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January 21, 2004

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Washington, D.C. 2004

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Midwest Generation, LLC
Attn: Scott Miller
440 S. LaSalle St., Suite 3500
Chicago, IL 60605

Re: Midwest Generation EME, LLC Title V/CAAPP/Title I Permit Application
Joliet, ID No. 197809AA0; Application No. 95090046

To The Administrator:

Please be advised that I represent Citizens Against Ruining the Environment (“CARE”), a Lockport, Illinois-based, not-for-profit community group dedicated to a safe and healthful environment for people who live and work in Will County, Illinois.

Please accept this as a formal Petition submitted to you pursuant to 42 U.S.C. 7661d(b)(2), commonly cited as Section 505(b)(2) of the Clean Air Act (“CAA 505(b)(2)”). As you know, this Section of the Clean Air Act allows any person to Petition for your review of a Title V operating permit, as long as the Petition is timely filed and is based on objections that were

raised during the public comment period. Under this Section, you must grant or deny this Petition within 60 days after the Petition is filed. A denial is subject to judicial review.

Members of CARE gave testimony in the consolidated public hearing regarding the Title V permits for Midwest Generation's Joliet and Will County facilities. I also appeared and gave testimony as a representative of CARE. On behalf of CARE, I submitted extensive, timely written comments about the Joliet and Will County proposed Title V permits to IL EPA's Hearing Officer. A true and accurate copy of these written comments is attached to this Petition.

Illinois EPA provided proposed Title V permits for the Joliet and Will County facilities to U.S. EPA on October 10, 2003. U.S. EPA's 45-day review period concluded on November 24, 2003. This Petition is being submitted to the Administrator within the subsequent 60-day period during which members of the public can request U.S. EPA to object to a Title V permit.

As of today's date, IL EPA has not issued a final permit for this facility. In the absence of a Final Permit and in light of the deadline for filing this Petition, CARE is submitting this Petition to ensure its concerns about the deficiencies of the proposed permit are preserved for review.

A copy of this Petition is being sent to you, the Director of the Illinois Environmental Protection Agency and Midwest Generation, LLC. A courtesy copy is being sent to the Regional Administrator for U.S. EPA Region 5.

The members of CARE respectfully request for:

1. the Administrator to obtain the complete record of the Title 5 permitting proceedings relating to this facility from the IL EPA;
2. the Administrator to review this permit record, grant the Petition in whole or in part, and to make objections for the reasons described in this Petition;
3. the Administrator to investigate whether IL EPA is operating its Title 5 permitting program in manner consistent with U.S. EPA's delegation of authority to issue these permits;
4. the Petitioners to be given leave to amend or otherwise supplement this Petition when IL EPA issues the contested permit in final form.

By way of summary, the proposed Title V permit for Midwest Generation's Joliet Generating Station has numerous conditions that are inadequate and must be revised. More specifically, the permit:

- Fails to comply with state and federal requirements;
- Allows excess emissions during startup and malfunction, contrary to U.S. Environmental Protection Agency ("U.S. EPA") policy;
- Contains conditions that are not practically enforceable;

- Allows the plant to continue to operate in a manner which causes severe health impacts on the surrounding communities;
- Contains numerous typographical errors, mistakes, and omissions;
- Is Legally Inadequate Because It Does Not Impose An Enforceable Schedule To Remedy Non-Compliance; and,
- Fails To Address Mercury and Other Hazardous Air Pollutants.

Consequently, the proposed permit must be substantially revised and rewritten as discussed in great detail below.

I. THE PERMIT IS INADEQUATE BECAUSE IT CONTAINS CONDITIONS THAT FAIL TO COMPLY WITH APPLICABLE STATE AND FEDERAL REGULATIONS.

There are a number of conditions in the proposed Title V permit that fail to comply with the Illinois Environmental Protection Act found at 415 ILCS 5/1 et seq. (the “Act”), the Illinois Administrative Code, the Code of Federal Regulations (“C.F.R.”), or the Clean Air Act (“CAA”). The conditions that fail to meet the requirements of various provisions of the Act are discussed in Section A below. The conditions that fail to meet the requirements of various provisions of the Illinois Administrative Code are discussed in Section B below. The conditions that fail to provide monitoring sufficient to meet the requirements of the C.F.R. are discussed in Section C below, and those that fail to meet the Credible Evidence Rule laid out in the C.F.R. are discussed in Section D below.

A. The Permit Contains Conditions That Do Not Comply with the Illinois Environmental Protection Act.

The following conditions in the permit fail to comply with provisions of the Illinois Environmental Protection Act that are requirements for Illinois to receive approval for, and to administer, the Title V permit program. In Illinois, these provisions are found in 415 ILCS 5/39.5 et seq., commonly known as the Clean Air Act Permit Program (hereinafter “CAAPP”).

1. Reporting of Deviations

A number of conditions do not meet the requirements from 39.5(7)(f)(ii) of the Act regarding reporting of deviations.

- A number of conditions allow reporting of deviations with quarterly reports; however, three months does not reasonably qualify as the “prompt reporting” required by 39.5(7)(f)(ii) of the Act. The following conditions must be revised to include reporting that meets the “prompt” requirement:
 - Condition 7.1.10(g)(iii)
 - Condition 7.2.10(a)
 - Condition 7.3.10(a)
 - Condition 7.4.10(a)

Condition 7.5.10(a)
Condition 7.6.10(a)
Condition 7.7.10(a)(iii)

- A number of conditions provide for “reporting of deviations” and but must meet the requirement that the reporting be prompt from 39.5(7)(f)(ii) of the Act:
Condition 7.2.10(a)
Condition 7.3.10(a)
Condition 7.4.10(a)

2. Incomplete Conditions

A number of conditions fail to include all relevant requirements from applicable provisions of the Act.

- Condition 8.1 provides for the permit shield and cites Section 39.5(7)(j) of the Act. Section 39.5(7)(j)(ii) specifies that “The permit shall identify the requirements for which the source is shielded.” The permit fails to do this and needs to be rewritten to include a recitation of the specific requirements for which the Permittee is shielded.
- Condition 9.2.3 cites Section 39.5(6)(c) of the Act but fails to include all of the requirements. It must be rewritten include the remainder of the that subsection, which specifies “consistent with this Act and applicable Board regulations.”
- Condition 9.12.1 cites Section 39.5(7)(o)(iii) of the Act, which provides “The filing of a request by the Permittee for a permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any permit condition.” Condition 9.12.1 must be supplemented to include the word “termination” in order to be compliant with Section 39.5(7)(o)(iii).
- Condition 9.12.2(b) is incomplete. Section 39.5(15)(a)(ii) of the Act reads in full: “Additional requirements (including excess emissions requirements) become applicable to an affected source for acid deposition under the acid rain requirement. Excess emissions offset plans shall be deemed to be incorporated into the permit upon approval by the EPA.” The parenthetical and last sentence have been omitted from the condition. This condition must be supplemented to include the parenthetical and last sentence of Section 39.5(15)(a)(ii).

3. Inconsistent Conditions

A number of conditions are inconsistent with relevant requirements from the Act.

- The compliance certification contained as a Standard Permit Condition in Condition 9.8 is inadequate. It fails to comply with provisions of the Act and lacks sufficient specificity regarding the individual facility. First, it indicates that the compliance certification shall be submitted no later than May 1. This is unclear as to whether that means May 1 of every year

and, therefore, fails to indicate a frequency as required by Section 39.5(7)(p)(v)(A) of the Act. This must be rewritten to specify a frequency. Also, Section 39.5(7)(p)(v)(C)(4) says that the compliance certification shall include the methods used for determining the compliance status “consistent with subsection 7 of Section 39.5 of the Act.” The permit says simply “consistent with the conditions of this permit,” in Condition 9.8(a) and, consequently, must be rewritten to include this precise language from Section 39.5(7)(p)(v)(C)(4). Further, while this general requirement regarding the compliance certification indicates that there may be other “applicable requirement[s]” or “permit condition[s],” there is no condition in the permit that provides specific actions that Permittee is required to take regarding the compliance certification. This general condition along with the reference to other “applicable requirement[s]” that may or may not apply and “permit condition[s]” that may or may not be included, does not provide the public with a clear or easily decipherable and, therefore, enforceable permit condition on compliance certifications. Nor is it sufficiently tailored to the particular individual facility. This condition must be rewritten to be clear, enforceable, understandable by the public, and tailored to the individual facility.

- Condition 9.10.2 as written is inconsistent with Section 39.5(7)(k) of the Act. The specific language that causes this inconsistency is the statement that “Normally, an act of God such as lightning or flood is considered an emergency” This language is attempting to define emergency yet does so in a manner that (1) indicates that it is an example instead of a definition and therefore is not practically enforceable and (2) is inconsistent with the definition included in Section 39.5(7)(k). Section 39.5(7)(k) states:

For purposes of this subsection, “emergency” means any situation arising from sudden and reasonably unforeseeable events beyond the control of the source, such as an act of God, that requires immediate corrective action to restore normal operation, and that causes the source to exceed a technology-based emission limitation under the permit, due to unavoidable increases in emissions attributable to the emergency. An emergency shall not include noncompliance to the extent caused by improperly designed equipment, lack of preventative maintenance, careless or improper operation, or operation error.¹

Consequently, the definition included in that section is much longer, much more detailed, and much clearer than the example included in the permit. The definition included in Condition 9.10.2(b) is also incomplete in the respect that it is missing the sentence from Section 39.5(7)(k)(iv) of the Act stating that “In any enforcement proceeding, the permittee seeking to establish the occurrence of an emergency has the burden of proof.” The condition must be rewritten to be made consistent with these provisions of the Act.

¹ See also 40 C.F.R. 70.6(g)(1): “An ‘emergency’ means any situation arising from sudden and reasonably unforeseeable events beyond the control of the source, including acts of God, which situation requires immediate corrective action to restore normal operation, and that causes the source to exceed a technology-based emission limitation under the permit, due to unavoidable increases in emissions attributable to the emergency. An emergency shall not include noncompliance to the extent caused by improperly designed equipment, lack of preventative maintenance, careless or improper operation, or operator error.”

B. The Permit Contains Conditions That Do Not Comply with State Regulations.

The following conditions in the permit fail to comply with Illinois Administrative Code provisions that are part of the Illinois State Implementation Plan.

- Condition 7.1.9(e) does not meet the requirements of 35 IAC § 217.712 (g), which requires that the Permittee submit copies of any records and data required by this Section to the Agency within 30 days after receipt of a written request by the Agency. It is not readily apparent where this condition is included in the permit. A review of Condition 7.1.9 on recordkeeping, Condition 7.1.10 on reporting, Condition 7.1.8 on monitoring and the recordkeeping and reporting requirements in Conditions 5.6 and 5.7 respectively fails to indicate the inclusion of this requirement. Condition 7.1.9(e) must be revised to include this recordkeeping requirement.
- Condition 7.1.10 does not meet the requirements of 35 IAC § 201.405. 35 IAC § 201.405 on Excess Emission Reporting states that:

Owners and operators of sources subject to the continuous monitoring requirements of this Subpart shall report the following information:

a) For periods of emissions in excess of any emission limitation applicable to the source adopted by the Board:

- 1) The starting date and time of the excess emissions;
- 2) The duration of the excess emissions;
- 3) The magnitude of excess emissions;
- 4) The cause of the excess emissions, if known;
- 5) Corrective actions and actions taken to lessen the emissions;
- 6) The operating status of the monitoring system, including the dates and times of any periods during which it was inoperative; . . .

Condition 7.1.10 fails to include several of these requirements in (c) Reporting of SO₂ Emissions, (d) Reporting of NO_x Emissions, and (e) Reporting of Opacity and Particulate Emissions. 35 IAC § 201.405(a)(3) is missing from (c) and (d). While these two permit conditions each require “a copy of the records for the excess emission, as maintained pursuant to Condition 7.1.9[(d)(ii) and (e)(ii) respectively]” those recordkeeping requirements only require records of emissions and not records of “magnitude of excess emissions.” Further, (e) fails to include 35 IAC § 201.405(a)(6) requiring the report to include “the operating status of the monitoring system, including the dates and times of any periods during which it was inoperative.” This condition must be rewritten to meet all of the requirements of 35 IAC § 201.405.

C. The Permit Fails to Include Conditions That Meet the Legal Requirements for Monitoring.

The necessary monitoring is strictly regulated by 40 C.F.R. § 70.6(a)(3)(i), which states that:

Each permit shall contain the following requirements with respect to monitoring:
(A) All monitoring and analysis procedures or test methods required under applicable monitoring and testing requirements, including part 64 of this chapter and any other procedures and methods that may be promulgated pursuant to sections 114(a)(3) or 504(b) of the Act. . . . (B) Where the applicable requirement does not require periodic testing or instrumental or noninstrumental monitoring (which may consist of recordkeeping designed to serve as monitoring), periodic monitoring sufficient to yield reliable data from the relevant time period that are representative of the source's compliance with the permit

40 C.F.R. § 70.6(c)(1) states that “All part 70 permits shall contain . . . testing, monitoring, reporting, and recordkeeping requirements sufficient to assure compliance with the terms and conditions of the permit.” CAA § 504 and 40 C.F.R. § 70.6(a)(3) require that permits indicate the frequency at which testing shall take place. There are a number of provisions in the permit that fail to meet these requirements.

- Condition 7.5 fails to require any monitoring whatsoever in Condition 7.5.8 and fails provide a frequency at which testing shall take place as required by CAA § 504 and 40 C.F.R. § 70.6(a)(3). Testing is only required in response to a written request by Illinois EPA. This barebones testing fails to comply with 40 C.F.R. § 70.6(a)(3) and 40 C.F.R. § 70.6(c)(1). Consequently, without such monitoring conditions, it is not possible for the public, the U.S. EPA and the IEPA to ensure that Permittee is complying with applicable emissions standards. This condition must be rewritten to include sufficient monitoring and recordkeeping.
- Condition 7.5.4 requires the unit to comply with NO_x standards pursuant to 40 C.F.R. § 60.44b, opacity standards contained in Condition 5.2.2(b) pursuant to 35 IAC § 214.304, and CO standards pursuant to 35 IAC § 216.121. However, in Condition 7.5.7, Permittee is required to test emissions of these pollutants only in response to “a written request from the Illinois EPA.” In violations of 40 C.F.R. § 70.6(a)(3)(i), Condition 7.5 fails to include testing and monitoring provisions sufficient to verify the Permittee’s compliance with Condition 7.5.4, and Condition 5.2.2(b), 35 IAC § 214.304, and 35 IAC § 216.121 as applied to Permittee in Condition 7.5. This condition must be rewritten to include sufficient monitoring and recordkeeping.
- Conditions 7.7.4 requires the unit to comply with opacity standards contained in Condition 5.2.2(b) pursuant to 35 IAC § 214.304 and to comply with sulfur dioxide standards from 35 IAC § 214.301. However, in violation of 40 C.F.R. § 70.6(a)(3)(i), Condition 7.6 fails to include testing and monitoring provisions sufficient to verify the Permittee’s compliance with Condition 7.6.4, and Condition 5.2.2(b), 35 IAC § 214.304, and 35 IAC § 214.301 as applied to Permittee in Condition 7.6. Monitoring is required because the turbines are fired by distillate fuel oil. This condition must be rewritten to include sufficient monitoring and recordkeeping.

- Condition 7.7.8 fails to provide a frequency at which monitoring shall take place as required by CAA § 504 and 40 C.F.R. § 70.6(a)(3). Further, it fails to require that records be kept of the monitoring and that results of that monitoring be reported to the Illinois EPA, as required by 40 C.F.R. § 70.6(c)(1). Consequently, without such conditions, it is not possible for the public, the U.S. EPA and the IEPA to ensure that Permittee is complying with applicable emissions standards. This condition must be rewritten to include sufficient monitoring and recordkeeping.

D. The Permit Contains Conditions That Violate the Requirements Related to Credible Evidence.

The U.S. EPA has the authority to bring enforcement actions “on the basis of any information available to the Administrator.” 42 U.S.C. § 7413 (emphasis added). This has been interpreted to mean any “credible evidence” that a court would accepted. U.S. EPA Region 9 Title V Permit Review Guidelines, Sept. 9 1999, p. III-46. U.S. EPA has stated that this means that “any credible evidence can be used to show a violation of or, conversely, demonstrate compliance with an emissions limit.” *Id.* Consequently, permit language may not exclude the use of any data that may provide credible evidence. *Id.* Specifically in regards to monitoring, the U.S. EPA has viewed permit conditions that provide that compliance will be demonstrated by certain test methods as tacitly excluding the use of other data to demonstrate compliance or noncompliance and, therefore, those conditions as violating the credible evidence rules. “The permit must specify the source’s obligations for monitoring in a way that does not establish an exclusive link between the test method and the emissions limit.” *Id.*

The Joliet proposed Title V permit contains numerous conditions which violate the credible evidence rules. While the permit does include Condition 9.1.3, which allows the use of other credible evidence notwithstanding the identified compliance practices, this is not sufficient to negate the violations of the credible evidence rules contained in other conditions that limit credible evidence. In general, these conditions violate the credible evidence rule because they specify that certain types of data be used to determine compliance. “Permit language may not [s]pecify that only certain types of data may be used to determine compliance.” *Id.* Identifying such data is not necessary according to the U.S. EPA. “In general, the permit should simply tell the source what it must do . . . It is not necessary to say that a term assures compliance or that an activity is required to assure compliance.” *Id.* at III-47. *See also* Credible Evidence Revisions, 62 Fed. Reg. 8314; 40 C.F.R. § 51.212; 40 C.F.R. § 52.23. The following conditions in the permit unacceptably limit credible evidence in violation of 42 U.S.C. § 7413 and such limitations must be deleted.

- Condition 5.2.2(a) unacceptably limits credible evidence by stating how compliance with that requirement shall be based.
- Condition 7.1.8(b) provides that continuous monitoring for SO₂ from the affected boilers “shall be used to demonstrate compliance with the limits in Condition 7.1.4(c)” By establishing an exclusive link between the test method and emissions limit, Condition 7.1.8(b) unacceptably limits credible evidence.

- Condition 7.1.12(d) is completely contrary to the credible evidence rule and citizens' right to enforce the permit by stating that "compliance is assumed to be inherent." This language must be deleted from the Condition 7.1.12(d).
- Further, by including a limited list of "Compliance Procedures", the following conditions unacceptably limit credible evidence in violation of 42 U.S.C. §7413:
 - Condition 5.9.1
 - Condition 7.1.12
 - Condition 7.2.12
 - Condition 7.3.12
 - Condition 7.4.12
 - Condition 7.5.12
 - Condition 7.6.12
 - Condition 7.7.12

II. THE PERMIT CONDITIONS REGARDING STARTUP, MALFUNCTION & BREAKDOWN VIOLATE U.S. EPA POLICY.

The permit must include more stringent requirements regarding violations that take place during startup, malfunction and breakdown. Such requirements must be consistent with the U.S. EPA's guidance regarding excess emissions during malfunctions, startup and shutdown. See Kathleen M. Bennett, Memorandum "Policy on Excess Emissions During Startup, Shutdown, Maintenance, and Malfunctions," September 28, 1982 ("Bennett Mem."); Steven A. Herman and Robert Perciasepe, Memorandum "State Implementation Plans: Policy Regarding Excess Emissions During Malfunctions, Startup, and Shutdown," September 20, 1999 ("Herman Mem.").

Automatic exemptions for excess emissions during startup, shutdown and malfunction are prohibited. Bennett Mem. at 1. "[A]ll periods of excess emissions are violations of the applicable standard." Id. The U.S. EPA is particularly intolerant of excess emissions during start-up and shutdown. "Start-up and shutdown of process equipment are part of the normal operation of a source and should be accounted for in the design and implementation or the operating procedure for the process and control equipment. Accordingly, it is reasonable to expect that careful planning will eliminate violations of emission limitations during such periods." Id. at 3.

U.S. EPA does give the states some discretion, however, to forego enforcement actions for some instances of excess emissions. At the state's discretion, sources are permitted to make a demonstration that excess emissions were due to an unavoidable occurrence in order to preclude an enforcement action. Id. at 1. However, state discretion is limited in this context to (1) refraining from taking an enforcement action under circumstances when excess emissions were caused by events entirely beyond the control of the owner or operators; (2) excusing a source from penalties in the context of an enforcement action for excess emissions if the source can demonstrate that it meets certain criteria (an "affirmative defense"); and (3) providing such an affirmative defense in actions for penalties but not in actions for injunctive relief. Herman Mem. at 1-2. States may not excuse or authorize excess emissions that would otherwise be violations

of applicable emission limitations. 35 IAC § 201.262 lays out the State’s requirements regarding malfunction, breakdown and startup. The inconsistency of this provision of the regulations with the standards provided in the guidance memo above is an issue for another day. Nonetheless, Joliet’s Title V permit can and should be made consistent with the two guidance memos. Consequently, the following changes to all conditions regarding excess emissions during startup, malfunction and breakdown need to be made.

- In the conditions listed below, the permit “authorize[s]” “continue[d] operation . . . in violation . . . of the applicable requirements . . .” or “the applicable standards . . .” The implication of this language is unclear in terms of whether it is simply providing an affirmative defense, which is permissible, or excusing a violation, which is impermissible. The following conditions must be revised so that they make clear that excess emissions during these periods are still violations and that it is only providing an “affirmative defense” as discussed above. Further, the following conditions must be revised to make clear that this affirmative defense is available only in actions for penalties and not in actions for injunctive relief:
 - Condition 7.1.3(b)
 - Condition 7.1.3(c)
 - Condition 7.2.3(b)
 - Condition 7.3.3(b)
 - Condition 7.4.3(b)
 - Condition 7.5.3(b)
 - Condition 7.5.3(c)
 - Condition 7.6.3(b)
 - Condition 7.6.3(c)
 - Condition 7.7.3(b)
 - Condition 7.7.3(c)
- U.S. EPA policy requires that the Permittee must demonstrate that “all reasonable efforts have been made to minimize startup emissions, duration of individual startups and frequency of startups.” Herman Mem., Attachment “Policy on Excess Emissions During Malfunctions, Startup, and Shutdown.” More specifically regarding excess emissions during startups, U.S. EPA policy indicates that States must require of Permittees that: (1) Any bypass leading to excess emissions be unavoidable and necessary to prevent loss of life, personal injury, or severe property damage; (2) The facility be operated in a manner consistent with good practice for minimizing emissions; (3) All possible steps be taken to minimize the impact of excess emissions on ambient air quality; (4) All emission monitoring systems be kept in operation if at all possible; and (5) The Permittee properly and promptly notify the Agency. Herman Mem., Attachment “Policy on Excess Emissions During Malfunctions, Startup, and Shutdown.” Further for the affirmative defense be available, Permittee must be required to demonstrate its adherence to the above requirements and Permittee must demonstrate that: (1) Periods of excess emissions during startup and shutdown were short, infrequent and could not have been prevented through careful planning and design; and (2) Excess emissions were not part of a recurring pattern indicative of inadequate design, operation or maintenance.

Herman Mem. Attachment “Policy on Excess Emissions During Malfunctions, Startup, and Shutdown.” These requirements must be included in the following conditions:

Condition 7.1.3(b)

Condition 7.5.3(b)

Condition 7.6.3(b)

Condition 7.7.3(b)

- The following conditions regarding excess emissions during malfunction must be revised to include a definition of malfunction. Malfunction is vague and renders the condition not practically enforceable. The following definition of malfunction should be included: “a sudden and unavoidable breakdown of process or control equipment.” Herman Mem. Attachment “Policy on Excess Emissions During Malfunctions, Startup, and Shutdown.” More specifically regarding excess emissions during malfunctions and breakdowns, U.S. EPA policy indicates that States must require of Permittees that: (1) The air pollution control equipment and processes be maintained and operated in a manner consistent with good practice for minimizing emissions; (2) Repairs be made in an expeditious fashion when the operator knows or should know that applicable emission limitations are being exceeded; (3) Amount and duration of excess emissions be minimized to the maximum extent practicable; (4) All possible steps be taken to minimize the impact of excess emissions on ambient air quality; and (5) All emission monitoring systems be kept in operation when possible. Herman Mem., Attachment “Policy on Excess Emissions During Malfunctions, Startup, and Shutdown.” For the affirmative defense to be available, Permittee must be required to demonstrate its adherence to the above requirements and must be required to demonstrate that: (1) The excess emissions were caused by a sudden, unavoidable breakdown of technology, beyond the control of the owner or operator; (2) The excess emissions (i) did not stem from any activity or event that could have been foreseen and avoided, or planned for, and (ii) could not have been avoided by better operation and maintenance practices; and (3) The excess emissions were not part of a recurring pattern indicative of inadequate design, operation, or maintenance. Herman Mem. Attachment “Policy on Excess Emissions During Malfunctions, Startup, and Shutdown.” These requirements must be included in the following conditions:

Condition 7.1.3(c)

Condition 7.2.3(b)

Condition 7.3.3(b)

Condition 7.4.3(b)

Condition 7.5.3(c)

Condition 7.6.3(c)

Condition 7.7.3(c)

- Finally, regarding both startups and malfunctions, the Permittee’s actions in response to excess emissions must be documented by a properly signed, contemporaneous operating log. Herman Mem. Attachment “Policy on Excess Emissions During Malfunctions, Startup, and Shutdown.” The following conditions must be revised to fully reflect this requirement.

Condition 7.1.9(g):

Condition 7.1.9(h)(ii)

Condition 7.2.9(g)(ii)
Condition 7.3.9(f)(ii)
Condition 7.4.9(f)(ii)
Condition 7.5.9(c)
Condition 7.5.9(d)(ii)
Condition 7.6.9(e)
Condition 7.6.9(f)(ii)
Condition 7.7.9(e)
Condition 7.7.9(f)

III. THE PERMIT CONTAINS CONDITIONS THAT VIOLATE U.S. EPA POLICY REQUIRING A PERMIT TO BE PRACTICALLY ENFORCEABLE.

The Joliet proposed Title V permit contains numerous conditions which are not practically enforceable. For a permit condition to be enforceable, the permit must leave no doubt as to exactly what the facility must do to comply with the condition. U.S. EPA Region 9 Title V Permit Review Guidelines, Sept. 9 1999, p. III-46.

A permit is enforceable as a practical matter (or practically enforceable) if permit conditions establish a clear legal obligation for the source [and] allow compliance to be verified. Providing the source with clear information goes beyond identifying the applicable requirement. It is also important that permit conditions be unambiguous and do not contain language which may intentionally or unintentionally prevent enforcement. Id.

Although some of the language identified below (i.e., “reasonable” or “significant”) may be quoting directly from the Act or regulations, this is not sufficient to justify the Illinois E.P.A.’s use of this language verbatim in the permit and overcome the practical enforceability problem. It is the responsibility of the Agency to interpret and implement the Act and regulations. One obligation under this responsibility involves translating language from the Act or regulations that would not be practically enforceable in a permit to language to be included in a permit that clearly and specifically identifies what a facility must do.

A. Permit Conditions That Reference Undefined Procedures, Documents, Etc., Are Not Practically Enforceable.

A permit condition is not practically enforceable if it references documents, procedures, instructions, etc., that are described in a manner that is insufficient to allow such items and the content thereof to be specifically, finally and conclusively identified. U.S. EPA Region 9 Title V Permit Review Guidelines, Sept. 9 1999, p. III-46. Further, “specific numbers must be incorporated into the permit rather than a reference to a document which may not include clear requirements.” Id. at III-52. Terminology such as “reasonable precautions” or “best engineering practices” must be defined. Id. at III-52, III-53. As noted above, for a permit condition to be enforceable, the permit must leave no doubt as to exactly what the facility must do to comply with the condition. Id. The following conditions are not practically enforceable and are

therefore impermissible because they fail to sufficiently identify referenced procedures, documents, instructions, etc.

- The reference to the alternative of “other written instructions” is vague and fails to specify exactly what instructions the Permittee shall be following, where those instructions come from, etc. As a result, this term and therefore the whole condition are not practically enforceable. U.S. EPA Region 9 Title V Permit Review Guidelines, Sept. 9 1999, p. III-46. Consequently, the following conditions must be rewritten to delete the references to “other written instructions” unless those instructions are precisely identified:
Condition 7.1.3(b)(ii)
Condition 7.5.3(b)(ii)
- Condition 7.1.7(b)(i) provides that the Permittee shall perform testing at “other operating conditions that are representative of normal operations.” This is vague and not practically enforceable. U.S. EPA Region 9 Title V Permit Review Guidelines, Sept. 9 1999, III-46. The condition must be rewritten and clarified with the specific conditions that Permittee must meet and actions that Permittee must take included in the permit. The exact operating conditions at which testing must be performed must be specifically described in this condition.
- Conditions 7.1.8(a)(i) and (b) provide that “monitoring equipment shall be operated pursuant to written monitoring procedures that include a quality assurance/control plan.” Further, Condition 7.1.8(a)(i) goes on to state “which procedures shall reflect the manufacturer’s instructions as adapted by the Permittee based on its experience.” The terminology “written monitoring procedures” is vague in that it fails to identify the content of the written monitoring procedures, the process of developing such procedures, and other necessary details. It also allows the Permittee unlimited discretion in developing such procedures. Condition 7.1.8(a)(i) allows Permittee even further discretion in adapting the manufacturer’s instructions as it sees fit, limited only by Permittee’s “experience” with the term “experience” left unclear and completely undefined. As a result, the above terminology and therefore both Conditions 7.1.8(a)(i) and (b) are not practically enforceable. U.S. EPA Region 9 Title V Permit Review Guidelines, Sept. 9 1999, III-46. Consequently, Conditions 7.1.8(a)(i) and (b) must be completely rewritten and clarified.
- Condition 7.6.3(b)(ii)(A) and 7.7.3(b)(ii)(A) requires the Permittee to implement “established startup procedures” “to minimize startup emissions, the duration of startups, and minimize the frequency of startups.” “Established startup procedures” is vague because it fails to indicate with specificity what procedures the Permittee shall be following. This terminology and therefore the whole condition are, consequently, not practically enforceable. U.S. EPA Region 9 Title V Permit Review Guidelines, Sept. 9 1999, p. III-46. This must be rewritten to indicate exactly what actions Permittee must take during startup.
- Condition 8.5. provides that “Tests . . . shall be conducted using standard test methods.” “Standard test methods” must be defined. At a minimum, the permit must cite a regulation or statute where standard test methods are defined. As it is written, the terminology is vague,

allows the Permittee too much discretion in deciding what qualifies as standard test methods, and as a result the condition is not practically enforceable. U.S. EPA Region 9 Title V Permit Review Guidelines, Sept. 9 1999, p. III-46. This must be rewritten such that it identifies exactly what test methods Permittee must use.

B. Permit Conditions That Contain Imprecise Timeframes Are Not Practically Enforceable.

The permit contains numerous conditions that provide timeframes in terms that are vague and subjective and therefore not practically enforceable. “Without [a time limit] defined in the permit, the burden may be on the permitting authority to prove that the source could or should have acted sooner.” U.S. EPA Region 9 Title V Permit Review Guidelines, Sept. 9 1999, p. III-51. The permit must “[r]equire that an outer time limit be set on any actions required to occur . . .” Id. Consequently, the following conditions are not practically enforceable and must be revised to include specific timeframes.

- Condition 5.2.3(b) provides that Permittee shall amend its operating program from “time to time” so that it is “current.” These timeframes are vague, subjective and therefore not practically enforceable. U.S. EPA Region 9 Title V Permit Review Guidelines, Sept. 9 1999, p. III-51. A set frequency or time period by which Permittee shall amend the operating program must be imposed upon Permittee instead.
- Condition 5.2.3(c) provides that paved areas shall be cleaned on a “regular” basis. This timeframe is vague, subjective and therefore not practically enforceable. U.S. EPA Region 9 Title V Permit Review Guidelines, Sept. 9 1999, p. III-51. A set frequency or time period by which Permittee shall clean paved areas must be imposed upon Permittee instead.
- Condition 5.2.7 requires Permittee to “immediately” implement the episode action plan. The timeframe “immediately” is vague, subjective and therefore not practically enforceable. U.S. EPA Region 9 Title V Permit Review Guidelines, Sept. 9 1999, p. III-51. A set time period by which Permittee shall implement the plan must be specified instead.
- Condition 7.1.3(b)(ii)(D) requires only “timely energization of the electrostatic precipitator as soon as this may be safely accomplished” This condition must include a specific timeframe denoted in hours, minutes, or the like by which the ESP must be energized. The terms “timely” and “as soon as” are vague and allow the Permittee too much discretion in determining when the ESP may be energized. This condition and the included indefinite timeframe is not practically enforceable and must be rewritten. U.S. EPA Region 9 Title V Permit Review Guidelines, Sept. 9 1999, p. III-51.
- Condition 7.1.8(a)(iv) provides that “monitoring pursuant to 35 IAC § 201.401 is not applicable during any period of a monitoring system or device malfunction if the Permittee demonstrates that the malfunction was unavoidable and is being repaired as expeditiously as practicable, pursuant to 35 IAC § 201.404.” The language “as expeditiously as practicable” is vague and not defined and therefore not practically enforceable. U.S. EPA Region 9 Title

V Permit Review Guidelines, Sept. 9 1999, III-51. A specific timeframe within which Permittee must conduct the repair must be provided.

- The following conditions in the permit include the language “The Permittee shall notify the Illinois EPA’s Regional Officeas soon as possible” The terminology “as soon as possible” is vague and allows the Permittee too much discretion in determining when the IEPA may be notified and, consequently, the conditions are not practically enforceable. U.S. EPA Region 9 Title V Permit Review Guidelines, Sept. 9 1999, III-51. The following conditions must be rewritten to include a specific timeframe denoted in hours, minutes, or the like by which the IEPA must be notified:
Condition 7.1.10(b)(i)
Condition 7.2.10(b)(i)
Condition 7.3.10(b)(i)
Condition 7.4.10(b)(i)
Condition 7.5.10(b)(i)
Condition 7.6.10(b)(i)
Condition 7.7.10(b)(i)
- Conditions in the permit require the Permittee to keep records “which shall be kept up to date.” This timing is vague and therefore not practically enforceable. U.S. EPA Region 9 Title V Permit Review Guidelines, Sept. 9 1999, III-51. The following conditions must require a specific frequency at which records shall be updated or a timeframe within which records shall be updated after a change at the operations:
Condition 7.2.9(a)
Condition 7.2.9(b)

C. Permit Conditions That Use the Term “Reasonable” Are Not Practically Enforceable.

The permit uses the terms “reasonable” and “reasonably” in a number of conditions. These terms are vague, subjective, and allow the Permittee too much discretion in determining whether certain actions are reasonable. For a permit condition to be enforceable, the permit must leave no doubt as to exactly what the facility must do to comply with the condition. U.S. EPA Region 9 Title V Permit Review Guidelines, Sept. 9 1999, p. III-46. Use of the vague terms “reasonable” and “reasonably” leads to the conditions being not practically enforceable. U.S. EPA Region 9 Title V Permit Review Guidelines, Sept. 9 1999, III-52.

- The conditions listed below are not practically enforceable because they require only that the “affected boiler . . . reasonably be repaired or removed” and that Permittee take only “reasonable steps to minimize emissions.” Inclusion of the terms “reasonable” and “reasonably” renders the condition not practically enforceable. U.S. EPA Region 9 Title V Permit Review Guidelines, Sept. 9 1999, III-52. The term “reasonably” must be deleted and the term “reasonable” must be replaced with “all available” in the following conditions; further, the exact steps that the Permittee shall take to minimize emissions must be included:
Condition 7.1.3(c)(ii)

Condition 7.2.3(b)(ii)
Condition 7.3.3(b)(ii)
Condition 7.4.3(b)(ii)
Condition 7.5.3(b)(ii)

- The permit provides that “the Permittee shall comply with all reasonable directives of the Illinois EPA.” The use of the term “reasonable” is vague and allows the Permittee too much discretion in determining which directives of the IEPA’s are reasonable and therefore discretion in determining which of the directives of the IEPA’s that it will comply with. By including the term “reasonable”, it renders the condition not practically enforceable. U.S. EPA Region 9 Title V Permit Review Guidelines, Sept. 9 1999, III-52. The term “reasonable” must be deleted in the following conditions and the Permittee must be required to follow all IEPA directives:
Condition 7.1.3(c)(iv)
Condition 7.2.3(c)(iv)
Condition 7.3.3(c)(iv)
Condition 7.4.3(c)(iv)
Condition 7.5.3(c)(iv)
Condition 7.6.3(c)(iv)
Condition 7.7.3(c)(iv)
- The Permit also states that “The Permittee shall implement and maintain control measures for the affected operations . . . that . . . provide a reasonable assurance of compliance . . .” By using the term “reasonable” the permit fails to require actual compliance and it renders the condition vague and not practically enforceable. U.S. EPA Region 9 Title V Permit Review Guidelines, Sept. 9 1999, III-52. The term “reasonable” is subjective and allows the Permittee too much discretion conclude that it need only do the bare minimum or less to comply with the cited regulations. The term “reasonable” must be deleted from the following conditions and complete compliance must be required of the Permittee:
Condition 7.2.6(b)(i)
Condition 7.3.6(a)(i)
Condition 7.4.6(a)(i)

D. Permit Conditions That Allow for Too Much Agency Discretion Are Not Practically Enforceable.

The permit has numerous provisions that are not practically enforceable because the condition allows for too much agency discretion. This results in citizens not being able to enforce the permit condition without access to a determination by Illinois EPA. U.S. EPA Region 9 Title V Permit Review Guidelines, Sept. 9 1999, III-49. Further, “citizens would have difficulty disputing a finding by the Director that the source had met the requirements of that condition.” Id. Finally, such agency discretion allows the source to negotiate the condition “off permit” and bypass the permitting process requirements and procedures. Id. Consequently, the following conditions are not practically enforceable and must be revised to require specific actions or set specific limits on Permittee instead of allowing excessive agency discretion.

- Condition 5.2.3(a) provides for Illinois EPA review of the operating program regarding fugitive particulate matter. Allowing this sort of Agency discretion renders the condition not practically enforceable. U.S. EPA Region 9 Title V Permit Review Guidelines, Sept. 9 1999, III-49. The condition is also vague because it fails to indicate what this review entails, for instance, whether review of the program involves Illinois EPA approval or whether review provides Illinois EPA with the opportunity to alter the program. The condition must be rewritten and clarified with the specific conditions that Permittee must meet and actions that Permittee must take included in the permit.
- Condition 7.1.7(a)(i)(B) allows the Illinois EPA to waive the requirement. This is not practically enforceable because citizens would have trouble disputing a finding by the Director that the requirement should be waived. U.S. EPA Region 9 Title V Permit Review Guidelines, Sept. 9 1999, III-49. The condition must be rewritten and clarified with the specific conditions that Permittee must meet and actions that Permittee must take included in the permit.
- Condition 7.1.7(c) provides for Illinois EPA review and approval of the test plan to be utilized along with allowing for IEPA to impose additional conditions through the test plan. Allowing this sort of Agency discretion renders the condition not practically enforceable because citizens would not be able to enforce the permit condition without access to a determination by IEPA and would have difficulty challenging a decision by the IEPA to approve the test plan. U.S. EPA Region 9 Title V Permit Review Guidelines, Sept. 9 1999, III-49. Further, this agency discretion allows the source to negotiate the test plan “off permit” and bypass the permitting process requirements and procedures. Id. The condition must be rewritten and clarified with the specific conditions that Permittee must meet and actions that Permittee must take included in the permit.
- Condition 7.2.6(a) states that “Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Illinois EPA or the USEPA” This condition again is not practically enforceable because the decision as to whether the condition is met is left to the permitting authority. U.S. EPA Region 9 Title V Permit Review Guidelines, Sept. 9 1999, p. III-49. Citizens are not able to enforce the permit condition without access to a “determination” by IEPA or USEPA. Id. Further, citizens would have difficulty disputing a finding by the Director that acceptable operating and maintenance procedures are being used. Id. Such agency discretion allows the source to negotiate the operating and maintenance procedures “off permit” and bypass the permitting process requirements and procedures. Id. In addition, the term “acceptable” is vague and subjective and therefore not practically enforceable. The term “acceptable” and the language providing agency discretion must be removed and specific actions must be required of the Permittee instead.

D. Certain Other Permit Conditions That Contain Vague Language Are Not Practically Enforceable.

The permit has a number of other conditions that are not practically enforceable because they contain language that is vague. For a permit condition to be enforceable, the permit must leave no doubt as to exactly what the facility must do to comply with the condition. U.S. EPA Region 9 Title V Permit Review Guidelines, Sept. 9 1999, p. III-46.

- Condition 5.2.3(a) requires the operating program to “significantly reduce fugitive particulate matter emissions.” “Significantly” is vague and therefore not practically enforceable. U.S. EPA Region 9 Title V Permit Review Guidelines, Sept. 9 1999, III-51. “‘Significant’ must be defined for the permit to be enforceable.” Id. A set level by which Permittee shall reduce fugitive particulate matter emissions must be imposed upon Permittee instead.
- Condition 5.2.7 discusses the Episode Action Plan but the provisions in this condition are vague and lacking sufficient detail to be practically enforceable. U.S. EPA Region 9 Title V Permit Review Guidelines, Sept. 9 1999, III-46. In Condition 5.2.7(a), episode action plan must be defined and the contents of the plan must be delineated in much greater detail with the specific conditions that Permittee must meet and actions that Permittee must take included in the permit. Condition 5.2.7(b) requires that Permittee implement only the “appropriate” steps in the plan. The term “appropriate” is vague and not practically enforceable. U.S. EPA Region 9 Title V Permit Review Guidelines, Sept. 9 1999, III-46. Since Permittee drafts the plan for itself, it would be expected that all of the steps included in the plan are appropriate and it is therefore reasonable to require Permittee to implement all the steps in the plan consistent with the level of alert or emergency. Condition 5.2.7(c) uses the term “changed.” This term is subjective and not practically enforceable. U.S. EPA Region 9 Title V Permit Review Guidelines, Sept. 9 1999, III-46. It must be defined. Finally, the agency is able to determine whether the facility is (1) required to have a plan pursuant to 35 IAC § 244.142 and (2) located in the City of Chicago. The agency must state affirmatively in 5.2.7(d) whether these conditions apply to Permittee.
- Conditions that use the term “deviation” are not practically enforceable because the term is vague. U.S. EPA Region 9 Title V Permit Review Guidelines, Sept. 9 1999, III-46. This key term must be defined in the following conditions:
 - Condition 5.7.1
 - Condition 7.1.10(g)
 - Condition 7.2.10(a)
 - Condition 7.3.10(a)
 - Condition 7.4.10(a)
 - Condition 7.5.10(c)
 - Condition 7.6.10(a)
 - Condition 7.7.10(a)
- The condition that “The Permittee may obtain an extension of or up to a total of 72 hours* from the Illinois EPA, Air Regional Office unless extraordinary circumstances exist” is

unclear. This language is inconsistent with the following sentence which allows the IEPA to grant a longer extension if “unusual circumstances exist”, which seems to set a lower threshold than “extraordinary circumstances.” Consequently, the two sentences are inconsistent with each other and seem to apply to different circumstances although it is not clear in what ways they apply. Furthermore, the terminology “extraordinary circumstances” and “unusual circumstances” is not defined and unclear in general and therefore not practically enforceable as written, U.S. EPA Region 9 Title V Permit Review Guidelines, Sept. 9 1999, p. III-46, and must be rewritten and clarified in all of the following conditions:

Condition 7.1.3(c)(ii)

Condition 7.2.3(b)(ii)

Condition 7.3.3(b)(ii)

Condition 7.4.3(b)(ii)

- Condition 7.1.7(b)(ii) provides that “[m]easurements shall be taken at an appropriate location.” The term “appropriate” is vague and not practically enforceable. U.S. EPA Region 9 Title V Permit Review Guidelines, Sept. 9 1999, III-46. The exact location at which measurements must be taken must be specifically identified in this condition.
- Condition 7.1.8(d) is not practically enforceable because it is stated in the conditional. It places the burden on the Permittee or the citizen enforcing the condition of confirming that the requirements are consistent with 40 CFR Part 75. The Illinois EPA must ensure that all requirements included in the permit are consistent with 40 CFR Part 75.
- Condition 7.1.10(d)(ii) must be written more clearly. It gives some recordkeeping requirements by way of example but it is not clear whether these are required actions from 40 C.F.R. Part 75 or mere suggestions. Examples are not practically enforceable and the permit must provide specifically required actions of the Permittee instead. U.S. EPA Region 9 Title V Permit Review Guidelines, Sept. 9 1999, p. III-46.
- Condition 7.2.6(a) states that “the Permittee shall, to the extent practicable, maintain and operate any affected operation in a manner consistent with good air pollution control practice for minimizing emissions.” The terminology “to the extent practicable” is vague and grants unlimited discretion to the Permittee to determine what is practicable and consequently results in this condition failing to be practically enforceable. U.S. EPA Region 9 Title V Permit Review Guidelines, Sept. 9 1999, p. III-46. The terminology “to the extent practicable” must be deleted. In addition, “good air pollution control practice” is vague and not defined and also therefore not practically enforceable. U.S. EPA Region 9 Title V Permit Review Guidelines, Sept. 9 1999, III-53. Good air pollution control practice must be defined with the exact actions that the Permittee needs to take delineated. Consequently, 7.2.6(a) needs to be rewritten such that it is clear, specifically lists what actions Permittee must take, and vague language is eliminated.
- The Permit includes the language “such as” in the following conditions. This language is vague and transforms the language that follows “such as” into examples. Examples are not practically enforceable. U.S. EPA Region 9 Title V Permit Review Guidelines, Sept. 9 1999,

p. III-46. This is especially troublesome in the following conditions because this language is used regarding the control measures. The permit must require specific control measures instead in the following conditions:

Condition 7.2.6(b)(i)

Condition 7.3.6(a)(i)

Condition 7.4.6(a)(i)

- It is unclear what is meant by “A summary of compliance compared to the established control measures” in the following conditions. This language is vague and therefore not practically enforceable. U.S. EPA Region 9 Title V Permit Review Guidelines, Sept. 9 1999, p. III-46. The following conditions must be clarified:

Condition 7.3.9(c)(v)

Condition 7.4.9(c)(v)

- Several conditions are devoid of practically enforceable substantive requirements. They state that “The Permittee shall operate and maintain each affected process with the control measures identified in Condition 7.4.9(b)” yet 7.4.9(b) does not identify any control measures beyond what are currently being implemented at the facility, which could be none at all. The following conditions must be rewritten to include practically enforceable substantive requirements:

Condition 7.2.6(b)(ii)

Condition 7.3.6(a)(ii)

Condition 7.4.6(a)(ii)

- Condition 7.5.4(a)(iii) states that “the Permittee shall maintain and operate the affected boiler, including associated air pollution control equipment, in a manner consistent with good air pollution control practice for minimizing emissions.” The terminology “good air pollution control practice” is vague, not defined and, therefore, not practically enforceable. U.S. EPA Region 9 Title V Permit Review Guidelines, Sept. 9 1999, III-53. Good air pollution control practice must be defined with the exact actions that the Permittee needs to take delineated. Consequently, 7.2.6(a) needs to be rewritten such that it is clear, specifically lists what actions Permittee must take, and vague language is eliminated.
- The compliance certification contained as a Standard Permit Condition in Condition 9.8 is inadequate. It is vague and therefore not practically enforceable. U.S. EPA Region 9 Title V Permit Review Guidelines, Sept. 9 1999, p. III-46. It indicates that the compliance certification shall be submitted no later than May 1. This is unclear as to whether that means May 1 of every year (if so, this must be specified) and is therefore not practically enforceable.
- Condition 9.10.2(i) includes the language “normally,” which is vague and subjective. This term and therefore the whole condition are not practically enforceable. U.S. EPA Region 9 Title V Permit Review Guidelines, Sept. 9 1999, p. III-51. The language “normally” must be deleted.

IV. THE PERMIT IS INADEQUATE BECAUSE IT ALLOWS THE FACILITY TO CONTINUE TO CAUSE SEVERE NEGATIVE HEALTH EFFECTS.

Joliet's Title V permitting process provides an opportunity for Illinois EPA to take action to set limits on the emissions from Joliet and reduce the severe negative health impacts that the plant has on the residents of both Joliet and the greater Chicago region. Approximately two-thirds of the negative health impacts Joliet causes could be avoided by requiring the installation of modern pollution control equipment at Joliet. Jonathan Levy et al., Estimated Public Health Impacts of Criteria Pollutant Air Emissions from Nine Fossil Fueled Power Plants in Illinois, Harvard School of Public Health, January 2001, at 106, tbl. 9. The permit as proposed poses cause for grave concern because it allows the facility to continue to operate in a manner that causes severe health impacts on the surrounding communities.

Joliet is located immediately adjacent to densely populated residential neighborhoods. According to Midwest Generation, the New Source Review rules do not apply to that boiler because it is grandfathered and has never been modified. Joliet emits twice as much SO₂ as a newer plant and fifty times more pollution than a modern natural gas plant.

A study from the Harvard School of Public Health examines nine coal-fired power plants in northern Illinois, including Joliet, and focuses on health impacts of particulate matter. Jonathan Levy et al., Estimated Public Health Impacts of Criteria Pollutant Air Emissions from Nine Fossil Fueled Power Plants in Illinois, Harvard School of Public Health, January 2001, at 3 ("Harvard School of Public Health Study"). That study concluded that in the year 2000, pollution from Joliet was responsible for 48 deaths, measured as total incremental mortality risk per year measured in premature deaths. Causing such profound impacts in other contexts would be described as negligent at best but more likely criminal; yet, the proposed Title V permit IEPA has proposed for Joliet allows it to continue to operate in this manner.

The Harvard School of Public Health Study is supported by a study by Abt Associates. The Particulate-Related Benefits of Reducing Power Plant Emissions, ABT Associates, October 2000, at 1-1 ("Abt Study"). That study determined that power plant emissions would cause 1,700 premature deaths in the year 2007 in Illinois. *Id.* at 6-9, ex. 6-8.²

Further, the Harvard study found that while there are both local and long range negative health impacts, health risks were greater close to the power plants and decreased with distance. Harvard School of Public Health Study at 6, 37. "[L]ocal' populations [those within 50 km] have mortality risks that are 2.4 to 7.1 times the risks to 'long range' populations." *Id.* at 37. The Harvard Study estimated that of the annual deaths calculated for Joliet, the majority will

² The two studies are consistent because the Harvard study "determined that nine grandfathered plants within [Northern] Illinois contribute approximately 200 premature deaths per year in Illinois, or about 10% of the Abt total. This would seem to be a plausible figure, given the number of other power plants in Illinois and upwind." Harvard School of Public Health Study, at 68. The Abt study was based upon all 24 major coal plants in Illinois plus emissions from other coal plants that are carried into the state.

occur within 50 km of the plant. *Id.* at 110, tbl. 13. Consequently, the bulk of the fatalities and other severely detrimental health effects caused by this facility take place in Joliet

Chicago ranks fourth among metropolitan areas in terms of number of health impacts from coal-fired power plants. Abt Study, at A-15, ex. A-2. The Abt study estimated that 995 deaths, 651 cases of chronic bronchitis, 648 hospital admissions, 256 emergency room visits for asthma, 24,800 upper respiratory symptoms, and 21,400 asthma attacks would occur in 2007 in the Chicago metropolitan area from power plant emissions. *Id.* at 6-13, ex. 6-10.

Approximately two-thirds of all of these negative health impacts could be avoided with modern emission limits on plants such as Joliet. Harvard School of Public Health Study at 106, tbl. 9. Requiring the nine coal-fired power plants in northern Illinois, including Joliet, to meet modern emission standards would reduce the number of deaths per year resulting from the nine plants' soot emissions by 68%. *Id.* at 107, tbl. 11. The Abt study estimated that the negative health impacts of the coal-fired power plants examined could be reduced by approximately 40% with a 75% reduction in power plant emissions. Abt Study, at 6-11, ex. 6-9. We recommend that IEPA take advantage of Joliet's Title V permitting process to set more stringent limits on the emissions from Joliet and reduce the severe negative health impacts that Joliet has on the residents of both Joliet and the greater Chicago region.

V. THE PERMIT IS INADEQUATE BECAUSE IT CONTAINS TYPOGRAPHICAL ERRORS, OMISSIONS, AND OTHER INADVERTENT MISTAKES.

There are also numerous conditions that are deficient because they contain typographical errors, omissions or other inadvertent mistakes.

- Condition 5.9.1 refers back to the “source-wide emission limits specified in Condition 5.5.” However, there are no limits included in Condition 5.5. This indicates the Illinois EPA is failing to tailor these permits to each specific facility and instead is producing them in a cookie cutter manner resulting in (1) conditions that are inapplicable or inappropriate for certain facilities and (2) conditions that are downright inconsistent with others included in the same permit. This condition must be individualized to Joliet.
- Condition 7.1.9(b) refers to Section 39.5(7) of the Act. It must specify Section 39.5 (7)(b), as Conditions 7.1.9(a), (c), (d), and (g) do.
- Condition 7.1.9(e) is poorly written. The introductory sentence is repeated verbatim in (ii). Further, it would appear that Illinois EPA intended the introduction to be consistent with the other subsections of Condition 7.1.9 in which case it must read “Pursuant to Section 39.5(7)(b) of the Act and 35 IAC § 217.712(a), the Permittee shall maintain records for the NOx monitoring system on each affected boiler required by Condition 7.1.8(c) in accordance with the applicable recordkeeping requirements of 40 CFR 75 that as a minimum shall include . . .” Even with such a revision (ii) is still redundant in terms of content and must be deleted.

- Conditions 7.1.10(c) and 7.1.10(d) both refer only to Section 39.5(7)(f) of the Act. They also must refer to Section 39.5(7)(b) in the manner that Condition 7.1.10(e) does.
- Condition 7.1.10(g)(ii) requires reporting of deviations from Condition 7.1.6. However, there are no requirements included in Condition 7.1.6. This indicates the Illinois EPA is failing to tailor these permits to each specific facility and instead is producing them in a cookie cutter manner resulting in (1) conditions that are inapplicable or inappropriate for certain facilities and (2) conditions that are downright inconsistent with others included in the same permit. This condition must be individualized to Joliet
- Several conditions state that the identified control measures “are referred to as the ‘established control measures’ in this subsection of the permit.” However, these conditions go on to discuss “the above established practices.” It is unclear whether this is referring back to the “established control measures.” If so, the permit must use that specific terminology.

Condition 7.3.9(b)

Condition 7.4.9(b)

- The following conditions misquote 35 IAC § 212.321(a) by omitting the word “which” after “any new process emission unit”.
Condition 7.4.4(c)
Condition 10.1 Attachment 1

VI. The Proposed Permit Is Legally Inadequate Because It Does Not Impose An Enforceable Schedule To Remedy Non-Compliance

It is a fundamental purpose of the Title V permitting program to ensure that regulated entities comply with requirements that originate in the Clean Air Act. The applicant for a Title V permit must disclose its compliance status and either certify compliance or enter into an enforceable schedule of compliance to remedy violations. 42 U.S.C. 7661b(b); 40 C.F.R.70.5(c)(8-9). In Illinois, the Clean Air Act Permit Program (415 ILCS 5/39.5 et seq) requires permit applicants to include a compliance plan, including a schedule of compliance, describing how each emission unit will comply with all applicable requirements. 415 ILCS 5/39.5(5)(d). In turn, when issued, the permit:

“...shall contain emission limitations and standards and other enforceable terms and conditions, including but not limited to operational requirements, and schedules for achieving compliance at the earliest reasonable date, which are or will be required to accomplish the purposes and provisions of this Act and to assure compliance with all applicable requirements.” 415 ILCS 5/39.5(7)(a)

As a practical matter, if a facility is not in compliance at the time the permit is issued, a schedule of compliance must be incorporated into the permit that includes a requirement for progress to resolve violations until compliance can be certified. 415 ILCS 5/39.5(p)(iv).

In the present permit proceeding, the applicant has certified compliance with all the requirements that apply to its facility. In its proposed permit, the IL EPA accepts this certification, and consequently does not incorporate any schedule of compliance or other remedial measures in the Title V/CAAPP permit.

A. The Proposed Permit Is Legally Inadequate Because It Does Not Include A Schedule of Compliance To Remedy Opacity Exceedances

IL EPA possesses evidence of non-compliance at this facility. The source of this information is Midwest Generation itself. Since it became the operator of this facility, Midwest Generation has regularly submitted information to IL EPA detailing ongoing violations of opacity standards at this and its other coal burning power plants. Copies of these extensive records were submitted by CARE and are part of the record of these permit proceedings. By way of summary, I have prepared a table, describing exceedances of the opacity standard at this and other Midwest Generation facilities for an eighteen-month period concluding on June 30, 2003:

**OPACITY EXCURSIONS AND EXCEEDANCES AT MIDWEST GENERATION FACILITIES
FROM 1/1/02 – 6/30/03**

FACILITY UNIT	OPACITY EXCURSIONS /1	OPACITY EXCEEDANCES /2
CRAWFORD		
7	93	51
8	49	9
FISK	243	70
JOLIET		
6	96	41
7	643	219
8	759	212
POWERTON	828	387
WAUKEGAN		
6	24	9
7	333	102
8	132	52
WILL COUNTY		
1	3	0
2	43	1
3	763	159
4	302	40
TOTAL	4,311	1,352

/1 The total number of six-minute average opacity exceedances recorded by opacity monitors and self-reported by Midwest Generation to the Illinois EPA

/2 Of the total number of opacity exceedances, the subset that Midwest Generation asserts are “considered exempt” because they occur during boiler startup or malfunction periods.

These opacity exceedances are unresolved as of the most recent quarterly report. This report details “opacity excursions” at Crawford (10), Fisk (86), Joliet (124), Powerton (422), Waukegan

(37) and Will County (183). The magnitude of some of the opacity excursions is striking. On at least 8 occasions during the most recent quarter, the Fisk facility recorded opacity readings at levels more than twice the legal limit. During the same period, the Will County facility recorded 40 opacity readings more than twice the legal limit, and the Joliet facility recorded nine such readings.

The requirements for Midwest Generation to comply with opacity standards are contained in federal and state regulations. 35 Illinois Administrative Code 212.123(a); 40 CFR 75.10. The opacity standard for this facility is lenient, $\leq 30\%$, and generous exemptions for start-up, malfunction and other conditions are provided in Illinois regulations. In light of this undemanding set of regulations, it is even more troubling that this and other Midwest Generation facilities continue to exceed the opacity standard. This suggests there may be more fundamental problems relating to facility operations, including combustion efficiency, ash handling, precipitator operation or load change procedures.

In light of the number of exceedances of the opacity standard, the number of years these exceedances have been occurring and reported without resolution, and the fact that they are based on continuous emission monitoring data, there is an incontrovertible factual basis for concluding this and other Midwest Generation facilities are not operating in compliance with federal and state opacity emission standards. Because IL EPA proposes a Title V/CAAPP permit without a schedule of compliance, this permit is not be legally adequate.

B. The Proposed Permit Is Legally Inadequate Because It Does Not Address The Requirements Arising Under New Source Review

The second compliance issue related to this and other Midwest Generation facilities is whether these facilities improperly avoided new source review (NSR) and, in turn, the requirement to install modern pollution control equipment. If this and other Midwest Generation facilities improperly avoided NSR, the Title V permit should include an enforceable schedule of compliance for NSR to occur, coupled with emission and operational standards equivalent to a new facility in this source category.

1. There Is Substantial Evidence That Modifications Have Occurred At Midwest Generation Facilities

There is substantial evidence readily available to the IL EPA to determine if NSR should have taken place at Midwest Generation facilities. First, there is evidence being generated as part of an ongoing U.S. EPA investigation of Midwest Generation to determine NSR compliance. More specifically, on or about February 21, 2003, Midwest Generation received a formal request from the U.S. EPA for information regarding past operations, maintenance, and physical changes at its coal plants. Midwest Generation disclosed the existence of this investigation in its May 6, 2003 filing with the U.S. Securities and Exchange Commission, a true and accurate copy of which was submitted by CARE and is part of the record of these permit proceedings. In its SEC filing, Midwest Generation acknowledges:

“Depending on the outcome of the review and regulatory developments, Midwest Generation could be required to invest in additional pollution control requirements, over and above the upgrades it is planning to install, and could be subject to fines and penalties.” Midwest Generation, LLC, Form 10-K/A Amendment No. 1, “Annual Report Pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934 For The Fiscal Year Ended December 31, 2002”, May 6, 2003, pp. 25-6.

The IL EPA should immediately request information compiled by U.S. EPA as part of its investigation, as well information in the possession of Midwest Generation that it is assembling to submit to U.S. EPA.

A second source of evidence demonstrating modifications at Midwest Generation facilities are two separate articles, both of which discuss major work that was completed at facilities now owned by Midwest Generation in the mid-1990s. The May, 1996 issue of Power magazine describes the relining of a total of 3,830 heat-exchanger tubes at the Joliet facility that is now seeking a Title V/CAAPP permit. Notably, the relining project is described as “...just one aspect of a 20-wk life-extension project currently underway at the 37-yr-old station.” A true and accurate copy of this article was submitted by CARE and is part of the record of these permit proceedings.

At roughly the same time, there is also substantial evidence of modifications at the Fisk facility. The Fisk facility was shutdown on November 2, 1994 due to a high pressure generator winding problem that caused severe bearing vibration, and that was anticipated to require the replacement or rewinding of the generator, to be completed over a period of up to ten months. November 21, 1994 letter from Mary F. O’Toole, Environmental Services Manager, Alternate Designated Representative, ComEd to Cecilia Mijares, U.S. EPA Region 5 (copy attached). An article written by Brian Schumel of PCI Energy Services describes other work that was completed during this period of time, including a boiler/turbine overhaul in January, 1995 and, most significantly, the replacement of a 300 MW steam chest. Schumel, Brian, PCI Energy Services, The Replacement of a 300 MW Steam Chest Background. A true and accurate copy of Mr. Schumel’s article is attached to these comments.

Mr. Schumel’s article provides a detailed account of the steam chest replacement. Due to numerous cracks along the internal chamber of Fisk’s steam chest manifold that had been present for some time, ComEd decided to replace both manifolds of the steam chest instead of repairing them. The decision to replace the manifolds was based on the fact that the location and orientation of thermal fatigue were not conducive for repair, and normal replacement would take too long. As a result, ComEd outsourced the project to an outside contractor, PCI, that oversaw the reverse engineering of the steam chest. This company had only done the project once before, which was in Detroit in 1991.

A third source of evidence relevant to determining NSR compliance are data about emission trends from electric generating units collected by the U.S. Environmental Protection Agency and posted as part of its Clean Air Markets database. <http://cfpub.epa.gov/gdm/> Using this database, IL EPA can track increases in actual emissions from Midwest Generation facilities. For example, using this database, there appears to be a significant increase in actual emissions from

the Fisk facility in the two- year period immediately following the completion of the major work at the facility concluding in July, 1995. A chart summarizing these increases was submitted by CARE and is part of the record of these permit proceedings.

2. If New Source Review Has Been Improperly Avoided, Illinois EPA Must Address This Non-Compliance In the Title V Permitting Process

Whether Midwest Generation facilities have improperly avoided NSR is directly relevant to Title V permitting for two reasons. First, as described above, ensuring compliance with the requirements originating in the Clean Air Act is a fundamental goal of the Title V/CAAPP permitting process. In turn, there is no more important Clean Air Act requirement than compliance with new source review.

Congress established the New Source Review (“NSR”) program in 1977. The NSR program was enacted for the purpose of protecting and enhancing “the quality of the Nation’s air resources so as to promote the public health and welfare and the productive capacity of its population.” 42 U.S.C. § 7401(b). NSR is a pre-construction permitting program that serves two important purposes: first, it ensures that factories, industrial boilers and power plants comply with air quality standards when components are modified or added to these facilities; and, second, NSR requires that new plants or existing plants undergoing a major modification install state of the art control technology. 42 U.S.C. § 7401(a)(1); 42 U.S.C. § 7401(a)(2). The program covers two distinct categories; (1) the construction of new industrial facilities, and (2) existing facilities that make any modifications that significantly increase pollution emissions and are not exempt from regulation. *United States v. Ohio Edison Co.*, 2003 U.S. Dist. LEXIS 13799, *11 (S.D. Ohio, Aug. 7, 2003). If a facility falls into one of these two categories then the company is required to establish stringent emissions controls. 42 U.S.C. § 7411(a)(1). If a modification is known to substantially increase the amount of emissions from a facility, the facility must obtain pre-construction approval. *United States*, 2003 U.S. Dist. LEXIS 13799, *11; *see e.g.* 42 U.S.C. § 7475.

Congress has defined a modification as “any physical change in, or change in the method of operation of, a stationary source which increases the amount of any air pollutant emitted by such source or which results in the emission of any air pollutant not previously emitted.” 42 U.S.C. § 7411(a)(4); *see also* 40 C.F.R. § 60.14(a) (U.S. EPA defining a modification as “any physical change or operations change to an existing facility which results in an increase in the emission rate to the atmosphere of any pollutant to which a standard applies”). A determination that New Source Review has been triggered by site modifications would require the source to comply with new source requirements and apply state of the art pollution controls, which are much more stringent than emission limits proposed without a permit. 42 U.S.C. § 7411(a)(1); *see also Ohio Edison*, 2003 U.S. Dist. LEXIS 13799, *56.

The second reason why NSR is directly relevant to the Title V permitting process was pointed out by Matt Dunn, testifying on behalf of the Illinois Attorney General at the public hearings for the Fisk and Crawford facilities. The IL EPA developed a proposed permit containing emission and operational standards explicitly and unthinkingly based on the applicant’s representations that it is not subject to new source standards. As pointed out by Mr. Dunn, if a facility should

have undertaken new source review, then entirely different emission and operational standards would apply than those proposed by IL EPA in the proposed permit. Simply, in the absence of determining if NSR applies, IL EPA cannot know which emission and operational standards apply to Midwest Generation's facilities. Although this information was not provided by the applicant, it has been introduced into the permitting process by members of the public, and must be included in IL EPA's deliberations. Mr. Dunn also made a highly practical recommendation – IL EPA should require the applicant to disclose all information about all modifications at its facilities as part of providing a full and complete application upon which IL EPA can make its final permitting decisions.

3. Illinois EPA Has The Authority and Responsibility To Ensure New Source Review Is Being Imposed On The Sources It Regulates

In reviewing modifications to this and other Midwest Generation facilities, IL EPA has clear guidance on the nature of its authority to require Midwest Generation to comply with new source review requirements. This guidance is contained in the recently decided NSR compliance case, *United States v. Ohio Edison Co.*, 2003 U.S. Dist. LEXIS 13799, *11 (S.D. Ohio, Aug. 7, 2003). In *Ohio Edison*, the Plaintiff commenced an enforcement action against the Defendant, alleging that the Defendant was subject to NSR by virtue of renovation activities at one of its coal power plants. For its part, Ohio Edison argued the renovations were properly characterized as “routine maintenance, repair and replacement”, an exception to NSR requirements. 40 C.F.R. 52.21(b)(2)(iii)(a); 40 C.F.R.60.14(e)(1).

For sources that made modifications before the effective date of recently promulgated regulations, the determination of what constitutes routine maintenance is made on a case-by-case basis. *E.g. Ohio Edison*, 2003 U.S. Dist. LEXIS 13799; *Wisconsin Electric Power Co. v. Reilly*, 893 F.2d 901 (7th Cir. 1990). Only a few cases have analyzed what the EPA classifies as “routine maintenance, repair or replacement.” However, these cases have held that the EPA's overall interpretation of the routine maintenance exemption should be construed narrowly. *E.g. Ohio Edison*, 2003 U.S. Dist. LEXIS 13799, *25; *United States v. Southern Indiana Gas & Electric Co.*, 245 F. Supp. 2d 994, 1009 (S.D. Ind. 2003); *WEPCO*, 893 F.2d at 907. For this reason, coal-fired power plants cannot contend a lack of fair notice regarding the U.S. EPA's narrow interpretation of the CAA because the plain language of the CAA and its regulations are clearly understood as narrowing the routine maintenance exemption. *Ohio Edison*, 2003 U.S. Dist. LEXIS 13799, *166. In addition, neither Midwest Generation nor IL EPA can excuse past NSR noncompliance by resorting to new U.S. EPA regulations regarding the routine maintenance, repair and replacement exemption. The Notice announcing these rules explicitly states they will not become effective until 60 days after being published in the August 27, 2003 Federal Register. In addition, the regulations will require further implementation by individual states that will take place over the next three years. Simply, the new regulations were not in effect when the physical changes now subject to investigation and public comment were being made at Midwest Generation's facilities.

In *WEPCO*, the EPA determined that Wisconsin Electric Power Company's proposed renovations were modifications that required NSR compliance. 893 F.2d 901. After Wisconsin Electric challenged the EPA's determination that proposed renovations would subject a power

plant to certain CAA pollution control provisions and regulations, the Seventh Circuit held that the renovations were not “routine maintenance, repair and replacement.” *WEPCO*, 893 F.2d at 912. More recently, the Southern District of Ohio reviewed whether eleven renovation activities performed on Ohio Edison’s Sammis plant were exempt from NSR compliance. *Ohio Edison*, 2003 U.S. Dist. LEXIS 13799. Upon adopting the Seventh Circuit’s analysis in *WEPCO*, the Southern District of Ohio determined that all eleven activities were modifications that were not routine and required NSR compliance. *See id.* at *12.

Using the analysis of *WEPCO* and *Ohio Edison*, the first question that IL EPA must ask is whether a modification was made at a Midwest Generation facility. As previously stated, a modification is defined as “any physical change in, or change in the method of operation of, a stationary source which increases the amount of any air pollutant emitted by such source or which results in the emission of any air pollutant not previously emitted.” 42 U.S.C. §7411(a)(4). (emphasis added). Any physical change, which either replaces critical components or rebuilds damaged elements of a facility, will signify a modification under the CAA. *Ohio Edison*, 2003 U.S. Dist. LEXIS 13799, *71. The *Ohio Edison* court had no difficulty determining that Ohio Edison made modification to its Sammis plant because it replaced critical components of the facility in addition to rebuilding damaged components of the facility. *Id.* at *72.

The next question that IL EPA must address is whether a modification is exempt from CAA compliance on the grounds that such a modification constitutes “routine maintenance, repair or replacement.” Such a question appears difficult because the regulations do not exempt “maintenance, repair or replacement from compliance with the CAA – rather, the regulation exempts “routine maintenance, repair or replacement.” *E.g. id.* at *73-74. However, if a regulated entity like Midwest Generation claims the benefit of such an exemption, it has the burden of proof to show that modifications are routine and indeed exempt from CAA compliance. *Id.* at *78. Moreover, because the U.S. EPA has not defined what “routine” shall mean, this is determined by the regulator on a case-by-case basis. *Id.* at *164.

The Seventh Circuit adopted the EPA’s four factor test to determine which modifications constitute routine maintenance, repair and replacement. *WEPCO*, 893 F.2d at 910. The court stated that the EPA makes a case-by-case determination by weighing 1) the nature and extent of the project; 2) the purpose of the project; 3) the frequency of similar projects; and 4) the cost of the work. *See id.*

When analyzing the nature and extent of the work performed, IL EPA should look to different facets of the renovations. *See Ohio Edison*, 2003 U.S. Dist. LEXIS 13799, *79. For example, activities that involve the replacement of equipment and miles of tubing are indications that the project is not routine. *Id.* A project that requires a facility to shut down for a period of weeks or even months also indicates the project is a large endeavor that is not routine. *Id.* More importantly, projects that require outside contractors to perform the modifications, which prove to be a one-of-a-kind project, cannot be classified as routine maintenance, repair or replacement. *Id.* at *80. Finally, a company that classifies a project as one that should be accounted for as a capital improvement, instead of operational costs, further substantiates the fact that a modification will not be considered routine to exempt the company from CAA compliance. *Id.* at *81. It appears all of these factors were present at the Fisk and Joliet facilities.

Next, projects performed for the purpose of increasing the availability and reliability of a facility, and extending the life expectancy of the facility will not exempt the facility from NSR compliance. *Id.* at *87. The court recognizes that such modifications are not routine maintenance that simply maintains the unit. *Id.* This is true because the purpose of such activities is to extend the life expectancy of the unit by making them more reliable and available for usage in the future. *Id.* Because Ohio Edison stated that all eleven activities were intended to increase the life expectancy of the Sammis plant for an extra thirty years, the court decided that this second factor weighed against classifying such activities as “routine maintenance, repair or replacement.” *Id.*

Another factor that IL EPA should consider is how frequently the activity is performed. *WEPCO*, 893 F.2d at 910. The *Ohio Edison* court declined to accept Ohio Edison’s argument that at the industry as a whole should be looked to when analyzing this factor. *Ohio Edison*, 2003 U.S. Dist. LEXIS 13799, *87-88 (“The frequency factor certainly can take into account repairs done at other plants across the country but, in the Court's view, such evidence is not as instructive in addressing whether a particular activity at a particular unit can be considered routine”). Thus, the appropriate standard is how frequent the activity has been performed at the particular unit at issue. *Id.* at *88.

The final factor that IL EPA should consider when determining if a renovation is exempt from CAA compliance is the cost of the activity. *WEPCO*, 893 F.2d at 910. Because Ohio Edison classified all eleven activities as capital expenditures, and not maintenance expenditures, the court concluded that the activities were not “routine maintenance, repair or replacement.” *Ohio Edison*, 2003 U.S. Dist. LEXIS 13799, *90. As a result, costs determined to be capital expenditures instead of maintenance expenses support the finding that modifications do not fall within the routine maintenance exemption. *Id.* at *85. In conclusion, any physical changes that constitute modifications under the CAA are not exempt as routine maintenance when the projects were large in scope, involved outside contractors, increased the value of the facilities, proved to be expensive and were treated as capital expenditures for accounting purposes. *E.g. id.* at 10.

VII. The Permits Fail to Address Hazardous Air Pollutants, Including Mercury.

A little over a year ago the State of Illinois announced its first major Mercury Reduction Initiative. It pledged to better determine the sources where mercury is released into the air and to convene a work group to develop reduction strategies. The agency’s work group should use these pending Title V permits as a vehicle for implementing these reduction strategies. On an annual basis, Illinois coal fired plants released 5, 957 pounds of mercury to the environment.³ Although the Title V permit acknowledges that the facility is a major source of HAP emissions, there are no provisions in the permit limiting emissions of HAPs, specifically mercury. The Great Lakes and Lake Michigan in particular are high priority ecosystems that deserve a high priority response from IEPA.

³ 2000 Toxic Release Inventory www.epa.gov/tri. This total includes air releases of 4, 169 pounds, water discharges of 11 pounds, land releases of 615pounds, and off-site transfers of 1, 162 pounds.

A. The Bioaccumulative Nature of Mercury & the Local Impacts to Lake Michigan Warrant Regulatory Attention.

While total emissions of mercury from coal fired power plants may be small when compared to greenhouse gas emissions, its bioaccumulative and highly toxic nature present significant threats to human health and our Lake Michigan ecosystem.

Once mercury enters the environment it remains indefinitely because it does not break down. Mercury is also highly toxic in trace amounts: it only takes 1/70 of a teaspoon of mercury to contaminate a 25 acre lake. Locally, an experiment on Little Rock Lake in Wisconsin found that only 1 gram of mercury was required to contaminate all the fish in the lake.⁴

The most serious risk to humans is posed through consumption of mercury contaminated fish. In particular, pregnant women and young children are most at risk. Mercury's harmful effects include brain damage, mental retardation, incoordination, blindness, seizures and inability to speak. Children poisoned by mercury may develop problems of their nervous and digestive systems, and kidneys.⁵

The southern Great Lakes has one of the highest mercury deposition rates in the United States. This year for the first time, the Illinois Department of Natural Resources (IDNR) issued a fish consumption advisory for Lake Michigan and mercury.⁶

According to U.S. EPA, each year 3,031 pounds of mercury are emitted to Lake Michigan, and 86 percent of that comes from direct atmospheric deposition. (EPA 2000b) Of the 86 percent, Chicago area sources alone contribute 30% of the mercury to the Lake (LaMP 2000) This high rate of deposition translates into rainwater with mercury levels as high as 42 times the U.S. EPA's human health standards, with a one year average of 12 times the acceptable level (NWF 1999b).

B. Section 5.7.3 : Annual Reporting of HAP Emissions Should be Required.

The Crawford, Fisk, Joliet and Will County and Waukegan power stations are among the largest single sources of mercury emissions in Illinois based on the U.S. EPA 2001 Toxic Release Inventory (TRI) and on the mercury emissions reported under the utility MACT rule development in 1999. When compared to mercury emissions from all sources in Illinois, as reported to the TRI in 2001, the three facilities alone comprise at least 9% percent of the total mercury releases to air in Illinois, and some estimates nearly double that. Considering that these facilities are located in densely populated urban areas and the permit allows the operator to

⁴ Weiner, J.G., and W.F. Fitzgerald, C.J. watras and R.G. Rada, 1990. Partitioning and bioavailability of mercury in an experimentally acidified Wisconsin lake. *Environmental Toxicology and Chemistry*, Vol. 9, pp. 909-918.

⁵ Agency for Toxic Substances and Disease Registry, "ToxFAQs for Mercury", April 1999.

⁶ See IDNR web page at <http://10.80.219.100/fish/>.

continue operating in the case of an equipment failure, the Title V permit should include an emission limit for mercury as well as provisions for monitoring mercury emissions to the community.

Currently there are no provisions in the Title V permit for limiting, measuring, or monitoring mercury emissions. Mercury should be included in the HAPs that are measured and reported at each facility. Regardless of whether control technology is implemented, at a minimum, the public is entitled to know how much mercury is being emitted into the environment.

C. Section 7.1 : Control Technology Should Be Required for Coal Fired Boilers.

The permits make no attempt to control mercury emissions. An electrostatic precipitator (ESP) and low NOx burners are the primary emission control technologies used at each facility as identified in the Title V permits. ESPs are primarily used to control particulate matter and low NOx burners are used to limit NOx emissions. While ESPs are effective at controlling particulate matter, they are not very effective mercury emissions controls. It is not clear from the permit if the ESP is a cold-side ESP or a hot-side ESP. Cold side ESPs remove approximately 31% of mercury and hot side ESPs only remove 12%, on average.⁷ Since these units can be considered a significant source of mercury to the community, if a cold side ESP is not use then one should be considered as well as alternative control technologies to limit mercury emissions. Proven technologies such as flue gas desulfurization (Wet FGD) combined with ESPs can remove up to 81% of mercury emissions depending on the type of coal used and the boiler configuration.⁸

There are a range of feasible options that should be considered by the agency for inclusion in the permits. Technologies such a powder activated carbon injection should be considered as viable mercury control technologies for these facilities. Tests have shown that mercury capture in particulate matter control devices, such as ESPs, increases as the carbon content of the fly ash increases. New sulfur dioxide and nitrogen oxide (NOx) specific controls may also reduce or eliminate the need for mercury specific controls. For example, installation of a wet or semi-dry scrubber unit should reduce oxidized mercury emissions by 90 to 95 percent over previous levels; adding upstream NOx could further reduce total mercury emissions. Replacing or supplementing existing particulate control devices with fabric filters will likely remove additional mercury, especially for boilers burning bituminous coal.⁹

Since the effectiveness of any control technology is dependent on the speciation of mercury (elemental mercury versus ionic mercury versus particulate-bound mercury) in the flue gas, a measure of mercury speciation in the facility flue gas should be completed.

⁷ U.S. EPA 2000. Memorandum from Frank T. Princotta to John Seitz, Director of Office of Air Quality Planning and Standards concerning Control of Mercury Emissions from Coal Fired Utility Boilers.

⁸ U.S. EPA 2000. Memorandum from Frank T. Princotta to John Seitz, Director of Office of Air Quality Planning and Standards concerning Control of Mercury Emissions from Coal Fired Utility Boilers.

⁹ “Mercury: Mercury and Midwest Power Plants”, Clean Air Task Force, February 2003, p.11.

D. Recent Scientific Studies Demonstrate that Mercury Control Technology Works.

Recent scientific studies support the conclusion that mercury control technology can lead to reduction in atmospheric deposition of mercury. A study conducted in the Upper Midwest focused on analyzing trends of mercury deposition.¹⁰ According to the study results, mercury deposition is decreasing, and the decrease is attributable to air pollution controls on incinerators, the reduced use of mercury in industrial processes and the switch from coal to other fuels for residential heating. This study demonstrates that controls work, and that we need more, not less controls.

Another study conducted in 2002 in Wisconsin has provided the first quantitative link between decreases in mercury deposition and mercury levels in fish. According to the study, changes in atmospheric mercury deposition rapidly effects fish mercury concentration. The results show that a 10% decrease in mercury deposition resulted in a 5% decrease in mercury.¹¹

E. 7.1.11: The Facilities Should Not Be Given Operational Flexibility To Burn Alternative Fuels.

Provisions for firing alternative fuels such as used oil, boiler cleaning residues, or other wastes should be removed from the permit. Burning unknown fuels types and inconsistent fuel mixes can result in increased and uncontrolled emissions of HAPs such as mercury. Considering that the permit does not place any limitations on HAPs nor are there any monitoring or measurement provisions for HAPs included in the permit, the provision to burn alternative fuels should not be included. Moreover, the permit should make it clear that if the facility begins combusting wastes, it will become subject to the local siting regulations contained in 415 ILCS 5/39.2 and, potentially, Sections 112 and 129 of the Clean Air Act.

F. The IEPA and the State of Illinois Should Take a Leadership Role in Reducing Mercury Emissions.

Limiting mercury emissions from power plants is not without precedent in the Great Lakes. The State of Wisconsin recently passed a mercury emission reduction rule (NR 446) that will cap mercury emissions from major utilities and require 80% reduction of mercury emissions from baseline standards by 2015. In the event U.S. EPA fails to promulgate the Utility MACT on or before December 15, 2004, Illinois EPA should go one step further and use its authority under 415 ILCS 5/39 Section 39.5, Subsection 19 to issue permits and promulgate regulations which contain emission limitations equivalent to the emission limits that would apply if an emissions standard had been promulgated.

¹⁰ Engstrom, D.R. and E.B. Swain, 1997. Recent declines in atmospheric mercury deposition in the Upper Midwest. *Envir. Sci. Technol.* 31:960-967.

¹¹ Hrabik, T.R. and C.J. Watras, 2002. Recent declines in mercury concentration in a freshwater fishery: isolating the effects of de-acidification and decreased atmospheric mercury deposition in Little Rock Lake. *Science of the Total Environment* (in press).

Based on the significant quantities of mercury that are emitted each year in the state of Illinois, our knowledge about mercury's potent human health impacts, and the attainability of control technology, we urge the IEPA to set an example and act now to reduce further mercury emissions.

Conclusion

The members of CARE respectfully request:

1. the Administrator to obtain the complete record of the Title 5 permitting proceedings relating to this facility from the IL EPA;
2. the Administrator to review this permit record, grant the Petition in whole or in part, and to make objections for the reasons described in this Petition;
3. the Administrator to investigate whether IL EPA is operating its Title 5 permitting program in manner consistent with U.S. EPA's delegation of authority to issue these permits;
4. the Petitioners be given leave to amend or otherwise supplement this Petition when IL EPA issues the contested permit in final form.

Respectfully Submitted,

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