlating to compliance with the PM emission limit must be "set as enforceable limits" in the permit. *In the Matter of Tampa Electric Co., F.J. Gannon Station*, Objection to Proposed Part 70 Operating Permit No. 0570040-002-AV at 8 (Sept. 8, 2000); *see also In the Matter of the Huntley Generating Station*, EPA Administrator Order at 21 (July 31, 2003) ("the title V permit must include a specific opacity limit [in the PM limit sections of the permit] that would correlate to the PM limit [in the permit].")<sup>9</sup>; *In the Matter of Dunkirk Power LLC*, EPA Administrator Order at 20 (July 31, 2003) (holding that operating outside of the parameter range constitutes a violation of the permit); *In the Matter of Midwest Generation, LLC, Waukegan Generating Station*, EPA Administrator Order at 20 (Sept. 22, 2005) (requiring that opacity

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baseline opacity is higher than normal and increased attention should be given to the operation of the boiler and the ESP performance."

<sup>11</sup> The cited provisions of the Huntley permit also appear problematic as opacity values with two different averaging times are used, i.e., 24 and 168 hours, both of which would be longer than the compliance period of the applicable PM limit, i.e., 0.17 pound/mmBtu, pursuant to 6 NYCRR 227-1.2(b).

<sup>12</sup> As a whole, the provisions of the Huntley permit cited by this comment would suggest that they were additional obligations taken on by a source in the context of settlement of an enforcement action, as they appear to go beyond those necessary for compliance with an applicable emission standard.

used as a surrogate for PM to satisfy Part 70 monitoring requirements must "include a correlation between th[ose] measurements and compliance with the PM emission limitations.") In fact, USEPA has required that the correlation be set so that it provides direct evidence of compliance or non-compliance with the permit. *In the Matter of Dunkirk Power LLC*, EPA Administrator Order at 19-20 ("Once operating ranges have been established for the ESP operating parameters, *operating the ESP outside of any of these ranges would constitute a violation of the title V permit.*" (emphasis added). As a result, the permit fails to meet the requirement that it include "monitoring . . . requirements sufficient to assure compliance with the terms and conditions of the permit." *In the Matter of Midwest Generation, LLC, Waukegan Generating Station*, EPA Administrator Order at 19 (citing 40 C.F.R. §§ 70.6(a)(3)(i)(B) and 70.6(c)(1)). The permit must be revised to include an enforceable opacity limit corresponding to violation of PM emission limits, set no lower than the 30% opacity limit provided for in the Illinois SIP. While the Illinois SIP already provides that the Plant's violation of its 30% opacity limit presumptively constitutes a violation of pertinent PM emission limits, 35 Ill. Adm. Code § 212.124(d)(2)(A), a lower enforceable opacity limit may be necessary to ensure compliance with PM emission limits and to conclusively demonstrate violations.

**Response:**

Illinois EPA disagrees that the proposed changes to Condition 7.1.9(c) would result in the Periodic Monitoring for the Lakeside and Dallman 31 & 32 boilers being insufficient. 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).<sup>13, 14</sup> Compared to the initial permit, essentially all that has occurred in Condition 7.1.9(c) of the modified permit is that 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 the Lakeside boilers. This value takes the place of the statistical criterion or "method" that would have been required for the future establishment by CWLP of value(s) of opacity that would serve to assure compliance with the PM standard.<sup>15</sup> The "alternative" approach to

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<sup>13</sup> 40 CFR 70.6(a)(3)(i)(B) provides as follows: "(3) *Monitoring and related recordkeeping and reporting requirements.* (i) Each permit shall contain the following requirements with respect to monitoring: ... (B) Where the applicable requirement does not require periodic testing or instrumental or noninstrumental monitoring (which may consist of recordkeeping designed to serve as monitoring), periodic monitoring sufficient to yield reliable data from the relevant time period that are representative of the source's compliance with the permit, as reported pursuant to paragraph (a)(3)(iii) of this section. Such monitoring requirements shall assure use of terms, test methods, units, averaging periods, and other statistical conventions consistent with the applicable requirement. Recordkeeping provisions may be sufficient to meet the requirements of this paragraph (a)(3)(i)(B) of this section;"

<sup>14</sup> 40 CFR 70.6(c)(1) does not appear to impose any additional requirements for the subject monitoring. As reiterated by USEPA in the order for the Waukegan Generating Station cited by this comment, "EPA has interpreted section 70.6(c)(1) as requiring that title V permits contain monitoring required by applicable requirements under the Act (e.g., monitoring required under federal rules such as MACT standards and monitoring required under SIP rules) and such monitoring as may be required under 40 C.F.R. § 70.6(a)(3)(i)(B)." *In the Matter of Midwest Generation, LLC, Waukegan Generating Station*, EPA Administrator Order (Sept. 22, 2005), p 19.

<sup>15</sup> By way of further explanation, CWLP 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



Periodic Monitoring for Lakeside Boilers for PM that is now present in the modified permit is consistent with the relevant conclusion from the USEPA's decision in *In the Matter of Midwest Generation, LLC, Waukegan Generating Station*.<sup>16</sup> This order does not state or suggest that the value of opacity that is selected for Periodic Monitoring must directly correlate with a violation of the PM standard, as implied by this comment:

"In this case, since IEPA used opacity and (sic) as one of the surrogate methods to assure compliance with PM limits, the Title V permit must include a specific opacity limit or a method for determining an opacity limit that would correlate the results of the PM testing results (sic) and the opacity limit."

*In the Matter of Midwest Generation, LLC, Waukegan Generating Station*, EPA Administrator Order (Sept. 22, 2005), p 20.

More significant however is the fact that the 30% trigger for the Lakeside boilers is not relevant given the fact that these boilers are shutdown permanently. The only purpose for the condition regarding Lakeside boilers is for procedural reasons. These boilers and the 30% opacity level will be removed at the reopening (See Footnote 1).

In regards to Dallman 31, 32, and 33 in Section 7.1 and 7.2, the periodic monitoring has been completely replaced with the CAM requirements. These CAM requirements can be found in Conditions 7.1.9(i) and 7.2.9(i). The CAM structure of recordkeeping is presumed to be more rigid and prescriptive than the general authority for periodic monitoring in Part 70. Furthermore, for these boilers, the indicator range is not 30%, but 20% on a 1 hour block average as discussed above.<sup>17</sup>

Comment III.C.2

- **Conditions 7.1.10-3(a)(i) and 7.2.10-3(a)(i)**—relating to telephonic reporting requirements for continued operation during malfunctions and breakdowns.

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results of emissions testing, with a numerical value for opacity set at the "upper bound of the 95 percent confidence interval." CWLP 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.

<sup>16</sup> The USEPA's Order in *In the Matter of Midwest Generation, LLC, Waukegan Generating Station*, is considered the appropriate guidance from USEPA for this proceeding. This is because it is more recent and addressed Title V permitting of a coal-fired power plant in Illinois.

<sup>17</sup> As this comment mentions 35 IAC 212.124(d)(2), while this rule may provide that violations of the opacity standard may be presumed to also constitute violations of the applicable PM standard, the nature and extent of any such presumption has not been adjudicated in the context of an actual enforcement action.

IEPA proposes to increase the length of an opacity exceedance that triggers Springfield CWLP's requirement to immediately notify IEPA from five or more 6-minute averaging periods to eight or more periods. In the Statement of Basis, IEPA asserts that the additional 18 minutes are necessary to provide "a reasonable opportunity for Springfield CWLP 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." (Statement of Basis at 18). This explanation is unreasonable. Pursuant to 35 Ill. Adm. Code §§ 212.123 and 212.124, opacity exceedances of two six-minute averaging periods constitute violations of the SIP's opacity and PM emission limits. Exceedances of thirty minutes in duration are serious violations that should be brought to IEPA's attention immediately. The Conditions allow Springfield CWLP to notify Illinois EPA by "telephone (voice, facsimile or electronic)"—a process that with modern communication technologies would take one worker less than one minute. This process is not burdensome and would not interfere with the corrective action process. The Condition should be reinstated.

**Response:**

This comment does not show that the planned change to this condition was improper and that the initial condition should have been retained in the modified permit. Condition 7.1.10-3(a)(i) and 7.2.10-3(a)(i) deals with reporting for continued operation of a boiler with excess opacity or PM emissions, including continued operation during malfunction or breakdown. It requires CWLP to provide certain "incident specific" notifications and reports to the Illinois EPA for such incidents. All such incidents must also be reported by CWLP in its quarterly reports under Condition 7.1.10-1(b) and 7.2.10-1(b) (periodic reporting of deviations) and Condition 7.1.10-2(d) and 7.2.10-2(d) (reporting of opacity and PM emissions).<sup>18</sup> This comment specifically addresses the requirement in Condition 7.1.10-3(a)(i) and 7.2.10-3(a)(i) that CWLP must immediately notify the Illinois EPA when the opacity from a boiler exceeds the opacity standard for a specified number of 6-minute averaging periods, unless CWLP has begun shutdown of the boiler by such time.

CWLP appealed Condition 7.1.10-3(a)(i) and 7.2.10-3(a)(i) in the initial permit. In the settlement negotiations, CWLP explained that it objected to having to provide notifications for opacity exceedances at a point in time when the circumstances surrounding the exceedances may still be unfolding or investigations are 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) for immediate notification were not correct. The Illinois EPA had assumed that 30 minutes would provide a reasonable opportunity for CWLP 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 expected that 30 minutes would provide adequate time for CWLP 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 expected

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<sup>18</sup> Condition 7.1.10-3(a)(ii) and 7.2.10-3(a)(ii) also requires incidents in which the PM standard(s) may have been exceeded (i.e., actually were exceeded or may have been exceeded based on relevant information that is available for an incident) to be reported to the Illinois EPA within 15 days.

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. Therefore, the length of time before the immediate notification requirement is triggered has been increased from five to eight 6-minute averaging periods (30 minutes to 48 minutes). CWLP will now have 18 additional minutes in which to correct the problem causing excess opacity or begin to shut down a boiler before it needs to provide immediate notification. This will 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 CWLP has been provided.

**Comment III.C.**

- **Condition 7.3.6(a)(i) and 7.4.6(a)(i)**—relating to control measures for coal handling and coal processing.

IEPA proposes to require control measures that are "established", which is defined as control measures that "may include" a list of identified controls. This modification renders the condition so vague as to be unenforceable. In the original Condition, the fugitive emission sources were *required* to implement the identified controls (enclosure, natural surface moisture, application of dust suppressants, and use of dust collection devices in Condition 7.3.6(a)(i), and enclosure and natural surface moisture in Condition 7.4.6(a)(i)). Based on the revised language, though, it is impossible to know whether any specific control is "established," and therefore whether the facility has complied with the requirement to apply the control (and the corresponding reporting requirements in Conditions 7.3.9 and 7.4.9).

**Response:**

The revised conditions originated from settlement discussions involving the administrative appeal, which included legal challenges to various components of periodic monitoring for the coal handling, coal processing and fly ash handling operations. In comparison to the initial permit issued in 2005, the revisions were mostly stylistic in nature, with the primary aim of introducing the concept of "established control measures" from the record-keeping condition to the earlier inspection condition. The language of the revisions retained the intent of the original inspection condition allowing the Permittee to select the control measures used to prevent dust and, similarly, contained an illustrative list of the types of control measures that would be employed in this effort.

The Illinois EPA disagrees that the revised conditions lack specificity or are not practically enforceable. The permit issued in 2005, as well as the draft permit conditions, simply codify the use of dust control measures that have been employed by the power plants for quite some time. The Illinois EPA did not identify the specific control measures that will be used for each affected operation unit but, rather, placed the onus of such identification upon the source, who must identify such measures within 60 days of permit issuance and thereafter maintain an on-going record of the same. However, the permit does generally identify the control measures to be employed by the source, as they are described in both the equipment descriptions and equipments lists contained within the subject conditions. When coupled with the requirement to

implement and maintain control measures,<sup>19</sup> which is a basic obligation of the permit to provide a reasonable means of periodic monitoring for the coal handling and processing activities, the permit clearly obligates the source to employ the use of control measures as so described or listed in the accompanying condition.<sup>20</sup>

The revised conditions to the permit did not alter the substantive requirements of the work practices from the earlier permit. Notably, the same contentions regarding the lack of specificity and practical enforceability of those requirements were raised in earlier CAAPP proceedings. Such contentions were rejected by USEPA. The USEPA order responding to a petition to object involving Midwest Generation's Fisk facility observed that "some control measures" are to be implemented under the affected conditions, rejecting the notion that the company might choose to implement no control measures at all. USEPA's orders relating to the Fisk and Romeoville facilities also rejected the notion that the permits were unenforceable, holding that the work practices set forth in the affected conditions were "enforceable as a practical matter".

Notwithstanding the aforementioned, in its consideration of this comment the Illinois EPA approached Ameren about the possibility of addressing this issue by reverting to the language of the earlier permit. In furtherance to expediting the issuance of the modified CAAPP permit for the Dallman Generating Station Center, and with the concurrence of CWLP, the Illinois EPA has opted to remove the proposed revisions to the conditions. The language of the relevant conditions will now generally reflect the language in the initial 2005 permit, with the simplifying clarification that the "control measures" identified in the recordkeeping provisions are now being addressed in lieu of "established control measures."<sup>21</sup> In addition, the recordkeeping requirements for the control measures are set out in more detail to ensure both enforceability and consistency with prior settlement discussions regarding the nature of the required record.

#### USEPA Comment 1.

The draft CAAPP permit does not specify a minimum set of control measures to be applied to coal handling and processing equipment to assure continuous compliance with applicable opacity and particulate matter (PM) limits.

The draft CAAPP permit requires the Permittee to implement and maintain "established" control measures to minimize visible emissions (VE) of PM from coal handling and processing equipment, and provide assurance of compliance with the applicable emission standards in Conditions 7.3.4 and 7.4.4. The draft permit states that "[established] control measures may include enclosure, natural surface moisture, application of dust suppressant, use of

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<sup>19</sup> These requirements addressed by the comment are found in Conditions 7.2.6(a)(i), 7.3.6(a)(i) and 7.4.6(a)(i).

<sup>20</sup> The Illinois EPA also did not establish whether, or which, control measures must always be operated, as doing so would contradict the intended use of such controls as necessary to assure compliance or on an as-needed basis.

<sup>21</sup> The use of "established" to describe the control measures was believed to be redundant and potentially confusing, as the record of the control measures would necessarily reflect those measures selected or established by the Permittee to minimize dust.

dust collection devices, and provide for different control measures depending on circumstances." Condition 7.3.6(a)(i) (emphasis added). The draft permit further requires the Permittee to submit to IEPA a record of the established control measures for each of the affected operations within 60 days of permit issuance.

As written, the draft CAAPP permit does not require the Permittee to use any specific control measures for coal handling and processing equipment. The draft permit allows the Permittee to select any type of control measure(s), and provides the Permittee discretion to change those control measures. Therefore, the draft CAAPP permit does not comply with 40 C.F.R. § 70.6(a) because it does not contain sufficient operational requirements to assure compliance with the applicable opacity and PM limits for coal handling and processing equipment. In addition, the draft permit does not provide the public with the opportunity to meaningfully comment on the selected control measures.

We recommend that IEPA revise Conditions 7.3.6(a)(1) and 7.4.6(a)(i) to specify the minimum set of control measures for the coal handling and processing equipment. Additionally, Conditions 7.3.9(b)(i) and (ii) and 7.4.9(b)(i) and (ii) should be revised to require review and approval by IEPA of the control measures selected by the Permittee and revised to provide the pertinent information on the control measures (description, frequency, and other information necessary to demonstrate compliance with applicable limitations). Since the current permit will require the submittal of full documentation to support the selected control measures to show compliance with all applicable requirements, IEPA should incorporate the specific control measures corresponding to each emission point into the permit during the planned reopening for cause process.

**Response:**

The permit conditions addressed by the comment require CWLP to implement control measures on the affected operations, as well as to "operate and maintain" those measures on an on-going basis.<sup>22</sup> The permit also requires CWLP to create and maintain a list of various control measures being implemented,<sup>23</sup> which are currently identified in the permit as natural surface moisture, various dust suppressants, enclosures and covers,<sup>24</sup> and to apprise the Illinois EPA of revisions to the list.<sup>25</sup> The associated inspection and recordkeeping requirements<sup>26</sup> are designed to ensure that the control measures are being followed. Cumulatively, these control measures, recordkeeping and inspections establish the permit's approach to periodic monitoring for these affected operations.

As noted in the previous response, 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 2005 permit and retained

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<sup>22</sup> See, Conditions 7.2.6(a)(ii), 7.3.6(a)(ii) and 7.4.6(a)(ii).

<sup>23</sup> See, Conditions 7.2.9(b)(ii), 7.3.9(b) and 7.4.9(b).

<sup>24</sup> 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.

<sup>25</sup> See, Conditions 7.2.9(b)(iv), 7.3.9(b)(ii) and 7.4.9(b)(ii).

<sup>26</sup> See, Condition 7.2.8 and 7.2.9, Condition 7.3.8 and 7.3.9, and Condition 7.4.8 and 7.4.9 respectively.

in the negotiated revisions to the permit,<sup>27</sup> the use of control measures was deemed appropriate as one component of periodic monitoring for the affected operations.<sup>28</sup> This requirement provided a reliable means of verifying compliance with the emission standards that apply to the affected operations (i.e., visible and fugitive emissions).<sup>29</sup> 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 nature of the permit requirements is analogous to regulatory programs under the Illinois State Implementation Plan<sup>30</sup> and certain New Source Performance Standards.<sup>31</sup> Those programs typically require an affected source to identify best management (or good engineering) practices to minimize emissions as may be needed, or as appropriate, for site 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 address varying types and degrees of site conditions, range of operation and changes in the characteristics of resulting emissions.

The Illinois EPA's approach to periodic monitoring in the CAAPP permit for the affected operations is similar to the regulatory framework described above. However, the Illinois EPA opted against requiring 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 existing 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).<sup>32</sup>

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<sup>27</sup> As previously noted, the requirements for control measures in the revised CAAPP permit are substantially identical to those contained in the initial CAAPP permit. The changes being made to these conditions depict mostly stylistic changes to the language and do not modify or alter the substantive elements relating to control measures.

<sup>28</sup> 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 will assure compliance with periodic monitoring. See, Response to Public Comments for CAAPP Permit Applications for Midwest Generation *et al*, at 33 (September 29, 2005).

<sup>29</sup> See, Conditions 7.2.4, 7.3.4 and 7.4.4.

<sup>30</sup> See, 35 IAC Part 212.309.

<sup>31</sup> See, 40 CFR Part 60 Subpart Y.

<sup>32</sup> In addition, an attempt to impose such requirements would potentially raise questions of legal authority, as USEPA and federal courts alike have recognized the general rule that Title V permit 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.

The comment also expresses concern regarding the absence of an opportunity for public comment on the control measures. The revised CAAPP permit, like the initial permit, requires the source to submit a list of established control measures that will be operated and maintained within 60 days of permit issuance. Owing to the lack of permit effectiveness for the initial CAAPP permit, the source has yet to generate this record and the comment is therefore premature. Once the record is submitted to the Illinois EPA, it will be available for public viewing and inspection upon receipt of a request filed under the state's Freedom of Information Act.<sup>33 34</sup>

#### USEPA Comment 2.

The frequency of the required VE observations from coal handling equipment, coal processing equipment, gypsum and limestone handling equipment, and fly ash equipment is inadequate to assure continuous compliance with applicable opacity and PM limits.

The draft CAAPP permit contains inspection requirements for the coal handling, coal processing, gypsum/limestone handling, and fly ash equipment. These include monthly inspections of the coal handling, coal processing and gypsum/limestone handling equipment, and weekly inspections of the fly ash equipment. In addition, the draft permit requires that the Permittee perform V E observations using EPA Reference Method 22 once per calendar year.

Given that the majority of the affected equipment operates regularly throughout the year, it is not clear how the draft CAAPP permit inspection requirements and frequency of the required VE observations are adequate to yield reliable and accurate emissions data, as required by 40 C.F.R. § 70.6(a)(3)(i)(B), with respect to the applicable opacity and process weight rate PM limits. During the planned reopening process, once IEPA has the information regarding the control measures discussed in Comment 1, Conditions 7.3.8(b), 7.4.8(b), 7.5.8(b), and 7.6.8(b) should include additional monitoring and/or testing to yield the reliable data that assures compliance on a continuous basis. Also, IEPA should provide in the permit record an explanation of how the control measures and monitoring requirements for each transfer point, coal pile, conveyor belt, and other points of fugitive emissions will assure compliance with all applicable opacity and PM limits. This should include a discussion of the relationship between monitoring frequency and applicable emission limits.

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<sup>33</sup> Further, it is presently anticipated that the generated record will be incorporated into 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.

<sup>34</sup> It should also be noted that the substance of the comment is beyond the scope of changes being addressed in this permitting action. The subject requirements relating to control measures underwent public comment and USEPA review at initial permit issuance and were clearly ascertainable at that time. More fundamentally, the permit modification procedures undertaken for resolving the CAAPP utility appeals appropriately do not encompass a comprehensive review of the permit. Rather, review is limited to the issues directly arising from the significant modifications to the permit. This approach is supported by the preamble discussion accompanying the Part 70 rules and was adopted by the Administrator in a subsequent petition response. For reasons that relate to the policy of administrative finality, the approach is equally essential in the current proceeding to achieve a complete resolution of the CAAPP appeal.

**Response:**

This comment focuses narrowly on only one aspect of periodic monitoring for the subject equipment (i.e., monthly inspection requirement), while overlooking other aspects of the overall monitoring approach.<sup>35</sup> The concept of periodic monitoring eschews a one-size-fits-all framework and is therefore regarded as something of a case-by-case evaluation. In a similar vein, one component of periodic monitoring should not trump other components, or be singled out without giving due regard to its relationship to the other components of the monitoring. The approach to periodic monitoring crafted for the subject equipment in 2005, centering around the work practice requirement for the use of control measures, was both sound and practical.<sup>36</sup>

A key component of the periodic monitoring is an on-going requirement that CWLP operate and maintain designated control measures for the equipment on an as-needed basis or, similarly stated, as necessary to assure compliance. This obligation, which is required whenever equipment is operating and material is being handled,<sup>37</sup> is now codified in the permit, although various uses of control measures have long been practiced by CWLP and the other utility sources.<sup>38</sup>

The use of control measures is accompanied by periodic verifications that must be formally undertaken by the source. Detailed records must be maintained for each instance in which an affected operation/process operates without the

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<sup>35</sup> As observed with the previous comment, the Illinois EPA notes that the subject comment is beyond the scope of changes being addressed in this permitting action. The CAAPP procedures governing here restrict this proceeding to only those issues directly arising from the planned significant modifications to the 2005 permit.

<sup>36</sup> The original 2005 permit established a comprehensive regimen for periodic monitoring. In its consideration of periodic monitoring for the subject equipment, the Illinois EPA 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, Response to Public Comments for CAAPP Permit Applications for Midwest Generation *et al*, at 33 (September 29, 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.").

<sup>37</sup> The fact that the equipment operates on a regular basis does not constitute a sufficient basis to require more frequent inspections, as suggested by the comment, when control measures must be used whenever the equipment operates. Moreover, it is inaccurate to suggest that the subject equipment operates "continuously, 365 days a year." In fact, most of the equipment operates intermittently. For instance, based on available information, the unloading of silos and reclamation of coal from the storage pile takes only about 6 hours per day. The load-out of fly ash takes only about 8 hours per day. The duration of daily equipment operation is lower when only one of the boilers is operating and the other boiler is out for maintenance, which occurs more than 20 percent of the time each year.

<sup>38</sup> Certain work practices are and will continue to be implemented for the subject equipment, independent of the CAAPP permit, for reasons related to worker safety, equipment reliability and longevity, and operational costs. The introduction of the requirement for control measures to the CAAPP permit is significant in that it codifies past and continuing dust minimization practices and establishes a supporting means of oversight and verified record-keeping.



presence of the designated control measures.<sup>39</sup> Deviations from the requirement to operate and maintain control measures must also be reported.<sup>40</sup> The inspection and record-keeping requirements are the remaining components of periodic monitoring. The formal inspections, by design, will provide specific confirmation that the designated control measures are being properly operated and maintained. Records must be kept for each required inspection to document the operation and condition of the applicable control measures, as well as the performance of the inspection.<sup>41</sup>

It should be noted that the use of control measures is required independent of the informal verifications (or observations) of the subject equipment that are contemplated by the permit. Lapses in the use of such measures must be corrected by CWLP independent of the formal inspections that are required. Because the collective requirements relating to control measures should be adequate to verify implementation of the control measures, the imposition of a daily, formal observation is not necessary to provide periodic monitoring that satisfies Title V's requirements. For these reasons, the comment does not justify changes to the frequencies of the formal inspections specified by the permit.<sup>42</sup>

Moreover, more frequent observations for visible emissions would not provide useful information. Neither the applicable standards nor the permit prohibit visible emissions from the subject equipment. For purposes of periodic monitoring, the absence of visible emissions is a criterion that will act to simplify the periodic inspections for certain equipment, such as the coal crushers which are located in a closed building.<sup>43</sup> For such equipment, the absence of visible emissions will likely readily confirm proper implementation of control measures. If visible emissions are not present from such equipment, either during an initial observation for visible emissions or following timely repair, it would also be unproductive to require observations for the opacity of emissions by USEPA Method 9, as are necessary for equipment from which visible emissions are normally present.

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<sup>39</sup> Such records include a description of the event, probable cause of the occurrence, any preventative measures taken, and an explanation of whether the relevant opacity standards were exceeded. See generally, Conditions 7.2.9(e), 7.3.9(e) and 7.4.9(e).

<sup>40</sup> Occasions during which the subject equipment is not in compliance for more than a specified time require notification within 30 days. Otherwise, the deviation must be reported in a quarterly report. See generally, Conditions 7.2.10(a)(ii) and (iii)(A), 7.3.10(a)(ii) and (iii)(A), and 7.4.10(a)(ii) and (iii)(A).

<sup>41</sup> The inspections must document the date and time of the inspection, as well as the particular equipment being observed; the "observed condition" of the control measures, including both the "presence of any visible emissions or atypical accumulations of coal fines;" a description of the "maintenance or repair" of equipment relating to the control measures, as well as a review of pending recommendations from prior inspections; and a description of any corrective action, including whether such action occurred within two hours of discovery and returned the operation to normal (i.e., no visible emissions). See generally, Conditions 7.2.9(d), 7.3.9(d) and 7.4.9(d).

<sup>42</sup> Formal 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. Inspections of fly ash equipment are required weekly pursuant to Condition 7.4.8(a).

<sup>43</sup> It is also expected that visible emissions will 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.

**FOR ADDITIONAL INFORMATION**

Questions about the public comment period and permit decision should be directed to:

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