BEFORE THE ADMINISTRATOR
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

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| IN THE MATTER OF: | ) | |
| | ) | ORDER RESPONDING TO |
| UNITED STATES STEEL | ) | PETITIONER'S |
| CORPORATION – GRANITE CITY | ) | REQUEST THAT THE |
| WORKS | ) | ADMINISTRATOR |
| | ) | OBJECT TO ISSUANCE OF STATE |
| CAAPP No. 96030056 | ) | OPERATING PERMIT |
| Proposed by the Illinois | ) | |
| Environmental Protection Agency | ) | Petition Number V-2009-03 |
| | ) | |

**ORDER GRANTING IN PART AND DENYING IN PART PETITION FOR OBJECTION TO PERMIT**

## INTRODUCTION

On September 3, 2009, pursuant to its authority under the Illinois Clean Air Act Permitting Program (CAAPP), the Illinois Environmental Protection Act, 415 ILCS 5/39.5, title V of the Clean Air Act (Act), 42 U.S.C. §§ 7661-7661f, and the United States Environmental Protection Agency's (EPA) implementing regulations in 40 C.F.R. part 70 (part 70), the Illinois Environmental Protection Agency (IEPA) issued a title V operating permit to United States Steel Corporation – Granite City Works (USS). USS is an integrated steel manufacturing facility that involves raw material processing/preparation, coke production, coke oven gas by-products recovery plant, iron production, steel production, and steel finishing.

On October 1, 2009, the Interdisciplinary Environmental Clinic at the Washington University School of Law submitted to EPA on behalf of the American Bottom Conservancy (Petitioner) a petition requesting that EPA object to the USS title V permit pursuant to section 505(b)(2) of the Act, 42 U.S.C. § 7661d(b)(2), and 40 C.F.R. § 70.8(d). Petitioner alleges that (1) the permit fails to include all applicable permits and permit requirements; (2) the permit fails to provide periodic monitoring sufficient to assure compliance; (3) the permit lacks compliance schedules to remedy all current violations; (4) the permit unlawfully exempts emissions during startup, shutdown, and malfunctions (SSM); (5) the permit fails to include compliance assurance monitoring (CAM) requirements; and (6) numerous permit provisions are not practically enforceable.

EPA has reviewed Petitioner's allegations pursuant to the standard set forth in section 505(b)(2) of the Act, 42 U.S.C. § 7661d(b)(2), which requires the Administrator to issue an objection if the petitioner demonstrates to the Administrator that the permit is not in compliance with the applicable requirements of the Act. *See also* 40 C.F.R. § 70.8(d); *New York Public Interest Research Group* v. *Whitman*, 321 F.3d 316, 333, n. 11 (2d Cir. 2003).

Based on a review of the available information, including the petition, the permit record, and relevant statutory and regulatory authorities and guidance, I grant Petitioner's request in part and deny it in part, for the reasons set forth in this Order.

## STATUTORY AND REGULATORY FRAMEWORK

Section 502(d)(1) of the Act, 42 U.S.C. § 7661a(d)(1), requires each state to develop and submit to EPA an operating permit program to meet the requirements of title V. EPA granted final full approval of the Illinois title V operating permit program effective November 30, 2001. 66 Fed. Reg. 62946 (December 4, 2001).

All major stationary sources of air pollution and certain other sources are required to apply for title V operating permits that include emission limitations and other conditions necessary to assure compliance with applicable requirements of the Act, including the requirements of the applicable State Implementation Plan (SIP). *See* sections 502(a) and 504(a) of the Act, 42 U.S.C. §§ 7661a(a) and 7661c(a). The title V operating permit program generally does not impose new substantive air quality control requirements (referred to as "applicable requirements"), but does require that permits contain monitoring, recordkeeping, reporting, and other requirements sufficient to assure compliance with applicable requirements. 57 Fed. Reg. 32250, 32251 (July 21, 1992). One purpose of the title V program is to "enable the source, States, EPA, and the public to understand better the requirements to which the source is subject, and whether the source is meeting those requirements." *Id.* Thus, the title V operating permit program is a vehicle for ensuring that air quality control requirements are appropriately applied to facility emission units and for assuring compliance with such requirements.

Under section 505(a) of the Act, 42 U.S.C. § 7661d(a), and the relevant implementing regulations at 40 C.F.R. § 70.8(a), states are required to submit each proposed title V operating permit to EPA for review. Upon receipt of a proposed permit, EPA has 45 days to object to final issuance of the permit if EPA determines the permit is not in compliance with applicable requirements or the requirements of part 70. 40 C.F.R. § 70.8(c). Section 505(b)(2) of the Act provides that, if EPA does not object to a permit on its own initiative, any person may petition the Administrator, within 60 days of expiration of EPA's 45-day review period, to object to the permit. 42 U.S.C. § 7661d(b)(2); *see also* 40 C.F.R. § 70.8(d). The petition must "be based only on objections to the permit that were raised with reasonable specificity during the public comment period provided by the permitting agency (unless the petitioner demonstrates in the petition to the Administrator that it was impracticable to raise such objections within such period or unless the grounds for such objection arose after such period)." 42 U.S.C. § 7661d(b)(2). In response to such a petition, the Administrator must issue an objection if a petitioner demonstrates that a permit is not in compliance with the requirements of the Act. *Id.; see also* 40 C.F.R. § 70.8(c)(1); *New York Public Interest Research Group, Inc.* v. *Whitman,* 321 F.3d at 333, n. ll. Under section 505(b)(2) of the Act, 42 U.S.C. § 7661d(b)(2), the burden is on the petitioner to make the required demonstration to EPA. *Sierra Club* v. *Johnson,* 541 F.3d 1257, 1266-1267 (11th Cir. 2008); *Citizens Against Ruining the Environment* v. *EPA,* 535 F.3d 670, 677-678 (7th Cir. 2008); *Sierra Club* v. *EPA,* 557 F.3d 401, 406 (6th Cir. 2009); *McClarence* v. *EPA,* 596 F.3d 1123, 130-31 (9th Cir. 2010) (discussing the burden of proof in title V petitions). If, in responding to a petition, EPA objects to a permit that has already been issued, EPA or the

permitting authority will modify, terminate, or revoke and reissue the permit consistent with the procedures set forth in 40 C.F.R. §§ 70.7(g)(4), (5)(i) - (ii) and 70.8(d).

## BACKGROUND

USS first applied in March 1996 for a CAAPP title V permit. IEPA determined in May 1996 that the application was complete and published a draft permit for public comment in 2003. USS submitted a supplemental permit application in 2007 to address maximum achievable control technology (MACT) standards. IEPA considered this application a supplement to the 1996 application and, therefore, did not perform a second completeness determination. IEPA issued a new draft CAAPP permit and Project Summary (IEPA's Statement of Basis) for public comment in October 2008. IEPA held a public hearing regarding the new draft permit on December 2, 2008, and provided follow-up answers in January 2009 to questions it could not answer at the time of the hearing. Subsequently, on February 27, 2009, Petitioner submitted written comments on the draft permit to IEPA. EPA received the proposed permit for its 45-day review on June 19, 2009. EPA did not object to the permit, and IEPA issued the final CAAPP permit for the facility, along with a response to public comments, on September 3, 2009.

Under the statutory timeframe in section 505(b)(2) of the Act, 42 U.S.C. § 7661d(b)(2), October 2, 2009, was the deadline to file a petition requesting that EPA object to the final USS permit. Petitioner submitted its petition to EPA on October 1, 2009. Accordingly, EPA finds that Petitioner timely filed its petition.

## ISSUES RAISED BY THE PETITIONER

### I. The Permit Fails to Include All Applicable Permits and Permit Requirements

***Petitioner's Allegations:***

Petitioner alleges that IEPA did not include all applicable requirements in the USS title V permit. Petition at 6-9. Specifically, Petitioner points to the emission reduction credits in the IEPA-issued construction permits[1] for cogeneration and the coke plant/coke conveyance system projects[2] (coke plant project permits) that were under construction at the time Petitioner submitted its petition. Petitioner claims that the requirements contained in the permits are applicable requirements, as that term is defined at 415 ILCS 5/39.5(1) and 40 C.F.R. § 70.2,

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[1] Petitioner refers to the following four IEPA-issued new source review permits:
Permit No. 06070022 – Emission Reduction Credits Permit issued January 18, 2007;
Permit No. 06070023 – Cogeneration Project Permit issued January 30, 2008;
Permit No. 06070088 – Coke Conveyance System Permit issued March 13, 2008; and
Permit No. 06070020 – Coke Plant Permit issued March 13, 2008 to Gateway Energy &Coke Company, c/o SunCoke Company.

[2] One of the four permits to which Petitioner cites, Permit No. 06070020, was issued to SunCoke Company. However, in Permit No. 06070020 and in Permit No. 06070088, issued to USS for construction of a coke conveyance system, IEPA noted that the two modifications are considered a single project for purposes of new source review applicability. *See* Permits No. 06070020 and No. 06070088, both at 4.

because IEPA issued the permits pursuant to the State's SIP-approved new source review (NSR) program for major sources and the delegated prevention of significant deterioration (PSD) program. *Id.* at 6-7. Petitioner asserts that the coke plant project constitutes a major source of particulate matter of 2.5 microns or less ($PM_{2.5}$) in a $PM_{2.5}$ nonattainment area, and thus could not proceed without "offsets" of other $PM_{2.5}$ emissions from USS. Petitioner claims that the coke plant project permits reference the IEPA-issued emission reduction credit permit because it provided some of the necessary offsets. *Id.* at 7. Petitioner further claims that, because the provisions of the cogeneration project and coke plant project permits that enabled the project to avoid major NSR are minor source permit requirements, they also must be included in the USS title V permit. *Id.* at 7-8. Petitioner asserts that both the cogeneration and coke plant projects under construction at the time Petitioner submitted the petition rely on netting to avoid major NSR permit requirements. Petitioner alleges that, for a source to rely on netting to avoid permit requirements, it must be bound legally to undertake the emission reductions before it commences construction. *Id.* at 8.

***EPA Response:***

A title V permit must include all applicable requirements. *See* 40 C.F.R. §§ 70.5(c)(4) and 70.6(a)(1). The term "applicable requirement," as defined in 40 C.F.R. § 70.2 and Illinois' CAAPP regulations, includes "any term or condition of any preconstruction permits issued pursuant to regulations approved or promulgated through rulemaking under title I, including parts C or D, of the Act." In addition, both part 70 and Illinois' CAAPP regulations include in the definition of "applicable requirement" those requirements that will become effective during the term of the title V permit. *See* 40 C.F.R. §§ 70.2, 70.5(c)(4) and (8), and 415 ILCS 5/39.5. In its Responsiveness Summary on this issue, IEPA stated that the "CAAPP permit for U.S. Steel reflects only current operations. [Both the cogeneration and coke plant projects] permitted through construction permits [cited by Petitioner in its comments] are under construction and not operable yet." Responsiveness Summary at 24-25. IEPA did not provide any legal justification for its position that the permit only needed to reflect current operations, nor did it dispute that the PSD permits contained applicable requirements. The facilities that are the subject of the more recently issued NSR permits are [considered by IEPA to be] part of the source that is covered by the title V operating permit under review in this action. Thus by failing to include the provisions of the NSR permits in the title V permit, IEPA has acted contrary to both part 70 and Illinois' CAAPP regulations that define the term "applicable requirement."[3] Based on EPA's and

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[3] In stating that the USS CAAPP permit reflects current operations and that sources covered by the preconstruction permits were still under construction, it is possible that IEPA was intending to refer to 40 C.F.R. §70.5(a)(1)(ii). That provision states in relevant part: "Part 70 sources required . . . to have a permit under the preconstruction review program approved into the applicable implementation plan under part C or D of title I of the Act [i.e., the New Source Review program], shall file a complete application to obtain the part 70 permit or permit revision within 12 months after commencing operation or on or before such earlier date as the permitting authority may establish. Where an existing part 70 permit would prohibit such construction or change in operation, the source must obtain a permit revision before commencing operation."

EPA's proposed part 70 rule stated that any source required to have a preconstruction permit under the NSR program would be subject to the part 70 program, but the proposed rule did not address the timing of a title V application. *See* 57 Fed. Reg. 32250, 32271. EPA included 40 C.F.R. 70.5(a)(1)(ii) in the final rule to address this issue and situations where a source had no title V permit or such permit was not up for revision, or where the

Illinois' definition of "applicable requirement," as described above, the emission reduction credits and all other terms of the construction permits issued pursuant to SIP-approved programs are applicable requirements and, as such, must be included in the title V operating permit. I therefore grant the petition on this issue, and direct IEPA to include the requirements for the emission reduction credits in the USS CAAPP permit, as well as all other requirements of the pre-construction permits cited by Petitioner at pages 6 and 9 of the petition.[4] *See In the Matter of Wisconsin Public Service Corporation's JP Pulliam Power Plant,* Petition Number V-2009-01 (June 28, 2010) at 3-5.

## II. The Permit Fails to Provide Periodic Monitoring Sufficient to Assure Compliance

***Petitioner's Allegations:***

Petitioner claims that the USS CAAPP permit does not meet the periodic monitoring requirements of part 70 for various requirements applicable to the coal handling operations, the coke production operations, the coke oven gas by-products recovery plant, the blast furnaces, the basic oxygen furnaces, the continuous casting operations, the hot strip mills, the finishing operations, the boilers, the internal combustion engines, and the gasoline storage and dispensing operations. Petition at 9-28. Petitioner claims that permitting authorities must take the following three steps to satisfy the monitoring requirements of title V:

1. Under 40 C.F.R. § 70.6(a)(3)(i)(A), where existing regulations or underlying permits prescribe monitoring that is appropriate to the timeframe of the emission

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source's existing permit would prohibit construction or a change in operation. As EPA explained in the final rule, a source must submit a title V application generally within 12 months after the date on which the source becomes subject to the title V program. *Id.* at 32272. The Act implies that a source becomes subject to the title V program when operations commence. *Id.* Therefore, a source that receives a preconstruction permit and will be newly subject to title V generally would have 12 months after commencing operation to submit a title V application. 40 C.F.R. § 70.5(a)(1)(ii) follows this reading of the statute, and it "prevents the source from being subject to an enforcement action during the 12-month period that it operates before it applies for an operating permit." *Id.* This rule also addresses when an existing title V source would need to apply for a title V permit revision, and provides that (except in situations where the part 70 permit would prohibit such construction or change in operation) the source must submit its application within 12 months of commencing operations. *Cf.* 40 C.F.R. § 70.7(f)(1)(i).

Importantly, 40 C.F.R. § 70.5(a)(1)(ii) does not provide an exception to the definition of "applicable requirement." Nor is it an exemption from the Act's requirement that all title V permits include conditions to assure compliance with all "applicable requirements . . . including the requirements of the applicable implementation plan." *See* 42 U.S.C. § 7661b. 40 C.F.R. § 70.5(a)(1)(ii) does not apply in a situation where a permitting authority is issuing a title V permit to a source and the source holds preconstruction permits that have been issued. The preconstruction permits are applicable requirements, as noted above, and nothing in the Act or the regulations allows a permitting authority to exclude them from the title V permit.

[4] Petitioner suggests that the terms of the preconstruction permits would not be federally enforceable until they were incorporated into USS's title V permit. *See* Petition at p. 8. EPA disagrees with this assertion. EPA has the authority to enforce preconstruction permits issued pursuant to delegated PSD programs or to SIP-approved major and minor NSR programs regardless of whether they are incorporated into title V permits. *See* Section 113(a)(1) and (a)(3) of the Act, 42 U.S.C. § 7413(a)(1) and (a)(3).

limit and sufficient to assure compliance, the permitting authority must properly incorporate that monitoring requirement into the title V permit.

2. Under 40 C.F.R. § 70.6(a)(3)(i)(B), where there is no previously-established monitoring requirement to correspond to an emission limit, the permitting authority must add "periodic monitoring sufficient to yield reliable data from the relevant time period that are representative of the source's compliance with the permit."

3. Under 40 C.F.R. § 70.6(c)(1), where there exists a previously-established monitoring requirement corresponding to an emission limit, but that monitoring is not sufficient to assure compliance with limit, the permitting authority must supplement monitoring to assure such compliance.

Petition at 9, citing *Sierra Club v. EPA*, 536 F.3d 673 (D.C. Cir. 2008), *CITGO Refining and Chemicals Company L.P.*, Petition No. VI-2007-01 (May 28, 2009) at 7 and *Premcor Refining Group, Inc.*, Petition No. VI-2007-02) at 7 (May 28, 2009). Petitioner asserts that the United States Court of Appeals for the District of Columbia Circuit made clear in *Sierra Club* that the Act requires augmentation of monitoring requirements where requirements exist but are not adequate to ensure compliance, (Petition at 10, quoting *Sierra Club*, 536 F.3d at 678) and that the Illinois Environmental Protection Act also mandates supplemental monitoring where necessary to ensure compliance. *Id.*, quoting 415 ILCS 5/39.5(7)(b).

Petitioner asserts that the USS CAAPP permit contains numerous conditions that establish emission limits but lack periodic monitoring requirements sufficient to assure compliance with the limits. *Id.* Petitioner also asserts that the Project Summary contains conclusory statements about the monitoring requirements but no justifications for IEPA's monitoring choices, and that IEPA must satisfy the monitoring requirements and provide a rationale for the monitoring, as required by part 70. *Id.* at 11-12. Finally, Petitioner alleges that IEPA failed to respond to its significant comments regarding the adequacy of monitoring in the USS CAAPP permit. *Id.* at 11-12.

***EPA Response:***

EPA's part 70 monitoring rules (40 C.F.R. § 70.6(a)(3)(i)(A) and (B) and 70.6(c)(1)) are designed to address the statutory requirement that "[e]ach permit issued under [title V] shall set forth . . . monitoring . . . requirements to assure compliance with the permit terms and conditions." 42 U.S.C. § 7661c(c). As a general matter, permitting authorities must take three steps to satisfy the monitoring requirements in EPA's part 70 regulations. First, under 40 C.F.R. § 70.6(a)(3)(i)(A), permitting authorities must ensure that monitoring requirements contained in applicable requirements are properly incorporated into the title V permit. Second, if the applicable requirement contains no periodic monitoring, permitting authorities must add "periodic monitoring sufficient to yield reliable data from the relevant time period that are representative of the source's compliance with the permit." 40 C.F.R. § 70.6(a)(3)(i)(B). Third, if there is some periodic monitoring in the applicable requirement, but that monitoring is not

sufficient to assure compliance with permit terms and conditions, permitting authorities must supplement monitoring to assure such compliance. 40 C.F.R. § 70.6(c)(1). *See CITGO* at 6-7.

In addition to meeting these three steps, the rationale for the monitoring requirements selected by a permitting authority must be clear and documented in the permit record (e.g., in the statement of basis). 40 C.F.R. § 70.7(a)(5). The determination of whether monitoring is adequate in a particular circumstance generally is a context-specific determination. The monitoring analysis should begin by assessing whether the monitoring required in the applicable requirement is sufficient to assure compliance with permit terms and conditions. Some factors that permitting authorities may consider in determining appropriate monitoring are: (1) the variability of emissions from the unit in question; (2) the likelihood of a violation of the requirements; (3) whether add-on controls are being used for the unit to meet the emission limit; (4) the type of monitoring, process, maintenance, or control equipment data already available for the emission unit; and (5) the type and frequency of the monitoring requirements for similar emission units at other facilities. The preceding list of factors provides the permitting authority with a starting point for its analysis of the adequacy of the monitoring; the permitting authority also may consider other site-specific factors. *CITGO* at 7-8.

Further, IEPA has an obligation to respond adequately to significant comments on the draft title V permit. Section 502(b)(6) of the Act, 42 U.S.C. § 7661a(b)(6), requires that all title V permit programs include adequate procedures for public notice regarding the issuance of title V operating permits, "including offering an opportunity for public comment." *See* 40 C.F.R. § 70.7(h). It is a general principle of administrative law that an inherent component of any meaningful notice and opportunity for comment is a response by the regulatory authority to significant comments. *Home Box Office v. FCC*, 567 F.2d 9, 35 (D.C. Cir. 1977) ("the opportunity to comment is meaningless unless the agency responds to significant points raised by the public."). *See, also, In the Matter of Louisiana Pacific Corporation*, Petition Number V-2006-3 (Nov. 5, 2007), at 4-5.

The petition sets out approximately 50 instances in the USS title V permit where Petitioner claims IEPA has failed to include sufficient monitoring to assure compliance and/or where IEPA has failed to justify the required monitoring. These issues are addressed below. In sum, in the instances described below where I grant on the monitoring issues raised by Petitioner, IEPA must ensure it has: (1) satisfied the monitoring requirements of 40 C.F.R. § 70.6(a)(3)(i)(A) and (B) and (c)(1); (2) provided a rationale for the monitoring requirements placed in the permit (*see* 40 C.F.R. § 70.7(a)(5)); and (3) responded to significant comments. *CITGO* at 8.

### A. Coal Handling Operations

***Petitioner's Allegations:***

Petitioner alleges that the permit does not include periodic monitoring sufficient to assure compliance with the emission limit for particulate matter of 10 microns or less ($PM_{10}$) found in Condition 7.1.3(f) of the permit. Petition at 12. Petitioner states that the permit only requires inspections of control equipment and related recordkeeping but does not require any actual

monitoring. Petitioner concludes that, because USS must meet the emission limit for $PM_{10}$ on an hourly basis, the permit must be revised to require additional periodic monitoring, such as a continuous emission monitoring system (CEMS) for particulate matter (PM), to assure compliance with the limit. *Id.*

***EPA Response:***

In its Responsiveness Summary, IEPA claims that the "[r]ecordkeeping requirements of Conditions 7.1.10(b), (d), 5.9.3(d) and inspection requirements of Condition 7.1.8 are sufficient to satisfy requirements of 39.5(7)(d) of the Act and ensure that control device is operated properly." Responsiveness Summary at 27. IEPA's response simply recites the monitoring requirements. IEPA did not provide a sufficient analysis to demonstrate how the monitoring requirements in the USS permit assure compliance with the terms and conditions of the permit, or yield reliable data from the relevant time period that is representative of compliance with the permit in either its Project Summary or its responses to Petitioner's comment.[5] IEPA's response to Petitioner's comment was silent on how Conditions 7.1.10(b) and (d), 5.9.3(d) and the inspection requirements of Condition 7.1.8 are sufficient to assure compliance with the related emissions requirements. Therefore, I grant the petition on this issue.

Petitioner also argues that CEMS should be considered the means to comply with the periodic monitoring requirements of part 70. Although CEMs may be the preferred type of monitoring in some instances, they are not always necessary to assure compliance with applicable requirements. Section 504(b) of the Act, 42 U.S.C. § 7661c(b), provides that "continuous emissions monitoring need not be required if alternative methods are available that provide sufficiently reliable and timely information for determining compliance." *See also, In the Matter of Alliant Energy WPL - Edgewater Generating Station*, Petition Number V -2009-02 (August 17, 2010), at 11.

Petitioner has neither identified an applicable requirement that compels the use of CEMS nor demonstrated that a CEM is the only monitoring that can assure compliance with this particular emission limit. I am ordering IEPA either to explain how the USS permit provides adequate monitoring or to modify the permit to ensure that it contains monitoring sufficient to

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[5] As discussed above, if the applicable requirement contains no periodic monitoring, the permitting authority must add periodic monitoring to the title V permit "sufficient to yield reliable data from the relevant time period that are representative of the source's compliance with the permit." 40 C.F.R. § 70.6(a)(3)(i)(B). If the applicable requirement contains some periodic monitoring, but that monitoring is not sufficient to assure compliance with permit terms and conditions, permitting authorities must, "[c]onsistent with paragraph (a)(3) . . . ," add monitoring "sufficient to assure compliance with the terms and conditions of the permit." 40 C.F.R. § 70.6(c)(1). Both of these monitoring rules (40 C.F.R. §§ 70.6(a)(3)(i)(A) and (B) and 70.6(c)(1)) are designed to address the statutory requirement that "[e]ach permit issued under [title V] shall set forth . . . monitoring . . . requirements to assure compliance with the permit terms and conditions." CAA section 504(c). Thus, in evaluating whether the permit contains monitoring sufficient to assure compliance under 40 CFR 70.6(c)(1), EPA believes it is appropriate to consider whether such monitoring is "sufficient to yield reliable data from the relevant time period that are representative of the source's compliance with the permit."

assure compliance with the terms and conditions of the permit. Therefore, I deny the claim seeking an order that IEPA must require the use of CEMS in the USS CAAPP permit.

### B.1. Coke Production - Coke Oven Charging, Leaks from Doors, Leaks from Lids, and Leaks from Offtakes

***Petitioner's Allegations:***

Petitioner alleges that the permit does not include periodic monitoring sufficient to assure compliance with visible emission (VE) limits found in Conditions 7.2.3-1(a) and (c), 7.2.3-2(a) and (b), 7.2.3-3(a) and (b), and 7.2.3-4(a) and (b) of the permit. Petition at 12. Petitioner states that the VE limits are based on state regulations and a state-issued permit for Coke Oven Battery B. *Id.* Petitioner further claims that Condition 7.2.14 provides monitoring methods, but does not require the permittee to monitor for compliance with the VE limits. *Id.* Petitioner notes that IEPA states in its Responsiveness Summary that "daily testing of visual emissions are required by condition 7.2.7-3(a) pursuant to 40 C.F.R. part 63, Subpart L," (sic), but claims that, because the emission limits are not based on and are not equivalent to the limits in the federal MACT regulations, IEPA's statement is unclear. *Id.*, quoting Responsiveness Summary at 27.

***EPA Response:***

IEPA did not provide an analysis to demonstrate how the monitoring requirements in the USS permit are sufficient to assure compliance with the VE limits, or are sufficient to yield reliable data from the relevant time period that is representative of compliance with the permit in either its Project Summary or its response to Petitioner's comments. In any case, as noted above, part 70 requires an analysis in the statement of basis or permit record of how the monitoring is sufficient to assure compliance with permit terms and conditions, or sufficient to yield reliable data from the relevant time period that is representative of compliance with the permit, including any augmentation of monitoring requirements where the state has found that monitoring in applicable requirements is not adequate to assure compliance. 40 CFR § 70.6(a)(3)(i)(B), 70.6(c)(1) and 70.7(a)(5). IEPA's response to Petitioner's comment simply recited the monitoring requirements in the permit and was silent on how the monitoring requirements of 40 C.F.R. part 63, subpart L are related to the emissions requirements in the permit. Therefore, I grant the petition on this issue.

### B.2. Coke Production - Combustion (Battery) Stack

***Petitioner's Allegations:***

Petitioner alleges that the permit does not include periodic monitoring sufficient to assure compliance with the PM emission limits found in Condition 7.2.3-7(a)(i) and (c) of the permit. Petition at 13. Petitioner asserts in both instances that the permit requires a single performance test one year before the renewal date of the permit, even though the PM limits require continuous compliance. *Id.* Petitioner claims that IEPA states in the Responsiveness Summary that "CEMs are generally not required for periodic monitoring." *Id.*, quoting Responsiveness Summary at 26-27. Petitioner claims IEPA's response did not provide an analysis to demonstrate how the

monitoring requirements in the USS permit are sufficient to assure compliance with the terms and conditions of the permit. Furthermore, Petitioner alleges that PM CEMs should be required because they are both available and feasible. *Id.*

***EPA Response:***

In its Responsiveness Summary, IEPA states that "Condition 7.2.7(d) of the final CAAPP addresses testing requirements for coke oven combustion stacks." Responsiveness Summary at 27. IEPA's response simply recites the monitoring requirements in the permit. IEPA did not provide in its response an analysis to demonstrate how the monitoring requirements in Condition 7.2.7(d) of the USS permit are sufficient to assure compliance with the terms and conditions of the permit or are sufficient to yield reliable data from the relevant time period that is representative of compliance with the permit. Therefore, I grant the petition on this issue.

Petitioner also asserts that CEMS be considered the means to comply with the periodic monitoring requirements of Part 70. As noted above, although CEMs may be the preferred type of monitoring in some instances, they are not always necessary to assure compliance with permit terms and conditions. Section 504(b) of the Act provides that "continuous emissions monitoring need not be required if alternative methods are available that provide sufficiently reliable and timely information for determining compliance." 42 U.S.C. § 7661c(b). *See also, In the Matter of Alliant Energy WPL - Edgewater Generating Station*, Petition Number V -2009-02) (August 17, 2010), at 11.

Petitioner has neither identified an applicable requirement that compels the use of CEMS nor demonstrated that a CEMS is the only monitoring that can assure compliance with the applicable requirements. I am ordering IEPA either to explain how the USS permit provides adequate monitoring or to modify the permit to ensure that it contains monitoring sufficient to assure compliance with the associated permit terms and conditions. Therefore, I deny the claim seeking an order that IEPA must require the use of CEMS in the USS CAAPP permit.

**B.3. Coke Production - Bypass/Bleeder Stack Flare**

***Petitioner's Allegations:***

Petitioner alleges that the permit does not include periodic monitoring sufficient to assure compliance with the VE limit found in Condition 7.2.3-8(b) of the permit. Petition at 14. Petitioner claims that, although the permit references the federal MACT regulation that specifies monitoring for visible emissions from flares, the permit does not expressly require USS to monitor flare emissions to assure compliance with the limit. *Id.* Petitioner argues that IEPA's statement in the Responsiveness Summary, that "40 CFR 63.309(h) does not specify the frequency of no visible emissions observations," is inadequate. *Id.*, quoting Responsiveness Summary at 27. Petitioner concludes by asserting that IEPA is required to add periodic monitoring requirements to the permit or provide additional information to justify the monitoring required in the permit. *Id.* at 14.

***EPA Response:***

IEPA did not explain how the monitoring requirements in the USS permit are sufficient to assure compliance with the associated permit terms and conditions. The fact that 40 C.F.R. § 63.309(h) does not specify a monitoring frequency does not end the analysis. As the permitting authority, IEPA must determine whether the monitoring included in a regulation is sufficient to assure compliance with the permit terms and conditions. If it is not, the permitting authority must supplement the monitoring. Therefore, I grant the petition on this issue.

### C. Coke Oven Gas By-Products Recovery Plant

***Petitioner's Allegations:***

Petitioner alleges that the permit's annual opacity reading requirement for the coke oven by-products flare is not frequent enough to assure compliance with the VE limit found in Condition 7.3.10(a)(i) of the permit. Petition at 14. Petitioner asserts that daily or more frequent monitoring such as the use of video monitoring is reasonable to assure compliance with visible emission limits for flares. *Id.* Petitioner further claims that IEPA's rationale for the monitoring associated with condition 7.3.10(a)(i) is unclear. *Id.* Petitioner notes that IEPA stated in its Responsiveness Summary that "[f]laring events are not frequent due to the use of this material as a fuel." *Id.*, quoting Responsiveness Summary at 28. Petitioner concludes that, to assure that monitoring requirements are sufficient, IEPA must clearly explain the frequency and duration of flaring events, and must provide additional information to justify the monitoring requirements associated with Condition 7.3.10(a)(i).

***EPA Response:***

In its Responsiveness Summary, IEPA states that "[r]egular monthly ignition system inspections… would assure that flare system operates properly. Video monitoring of flare is not needed due to established testing provisions of Condition 7.3.8(c)(vi), inspection requirements of Condition 7.3.9 and the recordkeeping requirements of Condition 7.3.11(c)(iv)(D)." Responsiveness Summary at 28. While IEPA addressed why it thought video monitoring is not needed, IEPA's response did not provide an analysis to demonstrate how the annual opacity reading or the monthly ignition system inspections are sufficient to assure compliance with the no visible emission limit or are sufficient to yield reliable data from the relevant time period that is representative of compliance with the permit. IEPA refers to the frequency of flaring events but does not provide any support for this and how it justifies an annual reading. Therefore, I grant the petition on this issue.

### D.1. Blast Furnace - Control Equipment

***Petitioner's Allegations:***

Petitioner alleges that the permit does not include periodic monitoring sufficient to assure compliance with the PM emission limit found in Condition 7.4.3-1(a)(ii)(A) of the permit. Petition at 15. Petitioner asserts that a one-time performance test during the permit term (once every 5 years) does not constitute periodic monitoring. *Id.* Petitioner further asserts that IEPA's

rationale for the monitoring requirements associated with Condition 7.4.3-1(a)(ii)(A) is inadequate. *Id.*

***EPA Response:***

In its Responsiveness Summary, IEPA states that "the monitoring and testing procedures outlined in Subsection 7.4 of the final CAAPP and the MACT standard are sufficient enough to demonstrate continuous compliance with the applicable emission standards." Responsiveness Summary at 29. IEPA's response recites the monitoring requirements and asserts that they are sufficient. IEPA's response does not provide an analysis to demonstrate how a performance test once every 5 years as required in the USS permit is sufficient to assure compliance with the terms and conditions of the permit, or is sufficient to yield reliable data from the relevant time period that is representative of compliance with the permit in either its Project Summary or its responses to Petitioner's allegations. Therefore, I grant the petition on this issue.

**D.2. Blast Furnaces – Opacity**

***Petitioner's Allegations:***

Petitioner alleges that the weekly opacity readings required in the permit are not sufficient to assure compliance with the visible emission limit found in Condition 7.4.3-1(d)(ii) of the permit. Petitioner also states that IEPA's response confuses matters as it refers to once-a-permit-term monitoring based on a MACT standard. Petitioner requests daily or more frequent opacity monitoring, including the use of video monitoring. Petition at 15.

***EPA Response:***

In addition to Condition 7.4.7-2(b)(i)(C)(1), which requires weekly opacity observations, IEPA refers in its Responsiveness Summary to once-a-permit-term monitoring in Condition 7.4.7-2(a)(ii). "[40 C.F.R. §] 63.7821(c) requires that '...For each emission unit equipped with a baghouse, you must conduct subsequent performance tests no less frequently than once during each term of your title V operating permit.' Therefore, Condition 7.4.7-2(a)(ii) of the final CAAPP correctly identifies frequency of subsequent testing. The IEPA believes that the monitoring and testing procedures outlined in Subsection 7.4 of the final CAAPP and the MACT standard are sufficient enough to demonstrate continuous compliance with the applicable emission standards." Responsiveness Summary at 29. EPA agrees it is unclear what monitoring requirements apply for purposes of the visible emission limit. Moreover, IEPA's response simply recites the monitoring requirements and concludes that they are sufficient. IEPA's response did not provide an analysis to demonstrate how the monitoring requirements in the USS permit are sufficient to assure compliance with the terms and conditions of the permit or are sufficient to yield reliable data from the relevant time period that is representative of compliance with the permit in either its Project Summary or its responses to Petitioner's comments. Therefore, I grant the petition on this issue.

**D.3 Blast Furnace - Excess Gas Flare**

*Petitioner's Allegations:*

Petitioner alleges that the annual opacity observations and monthly inspections of the flare ignition system required in the permit are not sufficient to assure compliance with the no visible emission limit found in Condition 7.4.5-4(e) of the permit, which applies on a continuous basis. Petitioner requests daily or more frequent monitoring, including the use of video monitoring. Petition at 15-16.

*EPA Response:*

In its Responsiveness Summary, IEPA states that "Condition 7.4.7-1 of the final CAAPP establishes monthly inspection requirements of the flare's ignition system. Condition 7.4.7-2(c) of the final CAAPP requires annual observations of a flare by using USEPA Method 22. Video monitoring of flare is not needed due to the inspection and testing requirements referenced above." Responsiveness Summary at 28. IEPA's response simply recites the monitoring requirements, but does not provide an analysis to demonstrate how the monitoring requirements in the USS permit are sufficient to assure compliance with the terms and conditions of the permit, or are sufficient to yield reliable data from the relevant time period that is representative of compliance with the permit in either its Project Summary or its responses to Petitioner's comments. Therefore, I grant the petition on this issue.

**D.4 Blast Furnaces – Production and Emission Limits**

Petitioner alleges that the permit does not include periodic monitoring sufficient to assure compliance with the emission limits in Conditions 7.4.6(b)-(g) for the blast furnaces and related operations. Petitioner alleges that compliance with these conditions is demonstrated through the use of iron production records and emission factors established in PSD permit 95010001. Petition at 16. Petitioner alleges that neither the title V nor the PSD permit identifies the source of the emission factors. Further, Petitioner asserts that neither the Project Summary nor the Responsiveness Summary provides evidence that the emissions factors are representative of the emissions at the USS facility. *Id.* Petitioner concludes that IEPA must provide additional information about the source of the data used to calculate the emission factors and must clearly explain how the use of the emission factors is sufficient to assure compliance with the associated emission limits. *Id.* at 17. Petitioner makes additional specific allegations for each emission limit in the sections below.

**a. Casthouse Baghouse (Furnace Tapping) Captured Emissions**

*Petitioner's Allegations:*

Petitioner alleges that the permit record does not provide a clear rationale for the monitoring requirements for the $PM_{10}$ emission limit found in Condition 7.4.6(b) of the permit as it relies on an emission factor from an unspecified source. *Id.* Petitioner further disagrees with IEPA's explanation that, in addition to the use of emission factors, testing requirements based on federal MACT regulations will be used to assure compliance with the $PM_{10}$ emission limit in Condition 7.4.6(b), stating that the testing requirements are based on federal MACT regulations

which do not apply to this permit condition. *Id.* Petitioner asserts that IEPA must provide additional information to justify this monitoring condition. *Id.*

***EPA Response:***

In its Responsiveness Summary, IEPA states that "The IEPA believes that the monitoring and testing procedures outlined in Subsection 7.4 of the final CAAPP and the MACT standard are sufficient enough to demonstrate continuous compliance with the applicable emission standards." Responsiveness Summary at 29. IEPA did not provide an analysis to demonstrate how the monitoring requirements in the USS permit are sufficient to assure compliance with the $PM_{10}$ emission limits, or are sufficient to yield reliable data from the relevant time period that is representative of compliance with the permit in either its Project Summary or its response to Petitioner's comments. IEPA's response to Petitioner's comment simply recited the monitoring requirements in the permit and was silent on how the monitoring requirements of the MACT are related to the emissions requirements in the permit.

The record for the USS permitting action does not specify the origin of the emission factors. It is not clear whether the emission factors used by IEPA are indicative of the emissions at USS's facility. IEPA has failed to provide an explanation why use of the emission factors is adequate to assure compliance. With a few exceptions, EPA does not recommend the use of emission factors to develop source-specific permit limits or to determine compliance with permit requirements. *In the Matter of Tesoro Refining and Marketing Co, Martinez, California Facility,* Petition Number IX-2004-6 (March 15, 2005) at 32. I grant the petition on the monitoring issues related to such use of emission factors. IEPA either must justify in the record why these emission factors are representative of USS's operations (i.e., representative to yield reliable data from the relevant time period representative of the sources compliance), and provide sufficient evidence to demonstrate that the emissions will not vary by a degree that would cause an exceedance of the standards, or IEPA must determine and adequately support another mechanism to assure compliance with the applicable emission limits from the underlying construction permit. Furthermore, if IEPA can adequately justify the use of emission factors as a compliance mechanism, it also should require USS to confirm the appropriateness of the emission factors such as through the use of stack testing using EPA-approved methods on a periodic basis, as operations and equipment change or deteriorate over time.

***Petitioner's Allegations:***

Petitioner alleges that the permit record does not provide a clear rationale for the monitoring requirements for the sulfur dioxide ($SO_2$) emission limit found in Condition 7.4.6(b) of the permit as it relies on an emission factor from an unspecified source. Petition at 17. Petitioner asserts that IEPA must provide additional information to justify this monitoring condition. *Id.*

***EPA Response:***

In its Responsiveness Summary, IEPA refers to the monitoring for a different unit, the iron spout baghouse. Responsiveness Summary at 29. The record does not specify the origin of

the emission factors. It is not clear whether the emission factors used by IEPA are indicative of the emissions at USS's facility. IEPA has failed to provide an explanation why use of the emission factors is adequate to assure compliance. Therefore, I grant the petition on this issue.

***Petitioner's Allegations:***

Petitioner alleges that the permit record does not provide a clear rationale for the monitoring requirements for the nitrogen oxides ($NO_x$) emission limit found in Condition 7.4.6(b) of the permit as it relies on an emission factor from an unspecified source. Petition at 18. According to Petitioner, IEPA has not provided further information on the "initial testing data" referenced in the Responsiveness Summary, making it difficult to determine whether testing is representative of $NO_x$ emissions from the casthouse baghouse. Petitioner asserts that a margin of compliance is not a sufficient basis for a determination that emissions will not change over the life of the permit. *Id.* Petitioner further claims that IEPA's rationale for the monitoring requirements associated with the $NO_x$ emission limit in Condition 7.4.6(b) is far too general. Petitioner concludes that IEPA must provide additional information to justify this monitoring condition or must revise the permit to require additional periodic monitoring. *Id.*

***EPA Response:***

In its Responsiveness Summary, IEPA states "The initial testing data indicates the actual level of NOx emissions from casthouse baghouse is almost three times lower than the allowable levels established in this condition. Therefore, application of CEMS is unnecessary. The IEPA believes that the monitoring and testing procedures outlined in Subsection 7.4 of the final CAAPP and the MACT standard are sufficient enough to demonstrate continuous compliance with the applicable emission standards." Responsiveness Summary at 30. EPA agrees that the record does not specify the origin of the emission factors. It is not clear whether the emission factors used by IEPA are indicative of the emissions at USS's facility. IEPA has failed to provide an explanation why use of the emission factors is adequate to assure compliance. Therefore, I grant the petition on this issue. Absent appropriate permit conditions limiting operations and inputs, initial testing data cannot be assumed to reflect the potential for variability in emissions. Operating conditions may change and a margin of compliance alone is not a sufficient safeguard in light of this potential for variability in operations and inputs, and consequently, emissions.

***Petitioner's Allegations:***

Petitioner alleges that the permit record does not provide a clear rationale for the monitoring requirements for the volatile organic material (VOM) emission limit found in Condition 7.4.6(b) of the permit as it relies on an emission factor from an unspecified source. Petition at 18. According to Petitioner, IEPA has not provided further information on the "initial testing data" referenced, making it difficult to determine whether testing is representative of VOM emissions under maximum operating conditions of the blast furnaces. Petitioner asserts that a margin of compliance alone is not a sufficient basis to determine that emissions will not change over the life of the permit. *Id.* Petitioner concludes that IEPA must provide additional

information to justify this monitoring condition or must revise the permit to require additional periodic monitoring. *Id.* at 18-19.

***EPA Response:***

In its Responsiveness Summary, IEPA states that "The initial testing data indicates the actual level of VOM emissions from casthouse baghouse is eight times lower than the allowable levels established in this condition. Because of such large margin of compliance, the IEPA does not support suggestions of VOM annual tests." Responsiveness Summary at 30. EPA agrees that the record does not specify the origin of the emission factors. It is not clear whether the emission factors used by IEPA are indicative of the emissions at USS's facility. IEPA has failed to provide an explanation why use of the emission factors is adequate to assure compliance. Therefore, I grant the petition on this issue.

**b. Blast Furnace Uncaptured Fugitive Emissions**

***Petitioner's Allegations:***

Petitioner alleges that the permit record does not provide a clear rationale for the monitoring requirements for the $SO_2$ emission limit found in Condition 7.4.6(c) of the permit as it relies on an emission factor from an unspecified source. Petition at 19. Petitioner asserts that IEPA must provide additional information to justify this monitoring condition. *Id.*

***EPA Response:***

In its Responsiveness Summary, IEPA states "condition 7.4.7-2(b)(i) of the final CAAPP establishes weekly visual observations of fugitive emissions released from the casthouse and supported by appropriate recordkeeping." Responsiveness Summary at 30. Condition 7.4.7-2(b)(i) of the final CAAPP refers to opacity testing. IEPA's response did not provide an analysis to demonstrate how the opacity monitoring requirements in the USS permit are sufficient to assure compliance with the uncaptured $SO_2$ emissions, or are sufficient to yield reliable data from the relevant time period that is representative of compliance with the permit in either its Project Summary or its responses to Petitioner's comments. The record also does not specify the origin of the emission factors. It is not clear whether the emission factors used by IEPA are indicative of the emissions at USS's facility. IEPA has failed to provide an explanation why use of the emission factors is adequate to assure compliance. Therefore, I grant the petition on this issue.

***Petitioner's Allegations:***

Petitioner alleges that the permit record does not provide a clear rationale for the monitoring requirements for the $NO_x$ emission limit found in Condition 7.4.6(c) of the permit as it relies on an emission factor from an unspecified source. Petition at 19. Petitioner asserts that IEPA must provide additional information to justify this monitoring condition. *Id.*

***EPA Response:***

In its Responsiveness Summary, IEPA states "condition 7.4.7-2(b)(i) of the final CAAPP establishes weekly visual observations of fugitive emissions released from the casthouse and supported by appropriate recordkeeping." Responsiveness Summary at 31. Condition 7.4.7-2(b)(i) of the final CAAPP refers to opacity testing. IEPA's response did not provide an analysis to demonstrate how the opacity monitoring requirements in the USS permit are sufficient to assure compliance with the uncaptured $NO_x$ emissions, or are sufficient to yield reliable data from the relevant time period that is representative of compliance with the permit in either its Project Summary or its responses to Petitioner's comments. The record also does not specify the origin of the emission factors. It is not clear whether the emission factors used by IEPA are indicative of the emissions at USS's facility. IEPA has failed to provide an explanation why use of the emission factors is adequate to assure compliance. Therefore, I grant the petition on this issue.

***Petitioner's Allegations:***

Petitioner alleges that the permit record does not provide a clear rationale for the monitoring requirements for the VOM emission limit found in Condition 7.4.6(c) of the permit as it relies on an emission factor from an unspecified source. Petition at 19. Petitioner asserts that IEPA must provide additional information to justify this monitoring condition. *Id.*

***EPA Response:***

In its Responsiveness Summary, IEPA states "condition 7.4.7-2(b)(i) of the final CAAPP establishes weekly visual observations of fugitive emissions released from the casthouse and supported by appropriate recordkeeping." Responsiveness Summary at 31. Condition 7.4.7-2(b)(i) of the final CAAPP refers to opacity testing. IEPA's response did not provide an analysis to demonstrate how the opacity monitoring requirements in the USS permit are sufficient to assure compliance with the uncaptured VOM emissions, or are sufficient to yield reliable data from the relevant time period that is representative of compliance with the permit in either its Project Summary or its responses to Petitioner's comments. The record also does not specify the origin of the emission factors. It is not clear whether the emission factors used by IEPA are indicative of the emissions at USS's facility. IEPA has failed to provide an explanation why use of the emission factors is adequate to assure compliance. Therefore, I grant the petition on this issue.

**c. Blast Furnace Charging Emissions**

***Petitioner's Allegations:***

Petitioner alleges that the permit record does not provide a clear rationale for the monitoring requirements for the $PM_{10}$ emission limit found in Condition 7.4.6(d) of the permit as it relies on an emission factor from an unspecified source. Petition at 19. Petitioner asserts that IEPA must provide additional information to justify this monitoring condition. *Id.*

***EPA Response:***

In its Responsiveness Summary, IEPA states that "Condition 7.4.11(f) of the final CAAPP does require [USS] to keep records of iron pellets charged to Blast Furnace. These records in conjunction with established emission factors are sufficient to establish actual emissions and to meet monitoring requirements pursuant 39.5(7)(d)(ii) of the Act. Also, iron pellet charging does not have individual emission stack and that makes testing impossible." Responsiveness Summary at 32. EPA agrees that IEPA's response did not provide an analysis to demonstrate how the monitoring requirements in the USS permit are sufficient to assure compliance with the terms and conditions of the permit, or are sufficient to yield reliable data from the relevant time period that is representative of compliance with the permit in either its Project Summary or its responses to Petitioner's comments. The record also does not specify the origin of the emission factors. It is not clear whether the emission factors used by IEPA are indicative of the emissions at USS's facility. IEPA has failed to provide an explanation why use of the emission factors is adequate to assure compliance. Therefore, I grant the petition on this issue.

**d. Slag Pits Emissions**

***Petitioner's Allegations:***

Petitioner alleges that the permit record does not provide a clear rationale for the monitoring requirements for the $PM_{10}$ emission limit found in Condition 7.4.6(e) of the permit as it relies on an emission factor from an unspecified source. Petition at 20. Petitioner asserts that IEPA must provide additional information to justify this monitoring condition. *Id.*

***EPA Response:***

In its Responsiveness Summary, IEPA states that "Condition 7.4.11(g) of the final CAAPP does require [USS] to keep records of slag processed. These records in conjunction with established emission factors are sufficient to establish actual emissions and to meet monitoring requirements pursuant 39.5(7)(d)(ii) of the [Illinois Environmental Protection] Act. Also, slag pits do not have emission stack and that makes testing impossible." Responsiveness Summary at 32. EPA agrees that IEPA's response did not provide an analysis to demonstrate how the monitoring requirements in the USS permit are sufficient to assure compliance with the terms and conditions of the permit, or are sufficient to yield reliable data from the relevant time period that is representative of compliance with the permit in either its Project Summary or its responses to Petitioner's comments. The record also does not specify the origin of the emission factors. It is not clear whether the emission factors used by IEPA are indicative of the emissions at USS's facility. IEPA has failed to provide an explanation why use of the emission factors is adequate to assure compliance. Therefore, I grant the petition on this issue.

***Petitioner's Allegations:***

Petitioner alleges that the permit record does not provide a clear rationale for the monitoring requirements for the $SO_2$ emission limit found in Condition 7.4.6(e) of the permit as

it relies on an emission factor from an unspecified source. Petition at 20. Petitioner asserts that IEPA must provide additional information to justify this monitoring condition. *Id.*

***EPA Response:***

In its Responsiveness Summary, IEPA states "condition 7.4.7-2(b)(i) of the final CAAPP establishes weekly visual observations of fugitive emissions released from the casthouse and supported by appropriate recordkeeping." Responsiveness Summary at 31. Condition 7.4.7-2(b)(i) of the final CAAPP refers to opacity testing for the casthouse. Neither IEPA's Project Summary nor its response to Petitioner's comments provided an analysis to demonstrate how the opacity monitoring requirements in the USS permit are sufficient to assure compliance with the uncaptured $SO_2$ emissions for the slag pits, or are sufficient to yield reliable data from the relevant time period that is representative of compliance with the permit. The record also does not specify the origin of the emission factors. It is not clear whether the emission factors used by IEPA are indicative of the emissions at USS's facility. IEPA has failed to provide an explanation why use of the emission factors is adequate to assure compliance. Therefore, I grant the petition on this issue.

**e. Iron Spout Baghouse Captured Emissions**

***Petitioner's Allegations:***

Petitioner alleges that the permit record does not provide a clear rationale for the monitoring requirements for the $PM_{10}$ emission limit found in Condition 7.4.6(f) of the permit as it relies on an emission factor from an unspecified source. Petition at 20. Petitioner also claims that the Responsiveness Summary is confusing regarding this monitoring requirement because it suggests that testing requirements from federal MACT requirements will be used to assure compliance with the $PM_{10}$ emissions limit in Condition 7.4.6(e). *Id.* Petitioner asserts that IEPA must provide additional information to justify this monitoring condition. *Id.*

***EPA Response:***

In its Responsiveness Summary, IEPA states that the "Condition 7.4.9(a)(ii) of the final CAAPP clearly identifies that each baghouse is equipped with a bag leak detection system. IEPA believes that the monitoring and testing procedures outlined in Subsection 7.4 of the final CAAPP and the MACT standard are sufficient enough to demonstrate continuous compliance with the applicable emission standards." Responsiveness Summary at 32. IEPA did not provide an analysis to demonstrate how the monitoring requirements in the USS permit are sufficient to assure compliance with the $PM_{10}$ emissions limits, or are sufficient to yield reliable data from the relevant time period that is representative of compliance with the permit in either its Project Summary or its response to Petitioner's comments. IEPA's response to Petitioner's comment simply recited the monitoring requirements in the permit and was silent on how the monitoring requirements of the MACT are related to the emissions requirements in the permit.

Further, the permitting record does not specify the origin of the emission factors. It is not clear whether the emission factors used by IEPA are indicative of the emissions at USS's facility.

IEPA has failed to provide an explanation why use of the emission factors is adequate to assure compliance. Therefore, I grant the petition on this issue.

***Petitioner's Allegations:***

Petitioner alleges that the permit record does not provide a clear rationale for the monitoring requirements for the $SO_2$ emission limit found in Condition 7.4.6(f) of the permit as it relies on an emission factor from an unspecified source. Petition at 20. Petitioner asserts that IEPA must provide additional information to justify this monitoring condition. *Id.* at 20-21.

***EPA Response:***

In its Responsiveness Summary, IEPA refers to the monitoring for a different unit, the casthouse baghouse. *See* Responsiveness Summary at 31. IEPA's response did not provide an analysis to demonstrate how the monitoring requirements in the USS permit are sufficient to assure compliance with the terms and conditions of the permit, or are sufficient to yield reliable data from the relevant time period that is representative of compliance with the permit in either its Project Summary or its responses to Petitioner's comments. The record also does not specify the origin of the emission factors. It is not clear whether the emission factors used by IEPA are indicative of the emissions at USS's facility. IEPA has failed to provide an explanation why use of the emission factors is adequate to assure compliance. Therefore, I grant the petition on this issue.

**f. Iron Pellet Screen Emissions**

***Petitioner's Allegations:***

Petitioner alleges that the permit record does not provide a clear rationale for the monitoring requirements for the $PM_{10}$ emission limit found in Condition 7.4.6(g) of the permit as it relies on an emission factor from an unspecified source. Petition at 21. Petitioner asserts that IEPA must provide additional information to justify this monitoring condition. *Id.*

***EPA Response:***

In its Responsiveness Summary, IEPA states that "Condition 7.4.11(h) of the final CAAPP does require [USS] to keep records of iron pellets screened. These records in conjunction with the established emission factors are sufficient to establish actual emissions and to meet monitoring requirements pursuant 39.5(7)(d)(ii) of the Act. Also, pellet screening does not have individual emission stack and that makes testing impossible." Responsiveness Summary at 33. EPA agrees that IEPA's response did not provide an analysis to demonstrate how the monitoring requirements in the USS permit are sufficient to assure compliance with the terms and conditions of the permit, or are sufficient to yield reliable data from the relevant time period that is representative of compliance with the permit in either its Project Summary or its responses to Petitioner's comments. The record also does not specify the origin of the emission factors. It is not clear whether the emission factors used by IEPA are indicative of the emissions

at USS's facility. IEPA has failed to provide an explanation why use of the emission factors is adequate to assure compliance. Therefore, I grant the petition on this issue.

### E.1. Basic Oxygen Furnaces (BOF) – Opacity

***Petitioner's Allegations:***

Petitioner alleges that the permit record does not provide a clear rationale for the frequency of the monitoring requirements for the opacity limit found in Condition 7.5.3-1(c)(iv) of the permit. Condition 7.5.3-1(c)(iv) sets an opacity limit of 20 percent based on 3 minute averages for any secondary emissions that exit any opening in the basic oxygen process furnace (BOPF) shop or any other building housing the BOPF or BOPF shop operation. Condition 7.5.7-2(d) requires weekly opacity observations for uncaptured roof monitor emissions unless a previous observation measures opacity of 20 percent or more. If a previous observation measures opacity of 20 percent or more, daily monitoring is required until five consecutive observations are less than 20 percent. Petition at 21. Petitioner alleges that daily observations using EPA Method 9 are supported by EPA's April 18, 1997, *Region 7 Policy on Periodic Monitoring for Opacity* (Region 7 guidance) for title V permits, and that the permit must be revised to require at least daily opacity observations to assure compliance with the limit. Petitioner asserts that IEPA must provide additional information to justify the monitoring frequency given in the permit.

***EPA Response:***

In its Responsiveness Summary, IEPA states that "Condition 7.5.7-2(d) of the final CAAPP identifies frequency (weekly and daily) of roof monitor opacity visual observations." Responsiveness Summary at 37. EPA agrees that IEPA's response did not provide an analysis to demonstrate how the frequency of the monitoring requirements in the USS permit is sufficient to assure compliance with the terms and conditions of the permit, or are sufficient to yield reliable data from the relevant time period that is representative of compliance with the permit in either its Project Summary or its responses to Petitioner's comments. Therefore, I grant the petition on this issue. However, I note that the Region 7 guidance, which recommends daily observations for opacity monitoring, provides guidance to permitting authorities, but does not contain any requirements; therefore, IEPA does not have to use the monitoring methods discussed in the Region 7 guidance. Regardless of the monitoring method it includes in the USS permit, IEPA must fully explain the bases for and sufficiency of its choice of monitoring.

***Petitioner's Allegations:***

Petitioner alleges that the permit lacks periodic monitoring requirements sufficient to assure compliance with the opacity limit found in Condition 7.5.3-1(f) of the permit. Petition at 21. Petitioner asserts that IEPA must provide additional information to justify this monitoring condition. *Id.*

***EPA Response:***

In its Responsiveness Summary, IEPA states that "MACT presented in Subpart FFFFF does not require visual observation frequencies other than those established in the permit. Condition 7.5.7-1(c)(1) of the final CAAPP identifies frequency (weekly) of opacity readings from BOF shop openings. This is sufficient to yield compliance with Condition7.5.3-1(f)." Responsiveness Summary at 37. IEPA did not provide an analysis to demonstrate how the monitoring requirements in the USS permit are sufficient to assure compliance with the visible emissions limit in 7.5.3-1(f), or are sufficient to yield reliable data from the relevant time period that is representative of compliance with the permit in either its Project Summary or its response to Petitioner's comments. IEPA's response to Petitioner's comment simply recited the monitoring requirements in the permit and was silent on how the monitoring requirements of 40 C.F.R. part 63, subpart FFFFF are related to the emissions requirements in the permit. Therefore, I grant the petition on this issue.

### E.2. Basic Oxygen Furnaces – Production and Emission Limits

Petitioner alleges that the permit does not include periodic monitoring sufficient to assure compliance with the emission limits in conditions 7.5.6(c)-(i) for the basic oxygen furnaces and related operations. Petition at 22. Petitioner alleges that compliance with these conditions is demonstrated through the use of steel production records and emission factors established in PSD permit 95010001. *Id.* Petitioner alleges that neither the title V nor the PSD permit identifies the source of the emission factors. Further, Petitioner asserts that neither the Project Summary nor the Responsiveness Summary provides evidence that the emissions factors are representative of the emissions at the USS facility. *Id.* Petitioner concludes that IEPA must provide additional information about the source of the data used to calculate the emission factors and must clearly explain how the use of the emission factors is sufficient to assure compliance with the associated emission limits. *Id.* Petitioner raises specific issues for each emission limit, and they are discussed in the sections below.

#### a. BOF Electrostatic Precipitator (ESP) Stack Emissions

***Petitioner's Allegations:***

Petitioner alleges that the permit record does not provide a clear rationale for the monitoring requirements for the $NO_x$ limit found in Condition 7.5.6(c) of the permit. Condition 7.5.6(c) sets a NOx emission limit of 69.63 tpy for the BOF ESP stack. Petitioner alleges that both the Project Summary and the Responsiveness Summary fail to include information necessary to justify the use of the $NO_x$ emission factor to assure compliance with the limit. According to IEPA, the emission factor is based on the testing of $NO_x$ emissions performed by the source. However, IEPA does not provide information on the testing data used to develop the emission factors, other than the fact that testing occurred. *Id.* Petitioner asserts that IEPA must provide additional information to justify these monitoring conditions. *Id.*

***EPA Response:***

In its Responsiveness Summary, IEPA states that "$NO_x$ emission limits and emission factor had been established in the production increase construction permit 95010001 and based

on the testing of $NO_x$ emissions performed by the source. This data along with the steel production records are sufficient to meet monitoring requirements pursuant 39.5(7)(d)(ii) of the Act." Responsiveness Summary at 33. However, IEPA has not made clear how the emission factors are indicative of the emissions at USS's facility, since it has failed to include in either the Responsiveness Summary or the permit record specific information on the testing of NOx emissions or references to the tests performed. IEPA has failed to explain how the use of the emission factors in conjunction with the production records is adequate to assure compliance. Therefore, I grant the petition on this issue.

***Petitioner's Allegations:***

Petitioner alleges that the permit record does not provide a clear rationale for the monitoring requirements for the VOM limit found in Condition 7.5.6(c) of the permit. Condition 7.5.6(c) sets a VOM emission limit of 10.74 tpy for the BOF ESP stack. Petitioner alleges that both the Project Summary and the Responsiveness Summary fail to include information necessary to justify the use of the VOM emission factor to assure compliance with the limit. Petition at 22-23. According to IEPA, the emission factor is based on the testing of VOM emissions performed by the source. However, IEPA does not provide information on the testing data used to develop the emission factors, other than the fact that testing occurred. A single stack test cannot reflect the variability in emissions throughout the range of operating conditions of the blast furnaces or the potential for emissions to change over time. Petitioner asserts that IEPA must provide additional information to justify these monitoring conditions. *Id.*

***EPA Response:***

In its Responsiveness Summary, IEPA states that "VOM emission limits and emission factor had been established in the production increase construction permit 95010001 and based on the testing of VOM emissions performed by the source. This along with the steel production records are sufficient to meet monitoring requirements pursuant 39.5(7)(d)(ii) of the Act. 35 IAC 219.301 regulates organic photochemical reactive materials (mostly solvents) and/or organic materials having odor nuisance. Organic solvents are not used at BOF and no odor problems directly attributed to BOF have been adjudicated or confirmed." Responsiveness Summary at 34. However, IEPA has not made clear in the permitting record how the emission factors are indicative of the emissions at USS's facility, since it has failed to include in either the Responsiveness Summary or the permit record specific information on the testing of NOx emissions or references to the tests performed. IEPA has failed to explain how the use of the emission factors in conjunction with the production records is adequate to assure compliance. Therefore, I grant the petition on this issue.

***Petitioner's Allegations:***

Petitioner alleges that the permit record does not provide a clear rationale for the monitoring requirements for the carbon monoxide (CO) limit found in Condition 7.5.6(c) of the permit, stating that both the Project Summary and the Responsiveness Summary fail to include information necessary to justify the use of the CO emission factor to assure compliance with the limit. According to IEPA, the emission factor is based on the testing of CO emissions performed

by the source and has a margin of compliance of ten times the actual emissions measured during a stack test. However, IEPA does not provide information on the testing data used to develop the emission factors, other than the fact that testing occurred. Petition at 23. Petitioner asserts that IEPA must provide additional information to justify these monitoring conditions. *Id.*

***EPA Response:***

In its Responsiveness Summary, IEPA states that "CO emission limit and emission factor had been established in the production increase construction permit 95010001 and based on the testing of CO emissions performed by the source (actual stack test results conducted in October 2006 demonstrate CO emission 10 times lower than established 95010001 permit). All these, along with the steel production records, are sufficient to meet monitoring requirements pursuant 39.5(7)(d)(ii) of the Act." Responsiveness Summary at 34. However, IEPA has not made clear in the permitting record how the emission factors are indicative of the emissions at USS's facility, since it has failed to include in either the Responsiveness Summary or the permit record specific information on the testing of CO emissions or references to the tests performed. IEPA has failed to explain how the use of the emission factors in conjunction with the production records is adequate to assure compliance. In addition, although IEPA states that there is a large margin of compliance (stating actual emissions are ten times lower than the permit limit), there is no information in either the Responsiveness Summary or the permit record which addresses the variability in emissions. Therefore, I grant the petition on this issue.

***Petitioner's Allegations:***

Petitioner alleges that the permit record does not provide a clear rationale for the monitoring requirements for the lead limit found in Condition 7.5.6(c) of the permit, stating that both the Project Summary and the Responsiveness Summary fail to include information necessary to justify the use of the lead emission factor to assure compliance with the limit. Furthermore, Petitioner is concerned that the emissions limit is much higher than necessary given the emission factor cited by the permit. Petition at 23. Petitioner asserts that IEPA must provide additional information to justify these monitoring conditions. *Id.*

***EPA Response:***

In its Responsiveness Summary, IEPA states that "The most significant source of lead emissions from BOF shop is a BOF ESP stack (see Condition 7.5.6(c)). The initial testing data indicates the actual level of lead emissions from ESP stack is around 3.5% of the allowable levels established in this condition." Responsiveness Summary at 35. However, IEPA does not make clear in the permitting record how the emission factors are indicative of the emissions at USS's facility or how the use of the emission factors in conjunction with the production records is adequate to assure compliance. IEPA has failed to provide an explanation why use of the emission factors is adequate to assure compliance. Therefore, I grant the petition on this issue.

**b. BOF Roof Monitor Emissions**

***Petitioner's Allegations:***

Petitioner alleges that the permit record does not provide a clear rationale for the monitoring requirements for the lead limit found in Condition 7.5.6(d) of the permit as it relies on an emission factor from an unspecified source. Although IEPA responds that there is a generous margin of compliance between actual testing emissions data and the emissions limit given in the permit, Petitioner alleges that IEPA has provided no further information to explain the source of these conservative estimates and how they are sufficient to assure compliance with the limit. Petition at 24. Petitioner asserts that IEPA must provide additional information to justify these monitoring conditions. *Id.*

***EPA Response:***

In its Responsiveness Summary, IEPA states that its limits are "based on conservative estimates whereas the actual emissions still maintain a generous margin of compliance." Responsiveness Summary at 35. The record does not specify the origin of the emission factors. It is not clear whether the emission factors used by IEPA are indicative of the emissions at USS's facility. IEPA has failed to provide the source of the emission factors and explain how the use of the emission factors in conjunction with production records is adequate to assure compliance. IEPA must also explain in the record how the margin of compliance is adequate, and that variability in emissions will not result in an exceedance of the emission limits. Therefore, I grant the petition on this issue.

**c. Desulfurization and Reladling (Hot Metal Transfer) Emissions**

***Petitioner's Allegations:***

Petitioner alleges that the permit record does not provide a clear rationale for the monitoring requirements for the VOM limit found in Condition 7.5.6(e) of the permit, stating that both the Project Summary and the Responsiveness Summary fail to include information necessary to justify the use of the VOM emission factor to assure compliance with the limit. Petition at 24. Petitioner alleges that, although IEPA claims that its emission limit is based on engineering estimates, it does not explain what engineering estimates were used to develop the emission limit and how those estimates are representative of desulfurization and reladling emissions at USS's facility. Petitioner asserts that IEPA must provide additional information to justify these monitoring conditions. *Id.*

***EPA Response:***

In its Responsiveness Summary, IEPA states that "VOM emission limits and emission factor had been established in the production increase construction permit 95010001 and based on the testing of VOM emissions performed by the source. This along with the steel production records are sufficient to meet monitoring requirements pursuant 39.5(7)(d)(ii) of the Act." Responsiveness Summary at 34. It is not clear whether the emission factors used by IEPA are indicative of the emissions at USS's facility. IEPA has failed to provide the source of the emission factors or engineering estimates and explain how the use of the emission factors in

conjunction with production records is adequate to assure compliance. Therefore, I grant the petition on this issue.

***Petitioner's Allegations:***

Condition 7.5.6(e) sets a lead emission limit of 0.09 tpy for desulfurization and reladling (hot metal transfer) emissions. Petitioner alleges that IEPA has not provided a clear rationale for the monitoring requirements associated with this limit as it relies on an emission factor from an unspecified source. The Responsiveness Summary states that the limit is "based on conservative estimates where as the actual emissions still maintain a generous margin of compliance."However, Petitioner alleges that IEPA has provided no further information to explain the source of these conservative estimates and how they are sufficient to assure compliance with the limit. Petitioner asserts that IEPA must provide additional information to justify the monitoring requirements associated with this condition. Petition at 24. Petitioner asserts that if IEPA cannot provide sufficient justification, the permit must be revised to require additional periodic monitoring, such as an annual stack test, to assure compliance with the lead limit. *Id.*

***EPA Response:***

In its Responsiveness Summary, IEPA states that "All other much smaller limits for lead emissions listed by commenter are based on conservative estimates where as the actual emissions still maintain a generous margin of compliance." Responsiveness Summary at 35.

In the case of the USS permit action, the record does not specify the origin of the emission factors. It is not clear whether the emission factors used by IEPA are indicative of the emissions at USS's facility. IEPA has failed to provide the source of the emission factors and an explanation of why the use of the emission factors is adequate to assure compliance. IEPA must also explain in the record how the margin of compliance is adequate, and that variability in emissions will not result in an exceedance of the emission limits. Therefore, I grant the petition on this issue.

**d. BOF Additive System Emissions**

***Petitioner's Allegations:***

Petitioner alleges that the permit record does not provide a clear rationale for the monitoring requirements for the $PM_{10}$ limit found in Condition 7.5.6(f) of the permit, stating that both the Project Summary and the Responsiveness Summary fail to include information necessary to justify the use of the emission factor to assure compliance with the limit. Petition at 25. Petitioner asserts that IEPA must provide additional information to justify these monitoring conditions. *Id.*

***EPA Response:***

In its Responsiveness Summary, IEPA states that "The quantity of PM10 emissions from the BOF Additive system controlled by a hopper baghouse when compared to the BOF primary operations is minor. PM10 emission factors, along with the steel production records, are sufficient to meet monitoring requirements pursuant 39.5(7)(d)(ii) of the Act. Coupled with inspection requirements, the likelihood of exceedance is minimal." Responsiveness Summary at 36. The record does not specify the origin of the emission factors. It is not clear whether the emission factors used by IEPA are indicative of the emissions at USS's facility. IEPA has also failed to explain how the use of the emission factors in conjunction with production records is adequate to assure compliance. Therefore, I grant the petition on this issue.

**e. Flux Conveyor, Transfer Pits, and Binfloor Emissions**

***Petitioner's Allegations:***

Petitioner alleges that the permit record does not provide a clear rationale for the monitoring requirements for the $PM_{10}$ limit found in Condition 7.5.6(g) of the permit, stating that both the Project Summary and the Responsiveness Summary fail to include information necessary to justify the use of the emission factor to assure compliance with the limit. Petition at 25. Petitioner asserts that IEPA must provide additional information to justify these monitoring conditions. *Id.*

***EPA Response:***

In its Responsiveness Summary, IEPA states that "PM10 emission factors, along with the steel production records, are sufficient to meet monitoring requirements pursuant 39.5(7)(d)(ii) of the Act. Coupled with inspection requirements, the likelihood of exceedance is minimal." Responsiveness Summary at 36. The record does not specify the origin of the emission factors. It is not clear whether the emission factors used by IEPA are indicative of the emissions at USS's facility. IEPA has also failed to explain how the use of the emission factors in conjunction with production records is adequate to assure compliance. Therefore, I grant the petition on this issue.

**f. Emissions from the Argon Stirring Station and Material Handling Tripper**

***Petitioner's Allegations:***

Petitioner alleges that the permit record does not provide a clear rationale for the monitoring requirements for the $PM_{10}$ limit found in Condition 7.5.6(i) of the permit, stating that both the Project Summary and the Responsiveness Summary fail to include information necessary to justify the use of the emission factor to assure compliance with the limit. Petition at 25. Petitioner asserts that IEPA must provide additional information to justify these monitoring conditions. *Id.*

***EPA Response:***

In its Responsiveness Summary, IEPA states that "PM10 emission factors, along with the steel production records, are sufficient to meet monitoring requirements pursuant 39.5(7)(d)(ii)

of the Act. Coupled with inspection requirements, the likelihood of exceedance is minimal." Responsiveness Summary at 36. The record does not specify the origin of the emission factors. It is not clear whether the emission factors used by IEPA are indicative of the emissions at USS's facility. IEPA has also failed to explain how the use of the emission factors in conjunction with production records is adequate to assure compliance. Therefore, I grant the petition on this issue.

### F.1. Continuous Casting - Opacity

***Petitioner's Allegations:***

Petitioner alleges that the permit record does not provide a clear rationale for the monitoring requirements for the five percent opacity limit for the continuous caster spray chambers or continuous casting operations set in Condition 7.6.3-1(b)(ii) of the permit. Petition at 25. According to Petitioner, the USS permit requires weekly opacity observations for uncaptured roof monitor emissions, or daily observations if a previous observation measured five percent opacity or more, until five consecutive readings measure less than five percent opacity. *Id.* Petitioner asserts that IEPA has not provided a rationale that demonstrates that this monitoring is "sufficient to yield reliable data from the relevant time period that are representative of the source's compliance with the permit." *Id.* Petitioner concludes that IEPA must revise the permit to require at least daily opacity observations to assure compliance with the opacity limit. *Id.*

***EPA Response:***

In its Responsiveness Summary, IEPA states that "Changes have been made. Condition 7.6.8-1(c)(i) of the final CAAPP identifies frequency (weekly and daily) of opacity reading from continuous casting operations." Responsiveness Summary at 38. In addition, IEPA refers to previous responses in which it contends that there is no stack in which to install a monitor or to perform a stack test. *Id.* Although IEPA addressed why it believed a continuous opacity monitor is not necessary, IEPA's response did not provide an analysis to demonstrate how the weekly (and potentially daily) opacity observations are adequate to assure compliance with the five percent opacity limit, or are sufficient to yield reliable data from the relevant time period that is representative of compliance with the permit in either its Project Summary or its responses to Petitioner's comments. IEPA refers to the frequency of the opacity readings from continuous casting operations, but does not provide any support for how it justifies the weekly (or daily) readings. Therefore, I grant the petition on this issue.

### F.2. Continuous Casting - Production and Emission Limits

***Petitioner's Allegations:***

Petitioner alleges that the permit does not include periodic monitoring sufficient to assure compliance with the $PM_{10}$ and $NO_x$ emission limits in Conditions 7.6.7(a)-(e) for the continuous casting and related operations. Petitioner alleges that compliance with this condition is demonstrated through the use of steel production records and emission factors established in PSD permit 95010001. Petition at 25. Petitioner alleges that neither the title V nor the PSD

permit identifies the source of the emission factors. Further, Petitioner asserts that neither the Project Summary nor the Responsiveness Summary provides evidence that the emissions factors are representative of the emissions at USS's facility. *Id.* at 25-26. Petitioner concludes that IEPA must provide additional information about the source of the data used to calculate the emission factors and must clearly explain how the use of the emission factors is sufficient to assure compliance with the associated emission limits. *Id.* at 26.

***EPA Response:***

In its Responsiveness Summary regarding Condition 7.6.7(b), IEPA asserts that "No changes were made. There is no stack for caster molds with which to install a monitor and/or perform a stack test. Emission factors and recordkeeping requirements are sufficient to yield compliance with Condition 7.6.7(b)." For Conditions 7.6.7(a-e), IEPA responds, "No changes were made. Number of operations from above do not have individual stacks and emissions associated with those units are uncaptured and/or not controlled. Emission factors, recordkeeping requirements and opacity reading are sufficient to yield compliance with different emission limits of Condition 7.6.7." Responsiveness Summary at 38.

The permit record does not specify the origin of the emission factors. It is not clear whether the emission factors used by IEPA are indicative of the emissions at USS's facility. IEPA has also failed to explain how the use of the emission factors in conjunction with production records is adequate to assure compliance. Therefore, I grant the petition on this issue.

### G.1. Hot Strip Mill - Slab Reheat Furnaces

***Petitioner's Allegations:***

Petitioner alleges the permit does not include periodic monitoring sufficient to assure compliance with the $PM_{10}$ limit in Condition 7.7.3-1. Petition at 26. The requirement to test once in five years at the time of renewal of the title V permit for compliance with this condition does not constitute period monitoring and is not "sufficient to yield reliable data from the relevant time period that are representative of the source's compliance with the permit." *Id.* Petitioner concludes that, because USS must comply with the PM limit on a continuous basis, the permit must require additional periodic monitoring such as the use of a PM CEMS to assure compliance with the limit. *Id.*

***EPA Response:***

In its Responsiveness Summary, IEPA states that "Changes have been made. Condition 7.7.8(d) of the final CAAPP establishes frequency of testing PM 10 emissions (once in five years at the time of CAAPP renewal) from slab reheat furnaces. Also, PM CEM's do not measure PM10 directly." Responsiveness Summary at 39. Although IEPA addresses why it believes a CEMS is not necessary, IEPA's response did not provide an analysis to demonstrate how the testing once every five years is adequate to assure compliance with the $PM_{10}$ limit, or is sufficient to yield reliable data from the relevant time period that is representative of compliance with the permit in either its Project Summary or its responses to Petitioner's comments. IEPA

refers to the frequency of the $PM_{10}$ readings from the hot strip mill slab reheat furnace operations, but does not provide any support for this or how it justifies the testing frequency of once every five years. Therefore, I grant the petition on this issue.

Petitioner also suggests that CEMS be considered the means to comply with the periodic monitoring requirements of part 70. Although CEMS may be the preferred type of monitoring in some instances, they are not always necessary to assure compliance with applicable requirements. Section 504(b) of the Act provides that "continuous emissions monitoring need not be required if alternative methods are available that provide sufficiently reliable and timely information for determining compliance." 42 U.S.C. § 7661c(b). *See also, In the Matter of Alliant Energy WPL - Edgewater Generating Station*, Petition Number V -2009-02) (August 17, 2010), at 11.

Petitioner has neither identified an applicable requirement that compels the use of CEMS nor demonstrated that a CEMS is the only monitoring that can assure compliance with the applicable requirements. I am ordering IEPA either to explain how the USS permit provides adequate monitoring or to modify the permit to ensure that it contains monitoring sufficient to assure compliance with the applicable requirements. Therefore, I deny the claim in the petition seeking an order that IEPA must require the use of CEMS in the USS CAAPP permit.

### G.2. Hot Strip Mill - Production and Emission Limits

***Petitioner's Allegations:***

Petitioner asserts that the permit does not include periodic monitoring sufficient to assure compliance with the $PM_{10}$ emission limits found in Condition 7.7.7(b) of the permit. Petition at 26. Petitioner claims that, although Condition 7.7.7(b) requires compliance with a maximum hourly heat input limit, Condition 7.7.10(b) requires only that USS keep a monthly log of fuel usage. *Id.* at 26-27. Petitioner asserts that the permit must contain an hourly fuel usage recordkeeping requirement.

***EPA Response:***

In its Responsiveness Summary, IEPA states that "Condition 7.7.7(b) of the final CAAPP was revised in order to remove obsolete total heat input of all reheat slab furnaces (1915 million BTU per hour). Current total maximum heat input is 1/3 lower than that limit." Responsiveness Summary at 39. IEPA concedes that the previous limit was obsolete. However, its response did not provide an analysis to demonstrate how the new heat input limit is adequate to assure compliance with the $PM_{10}$ limit, nor explain why the monthly fuel log is sufficient to assure compliance with the permit terms or yield reliable data from the relevant time period that is representative of compliance with the permit in either its Project Summary or its responses to Petitioner's comments. Therefore, I grant the petition on this issue.

### H. Finishing Operations

***Petitioner's Allegations:***

Petitioner claims that the permit does not include periodic monitoring sufficient to assure compliance with the hydrochloride (HCl) limits contained in Condition 7.8.5(a) of the permit. The petitioner states that it is unclear why the USS permit provides for an alternative testing schedule in Condition 7.8.8(a)(iii), which requires HCl performance testing "either annually or according to an alternative schedule that is approved by the applicable permitting authority, but no less frequently than every 2 ½ years or twice per Title V permit term." Petition at 27. Petitioner asserts that, if the permitting authority approved an alternate testing schedule, as allowed by Condition 7.8.8(a)(iii), the public would not know what testing frequency was required. *Id.* Petitioner concludes that the permit must be revised to require HCl performance testing on at least an annual basis. *Id.*

***EPA Response:***

In its Responsiveness Summary, IEPA states that "Changes have been made. Condition 7.8.8(1) and (b) of the final CAAPP adopts a 2.5 year interval between the tests required by 40 CFR 63.1161 and 63.1162. This schedule is in line with an option established by 63.1162(a)(1). The IEPA retains the rights to request more frequent tests, if needed." Responsiveness Summary at 39. Although IEPA refers to the underlying applicable requirement option, it did not provide an analysis to demonstrate how the new time interval is adequate to assure compliance with the HCl limit, nor explain why the monitoring is sufficient to yield reliable data from the relevant time period that is representative of compliance with the permit in either its Project Summary or its responses to Petitioner's comments. Therefore, I grant the petition on this issue.

### I.1. Boilers - $PM_{10}$ Emission Limit

***Petitioner's Allegation:***

Petitioner claims the permit does not include periodic monitoring sufficient to assure compliance with the $PM_{10}$ emission limit for the boilers in Condition 7.10.3(b)(ii). Petition at 27. Petitioner states that the emission limit must be met on a continuous basis but that the permit only requires performance testing once every five years. Petitioner argues this one-time test does not constitute periodic monitoring and is not sufficient to assure compliance. Petitioner argues the permit must be revised to require additional periodic monitoring, such as the use of a PM CEMS. *Id.*

***EPA Response:***

In its Responsiveness Summary, IEPA states: "This regulation [40 C.F.R. § 63.1162] will never become applicable because the boilers are only allowed to burn gaseous fuels .... This was done to limit the requirements associated with case-by-case determination." IEPA's response did not provide an analysis demonstrating how performance testing once every five years is sufficient to assure compliance with a limit that applies on a continuous basis. IEPA also states that the boilers will only be allowed to burn gaseous fuels. The intent of this sentence is unclear. It appears IEPA is asserting that burning of gaseous fuels only will result in $PM_{10}$ emissions that are below the limit, but IEPA has not provided any support for such a conclusion. It is also unclear why IEPA believes 40 C.F.R. § 63.1162 is not applicable if the boilers are limited to burning gaseous fuel. Therefore, I grant the petition on this issue.

Petitioner also concludes that CEMS be considered the means to comply with the periodic monitoring requirements of part 70. Although CEMS may be the preferred type of monitoring in some instances, they are not always necessary to assure compliance with applicable requirements. Section 504(b) of the Act, 42 U.S.C. § 7661c(b), provides that "continuous emissions monitoring need not be required if alternative methods are available that provide sufficiently reliable and timely information for determining compliance." 42 U.S.C. § 7661c(b). *See also, In the Matter of Alliant Energy WPL - Edgewater Generating Station*, Petition Number V -2009-02 at 11 (August 17, 2010). Petitioner has neither identified an applicable requirement that compels the use of CEMS nor demonstrated that a CEM is the only monitoring method that can assure compliance with the applicable requirements. I am ordering IEPA either to explain how the USS permit provides adequate monitoring or to modify the permit to ensure that it contains monitoring sufficient to assure compliance with the applicable requirements. Therefore, I deny the claim in the petition seeking an order that IEPA must require the use of CEMS in the USS CAAPP permit.

### I.2 Boilers - CO Emission Limit

***Petitioner's Allegation:***

Petitioner claims the permit lacks periodic monitoring sufficient to assure compliance with the CO emission limit for the affected boilers in Condition 7.10.3(e). Petition at 27. Petitioner claims IEPA has not provided a clear rationale supporting the monitoring requirements associated with the limit. *Id.*

***EPA Response:***

In its Responsiveness Summary, IEPA refers to a "case-by-case determination permit that requires a CO CEMS and some testing as well." Responsiveness Summary at 40. The permit to which IEPA refers is a permit which it is preparing pursuant to section112(g) of the Act, 42 U.S.C. § 7412(g). However, IEPA has yet to issue this permit; therefore, the terms of the permit are not effective. It does not appear that IEPA has included any of the terms of this draft section 112(g) permit in the CAAPP permit. I grant the petition on this issue. IEPA must explain what monitoring is required by the CAAPP permit, and how the monitoring required by the permit is sufficient to assure compliance with the permit condition or yields reliable data from the relevant time period that are representative of the source's compliance with the permit.

### J. Internal Combustion Engines

***Petitioner's Allegation:***

Petitioner claims that the permit requires USS to demonstrate compliance with Condition 7.11.7(b) for PM, CO, $NO_x$, and $SO_2$ emission limits for the emergency generator through the use of emergency generator operation records and emission factors identified in the permit. Petition at 28. Petitioner notes the USS permit indicates the emission factors were established in permit 000600003, but that neither of the permits, nor the Responsiveness Summary, identifies the source of the emission factors. Petitioner argues that the use of emission factors from unknown sources cannot be assumed to assure compliance with emission limits. Petitioner asserts that IEPA must provide additional information to justify the monitoring requirements. *Id.*

*EPA Response:*

In its Responsiveness Summary, IEPA states that the permit "requires a stack testing of emergency generator if the total operation exceeds 500 hr/yr .... Under normal/actual operation scenario, this emergency generator is used only several hours per day." Responsiveness Summary at 41. IEPA failed to address Petitioner's comment that the limits in permit 000600003, and compliance with those limits, were based on emission factors of unknown origin. IEPA has also not explained how the monitoring requirements in the permit are sufficient to assure compliance with the limits. Although IEPA stated in its response that stack testing is required if operation exceeds 500 hours in a year, it is not clear how this testing is sufficient to assure compliance with the limits. Condition 7.11.7(a) limits the operation of the emergency generator to 500 hours per year. Therefore, the stack testing to which IEPA refers is only applicable if the source exceeds its operational limit. I grant on this issue and order IEPA to provide an adequate explanation of whether the monitoring in the permit, including the use of emission factors, is sufficient to assure compliance with the CO emission limit.

**K. Gasoline Storage and Dispensing**

*Petitioner's Allegation:*

Petitioner claims that the permit fails to include adequate periodic monitoring to assure compliance with the hourly discharge limit on organic material into the atmosphere in Condition 7.12.3(b)(ii). Petition at 28. Petitioner argues that IEPA has failed to adequately justify how the use of the TANKS program and monthly throughput information is sufficient to assure compliance with an hourly discharge limit. *Id.* Petitioner further asserts that monthly gasoline throughput records do not appear to constitute "reliable data from the relevant time period that are representative of the source's compliance with the permit." *Id.* Petitioner concludes that IEPA must provide additional information to justify the monitoring requirements associated with this condition. *Id.*

*EPA Response:*

In its Responsiveness Summary, IEPA stated that no changes were made because "compliance . . . is achieved by using TANKS program and monthly gasoline throughput, considering that station [is] in service for 24 hours/day. Recordkeeping requirements of Condition 7.12.9 and compliance procedures of Condition 7.12.12 are sufficient to meet monitoring requirements." IEPA's response merely restates the monitoring requirements in the permit, but does not provide an analysis to demonstrate how the TANKS program and information on monthly gasoline throughput is adequate to assure compliance with the hourly discharge limit, or why these requirements are sufficient to yield reliable data from the relevant time period that is representative of compliance with the permit in either its Project Summary or its responses to Petitioner's comments. Therefore, I grant the petition on this issue.

**III. The Permit Lacks Compliance Schedules to Remedy All Current Violations**

*Petitioner's Allegations:*

Petitioner raises two issues with regards to compliance schedules, alleging that a) the permit forgoes a required enforceable compliance schedule in favor of an unacceptable "under review" compliance provision, and b) there are 21 additional instances of current noncompliance given by two notices of violations (NOVs), one given in January 2009 and the other in March 2009. Petition at 28. These are discussed in more detail below.

### A. Compliance Schedule

***Petitioner's Allegations:***

Petitioner states that IEPA and USS entered into a consent order in December 2007 that required USS to submit to IEPA a detailed compliance schedule regarding air pollution violations for basic oxygen furnace operations by March 31, 2008, and to implement the schedule by June 30, 2008. Petition at 29, citing Consent Order 05-CH-750, *Illinois ex. rel. Lisa Madigan v. U.S. Steel Corporation, Inc.*, Dec. 18, 2007, Circuit Court, Third Judicial Circuit, Madison County, Illinois. Petitioner alleges that the permit and Responsiveness Summary show that USS had not submitted an approvable schedule at the time of permit issuance. *Id.* Petitioner claims that by issuing a final permit without making an approved compliance schedule available for review, IEPA deprived the public of an opportunity to comment on a critical aspect of the permit. *Id.* at 29-30.

***EPA Response:***

EPA believes that, because consent decrees (CD) reflect the conclusion of a judicial or administrative process resulting from the enforcement of "applicable requirements" under the Act, all CAA-related requirements in such CDs are appropriately treated as "applicable requirements" and must be included in title V permits, regardless of whether the applicability issues have been resolved in the CD. This view is consistent with: (1) EPA's part 70 regulations, (*see, e.g.*, 40 C.F.R. § 70.5(c)(8) (compliance schedules "shall resemble and be at least as stringent as that contained in any judicial consent decree or administrative order to which the source is subject")); (2) statements EPA made at the time these regulations were issued, (*see, e.g.*, 57 Fed. Reg. 32250, 32255 (July 21, 1992) (preamble to the 1992 final part 70 rule) ("[s]ources seeking to obtain or renew a part 70 permit cannot be shielded from enforcement actions alleging violations of any applicable requirements (including orders and consent decrees) that occurred before, or at the time of, permit issuance.")); and (3) EPA's practice implementing title V. *See, e.g.*, *In the Matter of East Kentucky Power Cooperative, Inc. Hugh L. Spurlock Generating Station Maysville, Kentucky*, Petition IV-2006-4 (August 30, 2007), at 17 ("should the proposed consent decree be entered by the court in the related enforcement action, [the State and the source] would need to appropriately respond by incorporating the compliance schedule(s) required by the consent decree into the permit."); *In the Matter of Dynergy Northeast Energy Generation*, Petition No. II-2001- 06, at 29-30 ("conditions from [a] 1987 Consent Decree are applicable requirements that must be included in [the source's] title V permit."); *see also Sierra Club v. EPA*, 557 F.3d 401, 411 (6th Cir. 2008) (noting EPA's view that, once a CD is final, it will be incorporated into the source's title V permit). *See also* EPA's discussion in the *CITGO* at 12-13.

EPA's regulations at 40 C.F.R. § 70.6(c)(3) require that title V permits contain "[a] schedule of compliance consistent with [section] 70.5(c)(8)." In turn, section 70.5(c)(8) requires, among other things, that compliance schedules "shall resemble and be at least as stringent as that contained in any judicial consent decree or administrative order to which the source is subject." 40 C.F .R. § 70.5(c)(8)(iii)(C). *CITGO* at 12-13.

In response to this issue, IEPA noted that USS had submitted a revised compliance schedule under the consent order in July 2009 and that this revised document was under review. The terms of the consent order, however, are applicable requirements that are not reflected in the permit. The consent order required USS to implement the terms of the compliance schedule by June 30, 2008. As IEPA explained, though, the compliance schedule was still under review at the time of permit issuance. If a source is not in compliance with an applicable requirement at the time of permit issuance, EPA's regulations require that a title V permit contain a "schedule of compliance consistent with [40 C.F.R.] § 70.5(c)(8)." See 40 C.F.R. § 70.6(c)(3). This schedule of compliance must include "an enforceable sequence of actions with milestones, leading to compliance." See 40 C.F.R. § 70.5(c)(8)(iii)(C). *CITGO* at 12-13. EPA therefore grants the petition on this issue and directs IEPA to issue a permit that assures compliance with the December 18, 2007, consent order.

### B. Notices of Violation

***Petitioner's Allegations:***

Petitioner further references two NOVs issued to USS by IEPA in January and March 2009 after IEPA issued the draft CAAPP permit and Project Summary. *Id.* at 30. Petitioner concludes that, given these allegations of violations, "it is vital that USEPA require IEPA to develop approved, enforceable schedules of remedial measures with milestones leading to compliance...." *Id.*

***EPA Response:***

The issuance of an NOV, and reference to information contained therein, are generally not, by themselves, sufficient to satisfy the demonstration requirement under section 505(b)(2) of the Act, 42 U.S.C. § 7661d(b)(2). *See, generally, In the Matter of Georgia Power Company, Bowen Steam - Electric Generating Plant, et al,* (January 8, 2007 at 5-9); *In the Matter of East Kentucky Power Cooperative, Inc., Hugh L. Spurlock Generating Station,* Petition No. IV-2006-4 (August 30. 2007) at 13-18. Section 113(a)(1) of the Act, 42 U.S.C. § 7413(a)(1), provides that, "[w]henever, on the basis of any information available to the Administrator, the Administrator finds that any person has violated or is in violation of any requirement or prohibition of an applicable implementation plan or permit, the Administrator shall [issue an NOV]." An NOV is simply one early step in EPA's process of determining whether a violation has, in fact, occurred. This step is commonly followed by additional investigation or discovery, information gathering, and an exchange of views, all of which occur in the context of an enforcement proceeding, and are important means of fact-finding under our system of civil litigation. An NOV is not a final agency action and is not subject to judicial review. It is well recognized that no binding legal consequences flow from an NOV, and an NOV does not have the force or effect of law. *See PacifiCorp* v. *Thomas,* 883 F.2d 661 (9th Cir. 1988); *Absetec*

*Constr. Servs. v. EPA,* 849 F.2d 765, 768-69 (2nd Cir. 1988); *Union Elec. Co.* v. *EPA,* 593 F.2d 299, 304-06 (8th Cir. 1979); and *West Penn Power Co.* v. *Train,* 522 F.2d 302, 310-11 (3rd Cir. 1975). *See also, Sierra Club* v. *Johnson,* 541 F.3d at 1267; *Sierra Club* v. *EPA,* 557 F.3d at 406-409.

EPA may consider the issuance of an NOV or filing of a complaint as a relevant factor when determining whether the overall information presented by a petitioner - in light of all the factors that may be relevant - demonstrates the applicability or violation of a requirement for title V purposes. Other factors that may be relevant in this determination include the quality of the information; whether the underlying facts are disputable; the types of defenses available to the source; and the nature of any disputed legal questions, all of which EPA would consider within the constraints of the title V process. See *Sierra Club v. EPA*, 557 F.3d at 406-07. If in any particular case these factors are relevant and the petitioner does not present information concerning them, then EPA may find that the petitioner has failed to present sufficient information to demonstrate that a requirement is applicable or has been violated.

Another factor EPA considers is that the Act's enforcement and permitting authorities are complementary and it is reasonable to give full effect to both. See, e.g., *Sierra Club v. EPA*. 557 F.3d at 405-412 (discussing several aspects of the relationship between the enforcement and permitting authorities and processes). The Act provides EPA relatively short time periods in which to review title V permits. Under section 505(b)(1), EPA has only 45 days to review a proposed permit and determine if an objection is necessary. Similarly, under section 505(b)(2), EPA has only 60 days to review a petition seeking an objection and to determine if a petitioner has demonstrated the permit does not comply with the requirements of the Act. Congress deliberately established these short timeframes consistent with its intent that title V permitting be streamlined. The permit process may not allow EPA to fully investigate and analyze contested allegations. In contrast, the Act provides EPA with broad enforcement authority and several tools to resolve issues of compliance. For example, section 114 of the Act authorizes EPA to issue administrative information requests. And the enforcement process can involve significant information gathering through discovery, expert testimony, hearing, and the like.

In evaluating the nature of demonstration burden under section 505(b)(2) of the Act, EPA also considers the potential impact enforcement cases and title V decisions have on one another as illustrated by the following example. EPA could bring a civil judicial enforcement action for violations by a source of an applicable requirement or permit condition. The source and EPA could then be engaged in litigation over the merits of the allegations in EPA's complaint. Should EPA prevail in that enforcement proceeding, or should the source and EPA propose to settle their difference, then the court would enter judgment in the form of an order or consent decree requiring that the source achieve compliance, either pursuant to the terms of a compliance order, or, at a minimum, by a certain date. Separately, in the context of the issuance of a title V permit to the same source, the permitting authority may determine (on its own or as a result of an EPA objection) that the source is not in compliance with the applicable requirement or permit condition that is the subject of the enforcement proceeding, and require in the title V permit that the source achieve compliance pursuant to a schedule of compliance. Under such circumstances the source could challenge the permit, petition EPA for relief, and appeal to the appropriate circuit court. The source and EPA could then find themselves in two separate for a litigating essentially the same issue -- whether an applicable requirement or permit condition was violated

and the appropriateness of a compliance schedule -- which risks potentially different and conflicting results.

Considering all these factors, EPA determines that the petition has failed to demonstrate that a compliance schedule is necessary. Petitioner here has only cited to unresolved NOVs issued to USS and has not provided any further information seeking to demonstrate noncompliance. The petition is denied on this issue.

## IV. The Permit Unlawfully Exempts Emissions During Startup, Shutdown, and Malfunction

### A. Exemptions from MACT Standards During Periods of Startup, Shutdown and Malfunctions Based on EPA's General Duty Standard Are Invalid

***Petitioner's Allegations:***

Petitioner claims that numerous provisions in the permit unlawfully exempt USS from otherwise-applicable MACT standards during periods of SSM. Petitioner cites to a December 2008 decision by the District of Columbia Court of Appeals, *Sierra Club v. EPA*, 551 F.3d 1019 (D.C. Cir. 2008), which vacated specific regulations at 40 C.F.R. § 63.6(f)(1) and (h)(1) that had exempted sources from complying with otherwise-applicable MACT standards. Petitioner argues that the logic of the Court's opinion applies equally to all exemptions from MACT limits during periods of SSM, and is not limited to the specific regulations challenged. Petitioner also cites to a July 22, 2009, letter from Adam Kushner, the director of EPA's Office of Civil Enforcement ("Kushner letter"). Petitioner argues that the Kushner letter supports its broader view of the *Sierra Club* decision, noting that the letter states: "EPA recognizes that the legality of such source category-specific provisions [i.e., an exemption during periods of SSM] may now be called into question." Petition at 31.

Furthermore, Petitioner claims that nine permit terms[6] illegally allow for broad exemptions from permit requirements during periods of SSM and IEPA's response to comments falls short of adequately explaining why these SSM exemptions are legally or factually justified pursuant to 40 C.F.R. § 70.7(a)(5). *Id.* at 32-33.

***EPA Response:***

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[6] Petitioner refers to the following permit terms:
Condition 7.2.5-4 - coke oven batteries shutdown and malfunction;
Condition 7.3.5 - by-product recovery plant shutdown and malfunction;
Condition 7.4.5-2.b.i - blast furnace process shutdown and malfunction;
Condition 7.4.5-2.c - blast furnace process startup;
Condition 7.5.5-2.b - basic oxygen furnace shutdown and malfunction;
Condition 7.6.5.a - continuous casting operations shutdown and malfunction;
Condition 7.7.5 - slab reheat furnaces startup;
Condition 7.10.3.g - boilers startup; and
Condition 7.10.3.h.i - boilers shutdown and malfunction.

As Petitioner summarizes, in the *Sierra Club* decision, the D.C. Circuit vacated the SSM exemption contained in 40 C.F.R. § 63.6(f)(1) and (h)(1), which were two provisions of EPA's general provisions regarding MACT standards. When incorporated into MACT regulations for specific source categories, these two provisions exempted sources from the requirements to comply with otherwise-applicable MACT standards during periods of SSM. Following the vacatur of 40 C.F.R. § 63.6(f)(1) and (h)(1), sources (nor permitting authorities) could not rely on these provisions as a basis for an exemption during periods of SSM.

As an initial response to this issue, IEPA noted that the mandate in the case (making the decision effective) had not yet been issued and that it was not making any changes to the permit. EPA finds the state's response to be reasonable. EPA agrees that 40 C.F.R. § 63.6(f)(1) and (h)(1) remained in effect until the D.C. Circuit issued the mandate in *Sierra Club*. See Kushner letter at 2. The mandate did not issue until October 16, 2009, and the USS permit was issued on September 3, 2009. Therefore at the time IEPA issued the USS permit, 40 C.F.R. §63.6(f)(1) and (h)(1) were in effect. It was reasonable for IEPA not to take action in response to the court's decision since the mandate had not been issued at the time of permit issuance. Therefore, Petitioner's claim is denied.

However, since the mandate has now been issued, EPA will address the substance of Petitioner's claim. The vacatur of 40 C.F.R. § 63.6(f)(1) and (h)(1) affected only those MACT standards that incorporated those provisions by reference and contained no other regulatory text excusing compliance during SSM events. The Kushner memo contains tables that provided EPA's initial analysis on whether or not specific MACT standards would be affected by the vacatur. In response to Petitioner's comment, it appears IEPA did review specific MACT standards and the tables in the Kushner letter in addressing the permit conditions identified by Petitioner. IEPA determined that only one of the conditions in question would be affected by the mandate. IEPA found that the SSM exemption in 40 C.F.R. part 63, subpart CCC (Steel Pickling) would be affected once the mandate issued. EPA has reviewed the permit conditions raised by Petitioner and concurs with IEPA that 40 C.F.R. part 63, subpart CCC is the only MACT standard to which USS is subject that has been affected following the issuance of the mandate. EPA has granted other issues in the Petition and ordered IEPA to address them. In that process, EPA recommends that IEPA reopen the USS permit and clarify that the SSM exemption is not available under 40 C.F.R. part 63, subpart CCC.

Finally, EPA disagrees with Petitioner's suggestion that the *Sierra Club* decision applies equally to all SSM exemptions in MACT standards. The D.C. Circuit had before it only the specific language of 40 C.F.R. § 63.6(f)(1) and (h)(1), and the decision is limited to those provisions. Thus, only those MACT standards that relied exclusively on 40 C.F.R. § 63.6(f)(1) and (h)(1) to exempt sources from MACT standards during periods of SSM are affected by the vacatur. While EPA acknowledged in the Kushner letter that the legality of SSM exemption provisions had been called into question, EPA continues to believe that SSM exemptions that are not based on 40 C.F.R. § 63.6(f)(1) and (h)(1) remain in effect until they are changed. EPA is in the process of evaluating SSM exemptions in MACT standards on a case-by-case basis and is addressing emissions during period of SSM in each standard.

### B. Exemptions During Periods of Startup, Shutdown and Malfunctions Based on State Law Are Also Invalid

***Petitioner's Allegations:***

Petitioner claims that nine permit terms[7] illegally allow for broad exemptions from permit requirements during periods of SSM and IEPA's response to comments falls short of adequately explaining why these SSM exemptions are legally or factually justified pursuant to 40 C.F.R. §70.7(a)(5). Petition at 32-33.

***EPA Response:***

The Illinois SIP provision at 35 IAC § 201.262 provides that a permitting authority shall not authorize a permittee to operate in violation of emission limits and standards during startups unless the permittee has affirmatively demonstrated that it has made all reasonable efforts to, among others, minimize excess emissions. The USS permit contains a determination that the source already has made a demonstration that it has made all reasonable efforts to minimize startup emissions, duration of startups and frequency of startups. However, neither the permit nor the permit record (e.g., a statement of basis) provide any information about, or explanation of, how IEPA determined in advance that the permittee met its burden of affirmatively demonstrating that it had complied with the affirmative defense requirements of the permit. EPA is granting the petition and requiring IEPA to explain how it determined in advance that the permittee had met the requirements of the Illinois SIP at 35 IAC § 201.262, or otherwise make appropriate changes to the permit and explain how the permit ensures compliance with the requirement of the SIP. *See In the Matter of Midwest Generation LLC - Joliet Generating Station (Joliet),* Petition Number V-2004-3 (June 24, 2005), at 15.

The Illinois SIP provision at 35 IAC § 201.262 also provides that a permitting authority shall not authorize a permittee to operate in violation of emission limits and standards during malfunctions or breakdowns unless the permittee has submitted proof that continued operation is required to provide essential service, or to prevent risk of injury to personnel or severe damage to equipment. To authorize continued operation of units in violation of applicable standards, IEPA must have received proof that such operation is necessary to provide essential services, or to prevent injury to personnel or severe damage to equipment. The specific proof required in each instance usually will depend on the nature and the cause of the malfunction or breakdown. Thus, a determination that the permittee has met the requirements of 35 IAC § 201.262 to authorize continued operations during malfunction or breakdowns is a case-by-case determination. EPA therefore is granting the petition and requiring IEPA either to explain in the statement of basis how it determined in advance that the permittee had met the requirements of the Illinois SIP at 35 IAC § 201.262, or to specify in the permit that continued operation during malfunction or

[7] Petitioner refers to the following permit terms:
Condition 7.2.5-4 - coke oven batteries shutdown and malfunction;
Condition 7.3.5 - by-product recovery plant shutdown and malfunction;
Condition 7.4.5-2.b.i - blast furnace process shutdown and malfunction;
Condition 7.4.5-2.c - blast furnace process startup;
Condition 7.5.5-2.b - basic oxygen furnace shutdown and malfunction;
Condition 7.6.5.a - continuous casting operations shutdown and malfunction;
Condition 7.7.5 - slab reheat furnaces startup;
Condition 7.10.3.g - boilers startup; and
Condition 7.10.3.h.i - boilers shutdown and malfunction.

breakdown will be authorized on a case-by-case basis if the source meets the SIP criteria. *See Joliet* at 16.

## V. The Permit Fails to Include Compliance Assurance Monitoring Requirements

***Petitioner's Allegations:***

Petitioner claims that the compliance assurance monitoring (CAM) rule requirements found at 40 C.F.R. part 64 apply to USS because USS filed an initial CAAPP application after April 20, 1998. Petition at 33. Petitioner disputes IEPA's statement in the Project Summary that USS submitted its initial CAAPP application prior to April 1998. *Id.* Petitioner claims that National Steel Corporation[8] submitted a CAAPP application for the Granite City Works in March 1996, and IEPA deemed the application complete in May 1996. However, according to Petitioner, IEPA never acted on the May 1996 application. *Id.* Petitioner asserts that, pursuant to the Illinois CAAPP statute, IEPA's failure to act on the 1996 complete permit application within 18 months constituted final agency action on that application. *Id.* Petitioner further alleges that, because IEPA did not act on the 1996 application within the required 18 months of submission, the application cannot be considered the application for the draft USS CAAPP permit that IEPA made available for public comment in 2008. *Id.* at 34. Petitioner notes that, in May 2007, more than 9 years after the trigger date for CAM inclusion, USS submitted a CAAPP permit application to IEPA, which USS designated as the "initial application." *Id.* Petitioner claims that there are substantial differences between the 1996 and 2007 applications and highlights the 11 years between the two application submissions. *Id.* Petitioner asserts that, had IEPA issued a CAAPP permit with a five-year term in response to the 1996 application in a timely manner, USS would have submitted an application for a renewal permit in 2001, 3 years after the date the CAM rules were triggered. *Id.* Finally, Petitioner alleges that IEPA did not adequately respond to its comments on this issue. *Id.* According to Petitioner, IEPA stated in its Responsiveness Summary that the 1996 application "with a number of updates" was "the only one considered" in issuing the permit at issue. *Id.*, quoting Responsiveness Summary at 43, comment 70. Petitioner notes that IEPA further stated in the Responsiveness Summary that "most of the sources that would be subject to CAM are already covered by a MACT standard and therefore CAM would not be applicable…." *Id.* Petitioner asserts that this is untrue, citing to a number of conditions in the permit[9] that, it claims, are subject to CAM. *Id.* at 34-35.

***EPA Response:***

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[8] USS purchased National Steel Corporation, which was in bankruptcy, in May 2003.

[9] Petitioner refers to the following terms:
Condition 7.3.4.c - coke by-product recovery plant;
Condition 7.6.4.e - continuous casting;
Condition 7.7.4.e - slab reheat furnaces;
Condition 7.8.4.e - finishing operations;
Condition 7.9.4.e - wastewater treatment plant;
Condition 7.10.4.c – boilers; and
Condition 7.11.4.b – engines.

In general, the CAM rules require a title V applicant to submit as part of its application monitoring provisions that satisfy the requirements of 40 C.F.R. § 64.3, which the permitting authority places into the title V permit to assure compliance with applicable requirements. *See* 40 C.F.R. §§ 64.4 and 64.6. CAM applies to initial title V permits if, by April 20, 1998, the application was not yet filed or the permitting authority had not yet determined that the application was complete; if the permit has significant permit revisions; or if there are renewals of existing permits. 40 C.F.R. § 64.5(a).

National Steel submitted an initial title V permit application to IEPA in 1996. IEPA found the application complete and made a draft permit available for public comment, but did not issue a final permit. On May 29, 2007, several years after it had purchased National Steel, USS submitted an application that indicated on the cover page that it was an application for an initial title V permit, but that included only information necessary for IEPA to include conditions from the MACTs to which the Granite City Works had become subject since 1996. IEPA treated the 2007 application as an amendment to the 1996 application, and, therefore, did not do a completeness determination.

Petitioner has not demonstrated that the CAM requirements applied to the USS permit at the time it was issued. The length of time that elapses between the submission of a title V application and permit issuance is not relevant in regards to whether or not CAM applies. 40 C.F.R. § 64.5 requires CAM for sources that, among other things, apply for an initial title V permit after April 20, 1998. USS, as National Steel, applied for an initial title V permit in May of 1996, well before the CAM applicability deadline. USS had an obligation to update its permit application before IEPA noticed the draft title V permit for public comment on October 15, 2008. *See* 40 C.F.R. § 70.5(b). USS updated its application in 2007 with information on MACT requirements. However, the fact that a source becomes subject to a MACT standard does not, by itself, trigger CAM applicability. *See* 40 C.F. R. § 64.2(b)(i). Petitioner has not demonstrated that USS met any of the criteria that trigger CAM applicability.

Petitioner also suggests that 415 ILCS 5/39.5-5(j) prohibits IEPA from acting on a permit application if it has not done so within 18 months of the completeness determination. EPA disagrees with Petitioner's interpretation of the SIP language. 415 ILCS 5/39.5-5(j) provides that

> [IEPA] shall issue or deny the CAAPP permit within 18 months after the date of receipt of the complete CAAPP application..... Where the Agency does not take final action on the permit within the required time period the permit shall not be deemed issued; rather the failure to act shall be treated as a final permit action.

EPA reads this language to say that IEPA can be sued to take action on the languishing permit application, not that the permit is denied because 18 months has elapsed. This is consistent with section 502(b)(7) of the Act, which is intended to ensure against unreasonable delay by permitting authorities. Under section 502(b)(7) of the Act, state programs must provide that a failure to act on a permit application (whether initial or renewal) by the stated deadlines "shall be treated as a final permit action solely for purposes of obtaining judicial review . . . to require that

action be taken by the permitting authority." EPA reads 415 ILCS 5/39.5-5(j) as implementing section 502(b)(7) of the Act.

Given the reasons cited above, I deny the petition on this issue. Petitioner has not demonstrated that CAM applied to USS for the purposes of this permit.[10]

## VI. Numerous Permit Provisions Lack Practical Enforceability

Petitioner claims that numerous permit provisions lack practical enforceability. Petition at 35. Petitioner asserts that a title V permit must be sufficiently clear and specific to ensure that all applicable requirements contained therein are enforceable as a practical matter. According to Petitioner, to achieve practical enforceability, a title V permit must accurately describe operational requirements and limitations on emissions for a facility, including any alternative processes that the permitting state has selected. *Id.*, citing 40 C.F.R. § 70.6(a)(1)(iii) and (a)(3). Petitioner alleges that many provisions of the permit lack one or more of the conditions necessary for practical enforceability and must be revised. *Id.*

### A. The Permit Fails to Appropriately Incorporate Plans by Reference

***Petitioner's Allegations:***

Petitioner claims that the CAAPP permit does not sufficiently identify the plans or portions of plans that are incorporated into the USS title V permit by reference. *Id.* at 36. Petitioner asserts that IEPA must incorporate clearly and on the face of the permit, rather than in the Responsiveness Summary, the following plans:

1. fugitive particulate matter operating plan;
2. PM10 contingency measure plan;
3. episode action plan;
4. soaking plan; and
5. work practice plan. *Id.* at 36-37.

***EPA Response:***

In its Responsiveness Summary, IEPA stated that

> IEPA approval is not required for a plan for fugitive PM operating program. The only requirement is for a review of the plan.... Incorporation by reference is the act of including a second document within another document by only mentioning the second document. If done properly, the entire second document became a part of the main

[10] 40 C.F. R. §64.5(c) states: "... if a part 70 or 71 permit is reopened for cause by EPA or the permitting authority pursuant to § 70.7(f)(1)(iii) or (iv), ... the applicable agency may require the submittal of information under this section for those pollutant-specific emissions units that are subject to [Part 64] and that are affected by the permit reopening." This regulation authorizes IEPA to incorporate CAM if it chooses to do so during a permit reopening. See also section 64.5(a)(2).

document. In order for a document to be properly incorporated by reference, there are 3 criteria: 1) document have existed at the time the main document was created; 2) the main document must describe the particular document to be incorporated with enough specificity to be identified; and 3) must clearly identify the intent that the document be incorporated by reference.

However, this differs from how EPA specifies incorporating documents by reference.

EPA has discussed incorporation by reference in several guidance documents and title V orders. *See e.g., White Paper 2*; *In the Matter of Tesoro Refining and Marketing,* Petition No. IX-2004-6 (March 15, 2005)(*Tesoro*), at 9; *In the Matter of Proposed Clean Air Act Title V Operating Permit Issued to Premcor Refining Group, Inc., for Operation of Port Arthur Refinery*, Petition No. VI-2007-2 (February 16, 2007), at 29. Incorporation by reference may be appropriate where the cited requirement is part of the public docket or is otherwise readily available, clear and unambiguous, and currently applicable. *Tesoro* at 9. As EPA explained in *White Paper 2,* it is important to exercise care to balance the use of incorporation by reference with the need to issue permits that are clear and meaningful to all affected parties, including those who must comply with or enforce their conditions. *White Paper* 2 at 34-38. See also *Tesoro* at 8. In order for incorporation by reference to be used in a way that fosters public participation and results in a title V permit that assures compliance with the Act, it is important that: (1) referenced documents be specifically identified; (2) descriptive information such as the title or number of the document and the date of the document be included so that there is no ambiguity as to which version of a document is being referenced; and (3) citations, cross references, and incorporations by reference are detailed enough that the manner in which any referenced material applies to a facility is clear and is not reasonably subject to misinterpretation. *See White Paper* 2 at 37.

Regarding the five plans identified in the petition, IEPA only provided general information in the USS title V permit about what it intended to incorporate by reference. In particular,

1. IEPA incorporated the fugitive particulate matter operating plan into the permit in Condition 5.3.3. The permit requires that the plan contain the minimum provisions identified in 35 IAC 212.310, amended from time-to-time, and submitted to IEPA. Neither the permit nor the SIP requires IEPA's approval of the plan. The permit, however, did not refer to a specific version of the plan nor did it provide sufficient descriptive information about the plan or its requirements.

2. IEPA incorporated the PM10 contingency measure plan into the permit in Condition 5.3.4. The permit requires USS to implement the approved plan upon notification by IEPA. The permit, however, did not refer to a specific version of the plan nor did it provide sufficient descriptive information about the approved plan or its requirements.

3. IEPA incorporated the episode action plan into the permit in Condition 5.3.9, not Condition 5.3.10 as cited in the petition. The permit requires USS maintain a

written episode action plan at the source and on file with IEPA which contains the information specified in 35 IAC 244.144. The permit, however, did not refer to a specific version of the plan nor did it provide sufficient descriptive information about the plan or its requirements.

4. IEPA incorporated the soaking plan into the permit in Condition 7.2.5-1(b)(i). The permit requires that an initial soaking plan be submitted to IEPA for review prior to resumption of operation of the battery based on design information and supplemented as needed with a revised soaking plan. The permit, however, did not refer to a specific version of the plan nor did it provide sufficient descriptive information about the plan or its requirements.

5. IEPA incorporated the work practice plan into the permit in Condition 7.2.5-2. The permit requires that USS maintain a written emission control work practice plan for the affected battery designed to achieve compliance with visible emission limitations for doors, topside port lids, offtake systems, and charging operations under 40 C.F.R. part 63, subpart L. Condition 7.2.5-2 (b) contains the minimum elements of the plan. Conditions 7.2.5-2 (c) and (d) include the requirements for implementing and revising the plan respectively. The permit, however, did not refer to a specific version of the plan nor did it provide sufficient descriptive information about the plan or its requirements.

Without specific identifying information (such as document date) and a sufficient description of the plan and its requirements, it is not possible to tell which version of the plan applies to USS and what requirements USS must meet pursuant to the plan. IEPA's incorporation is ambiguous and leaves room for misinterpretation and misunderstanding about what exactly is required of USS. As noted by *White Paper 2*, this can create difficulties for all parties, including those who enforce the permit. The ambiguous incorporation also greatly hinders meaningful public participation. Therefore, I grant the petition on this issue. If IEPA wants to use incorporation by reference for these plans, EPA recommends it do so consistent with the three principles from *White Paper 2* and the *Tesoro* Order so that there is no ambiguity as to which version of a document is being referenced.

## B. Vague Provisions in the Permit Are Not Practically Enforceable

***Petitioner's Allegations:***

Petitioner claims that permit conditions must contain sufficient detail to ensure that the source and the public clearly understand permit obligations and compliance evaluation procedures. Petition at 37. Petitioner claims that the phrase "demonstrate that all reasonable steps" [11] from Condition 7.7.5(a) and "took all reasonable steps" from Condition 9.10.2.a.iv lacks specificity and therefore are not practically enforceable. *Id.*

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[11] Both the permit and the SIP at 35 IAC § 201.262 require the permittee to "demonstrate that all reasonable *efforts* are made to minimize startup emissions, duration of individual startups and frequency of startups." Although

***EPA Response:***

In its Responsiveness Summary, IEPA stated that "'Proper working order' and 'Reasonable steps' are direct citations of applicable regulations; no changes were made." Responsiveness Summary at 50. The Illinois SIP at 35 IAC § 201.262 provides that a permitting authority shall not authorize a permittee to operate in violation of emission limits or standards during startups unless the permit applicant "has affirmatively demonstrated that all reasonable efforts have been made to minimize startup emissions, duration of individual startups and frequency of startups." As discussed above, EPA is granting the petition as to permit Condition 7.7.5 and requiring IEPA to explain how it determined in advance that the permittee had met this requirement of the Illinois SIP, or otherwise make appropriate changes to the permit and explain how the permit ensures compliance with the requirement of the SIP.

Condition 7.7.5(a), which is derived from the SIP and is listed as a term or condition of the broad authorization in Condition 7.7.5, provides that "[t]his authorization does not relieve the Permittee from the continuing obligation to demonstrate that all reasonable efforts are made to minimize startup emissions, duration of individual startups and frequency of startups. . . ." Condition 7.7.5(b) provides broad minimum measures, presumably intended to provide some assurance that USS must make reasonable efforts to minimize emissions. It appears that IEPA intended these conditions to support IEPA's advance determination that USS has made the affirmative showing required by the SIP. But IEPA does not explain how these conditions support the broad advance authorization.

Further, in *In the Matter of Midwest Generation, LLC, Fisk Generating Station*, Petition No. V-2004-1 (March 25, 2005) (*Fisk*), EPA noted that for the permit to be practicably enforceable and ensure compliance with this SIP requirement, it must "include the startup procedures in the permit, or include minimum elements of the startup procedures that would 'affirmatively demonstrate that all reasonable efforts have been made to minimize startup emissions, duration of individual startups and frequency of startups.'" *Fisk* at 14. I direct IEPA, in responding to the grant with regard to the broad advance authorization addressed in IV.B. above, to evaluate whether, and ensure that, any permit conditions regarding startup are practicably enforceable.

With respect to Condition 9.10.2.a.iv, this provision is required by section 39.5(7)(k) of the Illinois Environmental Protection Act. Section 39.5(7)(k) is not an applicable requirement as defined at 40 C.F.R. 70.2. EPA notes that section 504(a) of the Act requires, among other things that, each title V permit shall include "enforceable" emissions limitations and standards and other provisions "as are necessary to assure compliance with applicable requirements" of the Act. Petitioner has not demonstrated that Condition 9.10.2.a.iv relates to an applicable requirement, and has not otherwise demonstrated that the condition is not in compliance with the Act.

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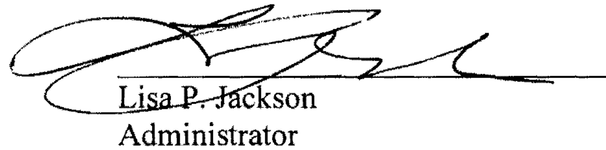
Petitioner discusses the phrase "demonstrate that all reasonable steps," EPA believes Petitioner's issue is still relevant.

## CONCLUSION

For the reasons set forth above and pursuant to Section 505(b)(2) of the Clean Air Act and 40 C.F.R. § 70.8(d), I hereby grant in part and deny in part the petition filed by Robert R. Kuehn on behalf of the American Bottom Conservancy objecting to the title V operating permit issued to the United States Steel Corporation-Granite City Works.

Dated: 1/31/11



Lisa P. Jackson
Administrator