# TECHNICAL SUPPORT DOCUMENT

for

# RULE REVISIONS TO PART 225: ILLINOIS RULE FOR REDUCING MERCURY EMISSIONS FROM COAL-FIRED ELECTRIC GENERATING UNITS

## AQPSTR 08-01

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## Executive Summary

On February 8, 2008, the United States Court of Appeals for the District of Columbia Circuit vacated the United States Environmental Protection Agency (USEPA) Clean Air Mercury Rule (CAMR). This court action raised concerns regarding the status of certain federal provisions in 40 CFR Part 75 (Part 75) dealing with the monitoring of mercury emissions. Given the current uncertainty surrounding federal mercury monitoring provisions, the Illinois Environmental Protection Agency (Illinois EPA) has determined that a revision to the Illinois mercury rule (i.e., 35 Ill. Adm. Code Part 225 Subpart B) is appropriate.

The primary focus of the proposed rule revisions will be on the methods used to measure mercury emissions for the demonstration of compliance with the emissions and control requirements and do not include any revisions to the emission and control standards themselves. Mercury monitoring via a continuous emissions monitoring system (CEMS) will continue to be an option for measuring mercury emissions. The proposed revisions also add stack testing as an alternative method to monitoring. This will provide sources with flexibility in their methods used to measure mercury emissions for compliance demonstrations. Further proposed amendments to the rule include the addition of an approved sorbent for use in mercury control, reconstituting the provisions of Part 225 Subpart F (i.e., Combined Pollutant Standard) into Part 225 Subpart B, and the replacement of specific citation to the Clean Air Interstate Rule (CAIR) with citation to any trading program. The last revision is needed due to the July 11, 2008 vacatur of CAIR and the uncertainty on what the citation would be to any future trading program for nitrogen oxides (NOx) and sulfur dioxide (SO2) allowances. The Illinois EPA considers these last amendments as a "housekeeping" measures, and as such, unnecessary to address in detail in this technical support document.

The primary purpose of this technical support document is to demonstrate that the proposed amendments to the Illinois mercury rule are both technically feasible and economically reasonable. The Illinois EPA continues to support CEMS for measuring

emissions of mercury from electric generating units (EGUs) for demonstrating compliance with the Illinois mercury rule. CEMS were deemed by the USEPA to be a technically feasible and economically reasonable method of measuring mercury emissions while promulgating CAMR, and the Board incorporated these same methods into the Illinois mercury rule. This determination had no bearing on the vacatur of CAMR, and vice versa, and the technical support regarding CEMS remains valid. The Illinois EPA has received assurances from USEPA of their support for such an approach, as well as assurances that the level of support given to state agencies for mercury monitoring provisions will be equal to that which was intended for monitoring under CAMR.

Previously, the Illinois mercury rule incorporated Part 75 by reference. The proposed amendments include the appropriate provisions of Part 75 monitoring requirements, with noted changes. Such changes include the removal of provisions that were appropriate only with the existence of a national mercury trading program and a state-by-state emissions cap (e.g., bias adjustment factor, missing data substitution).

The proposed stack testing alternative is a technically feasible method for the measurement of mercury emissions, and in many cases may be a lower cost option for mercury measurement than CEMS. Stack testing provides a measure of flexibility and certainty for sources in demonstrating compliance. This additional flexibility is also appropriate as Illinois is no longer required to demonstrate compliance with a mercury emissions cap for purposes of CAMR. The Illinois EPA has broad historic knowledge and experience with the use of stack testing for emissions measurement and compliance demonstrations. Quarterly stack testing, along with the monitoring of source operating parameters, will provide sources an alternative to CEMS monitoring of mercury emissions for a three-year period. The Illinois EPA anticipates that during this three-year window new federal regulations will prescribe monitoring provisions for mercury emissions and that the Illinois EPA will either adopt, or otherwise allow the use of, those provisions to demonstrate compliance with the Illinois mercury rule going forward.

The Illinois mercury rule includes a list of approved sorbent manufacturers whose sorbents have been tested and demonstrated to achieve a high level of mercury control as of the time of the rulemaking process. The rule also allows the use of any other halogenated activated carbon or sorbent that has demonstrated similar or better effectiveness for control of mercury emissions. Since that promulgation of the Illinois mercury rule, and prior to the compliance date of the rule, Calgon Carbon has demonstrated to the Illinois EPA that one of their sorbents contains a similar or better level of control in comparison to the approved sorbents. As a result, it is proposed that Calgon Carbon's FLUEPAC MC Plus be included as an approved sorbent for mercury control.

The Combined Pollutant Standard (CPS) was negotiated between the Illinois EPA and Midwest Generation during the original mercury rulemaking process. Similar to the Multi-Pollutant Standard of the mercury rule, the CPS allows flexibility in complying with the mercury provisions in exchange for SO2 reductions, NOx reductions, and other considerations agreed to by the parties. The desire at the time was to include the CPS in the Illinois mercury rule, however, the rule was in the final stages of adoption and therefore it was inappropriate at that time to reopen the rule for inclusion of the CPS. The CPS was subsequently included in Illinois' CAIR. Consistent with the original desire and determination that the more appropriate place for the CPS was in the Illinois mercury rule, the CPS will now be removed from CAIR and included in the Illinois mercury rule. Note that Midwest Generation has submitted a letter of intent to comply with the CPS, which are once in, always in provisions.

Both the multi-pollutant standard (MPS) and the CPS contain restrictions and other provisions regarding NOx and SO2 allowances. Such allowances were expected to be issued as part of the CAIR. As a result of the July 11, 2008 vacatur of CAIR, there now exists uncertainty regarding what program such allowances would originate from. As a result, a proposed revision is being made to replace the current citation to CAIR allowances in the MPS and CPS with citation to allowances from any trading program.

In summary, limited revisions to the Illinois mercury rule are appropriate in light of the vacatur of CAMR. The proposed revisions are focused on the methods allowed to measure mercury emissions for demonstration of compliance. The proposed revisions do not include any change to the emissions and control requirements for mercury emissions and therefore the level of mercury control required by the rule is not affected. Aside from providing additional flexibility to sources for compliance purposes, these proposed amendments represent little substantive change from the implementation of the Illinois mercury rule prior to the vacatur of CAMR.

## 1.0 Introduction

On February 8, 2008, the United States Court of Appeals for the District of Columbia Circuit vacated the United States Environmental Protection Agency's ("USEPA") Clean Air Mercury Rule ("CAMR"). This court action effectively eliminated certain federal provisions in 40 CFR Part 75 ("Part 75") dealing with the mercury monitoring that were relied upon by Illinois EPA in the rulemaking (R06-25) for the Illinois mercury rule. The amendments now being proposed will replace the relied-upon federal monitoring references with appropriate monitoring provisions for the Illinois mercury rule in the absence of the vacated CAMR program by incorporating the sections of Part 75 that were previously relied upon.

In efforts to ensure adequate mercury monitoring provisions in the Illinois mercury rule, Illinois EPA has considered the two monitoring methods prescribed by 40 CFR Part 75 prior to the vacatur of CAMR, as well as a number of reference methods for measuring mercury approved by the USEPA. The monitoring methods prescribed by Part 75, CEMS monitors or Appendix K sorbent trap methods, remain the preferred method for the measurement of mercury emissions from EGUs, as they provide accurate data on the mass emissions of mercury from a source over a given timeframe. However, in order to provide greater flexibility to sources in demonstrating compliance with Illinois mercury emission standards, Illinois EPA has included another option in its proposed revisions to the Illinois mercury rule. This option provides an alternative stack testing provision that would allow for quarterly stack testing of sources using approved reference methods, along with monitoring source operating parameters that could affect emissions from the source while mercury emissions are not being measured. These approved reference methods include the Ontario Hydro Method, EPA Method 29, Method 30A, and Method 30B.

The methods that were previously prescribed by Part 75 for the vacated CAMR are technically feasible and economically reasonable methods for demonstrating compliance with the Illinois mercury emission standards. The federal mercury rule was vacated

because a trading program was deemed inadequate by the deciding court, and not due to cost or feasibility concerns for the monitoring requirements. The research done by the USEPA regarding the cost and feasibility of mercury monitoring is valid and has been considered by the Board in its previous rulemaking for the Illinois mercury rule.

In addition, the proposed reference methods for the measurement of mercury are valid methods for determining compliance with Illinois mercury emission standards in the absence of a federal trading program and a statewide mercury emission cap. These proposed methods have also been shown to be technically feasible, and in many cases may provide a lower cost option for sources in comparison to the previously referenced Part 75 methods. In such cases where the alternative stack testing provisions can provide sources with a lower cost option for compliance demonstration, it is apparent that this alternative would be considered economically reasonable. Affected sources may determine which method of emissions determination will best address their particular situations.

Additional proposed revisions addressed by this document will result in either no cost impact to sources or in lower compliance and administrative costs to sources. These issues, such as revisions regarding the bias adjustment factor and missing data procedures, require no discussion regarding technical feasibility. They are addressed in this document in order to demonstrate that the integrity of the adopted Illinois mercury emission standards is not diminished by the proposed revisions.

## 2.0 Mercury Monitoring Methods

Illinois EPA has proposed amendments to Part 225 to reconstitute the monitoring provisions formerly codified at 40 CFR Part 75 prior to the vacatur of CAMR. These monitoring provisions have been proposed by the Illinois EPA as amendments to the Illinois mercury rule at 35 Ill. Adm. Code Part 225, Appendix B and we have consulted USEPA regarding these revisions.

## 2.1 40 CFR Part 75 Methods for Monitoring Mercury - Feasibility and Reasonableness

The methods for monitoring mercury from EGUs that were considered in the initial mercury rulemaking remain valid, technically feasible, and economically reasonable. These methods include mercury CEMS and Appendix K sorbent trap methods. The amendments to the Illinois mercury rule have been proposed in order to reconstitute the monitoring provisions of CAMR, found at 40 CFR Part 75, following the vacatur of all of CAMR. These vacated monitoring provisions of CAMR that have been proposed as amendments to the Illinois mercury rule remain technically feasible and economically reasonable as CAMR was not vacated due to concerns regarding the cost or feasibility of monitoring. The costs and feasibility of monitoring were researched and considered by USEPA prior to the promulgation of CAMR and found to be both reasonable and feasible. In addition, the costs and feasibility of mercury monitoring was previously considered by the Illinois Pollution Control Board ("Board") during the initial Illinois mercury rule rulemaking and found to be both reasonable and feasible. According to vendors of mercury monitoring systems, the great majority of sources formerly affected by CAMR have already purchased monitoring equipment that would have been compliant with the vacated portions of Part 75 in question.

As previously stated, on February 8, 2008, when the United States Court of Appeals for the District of Columbia Circuit vacated CAMR, the court ruled that CAMR, a trading program under Section 111 of the Clean Air Act ("CAA"), as adopted, inconsistent with provisions of the Clean Air Act. USEPA had previously concluded that it was appropriate and necessary to regulate mercury emissions from coal-fired EGUs under section 112 of the CAA, and these EGUs were then listed as sources of hazardous air pollutants ("HAPs") regulated under that section. In response to petitioners in the aforementioned court of appeals, the court stated:

> *"Because coal-fired EGUs are listed sources under section 112, regulation of existing coal-fired EGUs' mercury emissions under section 111 is prohibited, effectively invalidating CAMR's regulatory approach."*[1]

And that:

> *"Petitioners contend that once the Administrator determined in 2000 that EGUs should be regulated under Section 112 and listed them under section 112(c)(1), EPA had no authority to delist them without taking the steps required under section 112(c)(9). We agree."*[1]

The vacatur of CAMR on the grounds of USEPA's regulatory approach does not invalidate the technical and economic assessments that were conducted regarding mercury monitoring.

The cost and feasibility of Part 75 monitoring systems were also considered by the Board in the initial Part 225 rulemaking for mercury emissions from coal-fired EGUs. Following testimony questioning the reliability of CEMS for mercury monitoring or the availability of reliable CEMS for monitoring the Board concluded:

> *"While Mr. McRanie testified about problems with CEMS, contrasting evidence includes the USEPA's decision to adopt the Part 75 monitoring requirements and evidence that contradicts some of Mr. McRanie's testimony. Based on the evidence in the record, the Board finds that mercury monitoring technology is technologically feasible. The Board also finds that the technology is currently available.*" (p. 41 of Board's Nov. 2, 2006, Second Notice Opinion and Order)

The economic impact to sources was also considered by the Board in the same opinion and order quoted above, and was found to be reasonable when weighed against the benefits of the mercury emission reductions.

> *"The Board fully recognizes that the Agency proposal will result in costs for Illinois EGUs and that those costs will exceed those required by implementation of CAMR. Nonetheless, the Board noted above that, compared with CAMR, the Agency's proposal reduces mercury emissions more quickly and more deeply than CAMR. The Board concluded above on the basis of the record in this proceeding that the proposed rule can be expected to result in reduction of mercury deposition and to benefit the public health in the state. Therefore, the Board finds that when the Agency's estimated compliance costs are weighed against the expected benefits, the proposed rule that the Board adopts today is economically reasonable."* (p. 78 of Board's Nov. 2, 2006, Second Notice Opinion and Order)

It should be noted that Illinois EPA has proposed additional amendments to provide a greater degree of flexibility and potentially lower cost in mercury monitoring, specifically the Periodic Emissions Testing Alternative Requirements. This additional flexibility is appropriate as the state is no longer required to demonstrate compliance with a mercury emissions cap for EGUs in accordance with CAMR.

Finally, Illinois EPA is aware, through discussion with vendors of mercury monitoring systems and USEPA, that the great majority of coal-fired EGUs originally affected by CAMR have already purchased monitoring systems compliant with Part 75 requirements in anticipation of the January 1, 2009 effective date of the now vacated CAMR. This suggests that reliable monitors are indeed available at a reasonable cost. It should also be noted that the effective date for the amended monitoring provisions proposed has been changed to July 1, 2009, providing additional time and flexibility to sources that may be needed due to any uncertainty caused by the vacatur of CAMR.

## 2.2 Compliance Demonstration

In anticipation of the January 1, 2009 effective date of CAMR, significant technical infrastructure was created by USEPA to accept data from CEMS units, perform quality assurance and quality control ("QA/QC") on the reported data, and to report that data to the states. USEPA has assured states, and the Illinois EPA in particular, that support in this regard will be available to states with individual state rules at a level equal to that which would have been provided under CAMR. Although USEPA fully expects to provide the desired level of support, it should be noted that USEPA has also expressed some concern in regards to their legal authority to accept electronic monitoring data in light of the CAMR vacatur, thereby causing some uncertainty in this area. In the event that USEPA will not be able to accept electronic monitoring data and perform the associated QA/QC, USEPA has confirmed that identical support services will be available to Illinois EPA and other state agencies through the supplying vendor (i.e., Perrin Quarles Associates, Inc.) on a contracted basis utilizing the same software and infrastructure that USEPA plans to use and that was developed in anticipation of CAMR.

The proposed revisions therefore require that CEMS data be reported to USEPA or the Illinois EPA's designee, be subject to QA/QC procedures, and then reported to the Illinois EPA to verify compliance with Illinois mercury standards. All necessary efforts have been made by the Illinois EPA in proposed revisions to the Illinois mercury rule and in consultation with USEPA to ensure that reporting protocols will be consistent with those anticipated under CAMR for sources utilizing CEMS monitoring and reporting. However, if unforeseen circumstances cause USEPA and the planned designee to both be unable to receive mercury monitoring data in the proper format, the proposed rule modifications include provisions allowing the Illinois EPA to specify a different format for data reporting, thus giving additional flexibility to sources while ensuring that Illinois EPA receives the necessary data.

## 3.0 Alternative Emissions Testing

Illinois EPA has included in its proposed amendments to the Illinois mercury rule provisions for an alternative monitoring plan requiring quarterly emissions testing of sources in lieu of the proposed reconstituted Part 75 monitoring requirements. These emissions testing provisions provide sources an alternative method for demonstrating compliance with Illinois mercury emission standards while still ensuring a high level of integrity in regards to compliance verification. The Illinois EPA has extensive knowledge and experience with the utilization of stack testing for compliance demonstrations. The Periodic Emissions Testing Alternative Requirements, proposed as amendments at 35 Ill. Adm. Code Section 225.239, can be performed using approved USEPA methods for measuring mercury in an emissions test of a coal-fired EGU, and so are technically feasible. The emissions test alternative may also provide a lower cost option for sources relative to the reconstituted Part 75 monitoring requirements, and so are considered to be economically reasonable as an alternative monitoring measure. Affected sources may determine which method of emissions determination will best address their particular situations.

## 3.1 Technical Feasibility

Emissions tests performed to demonstrate compliance with the Illinois mercury emission standards can be conducted using one of three approved test methods. These methods are the Ontario Hydro Method and EPA Methods 29, 30A, and 30B. The emissions test methods were approved by USEPA for initial certification and relative accuracy test audits ("RATA") of Part 75 monitoring equipment, and are considered to be accurate methods for the measurement of mercury from coal-fired EGU stacks. Emissions tests are to be conducted while monitoring source operational parameters to ensure that measurements accurately represent mercury emissions for the time interval that the test will be used to demonstrate compliance. These operational parameters will be submitted to Illinois EPA in a Continuous Parameter Monitoring Plan prior to the test as prescribed in the proposed amendments at Section 225.239(f)(4). The source must then continue to monitor these same parameters and operate the EGU in a manner consistent with the Continuous Parameter Monitoring Plan for the duration of the compliance interval. This will ensure that the source continues to operate consistent with the operational conditions under which compliance was demonstrated, thus providing assurance that the source maintains ongoing compliance.

### 3.1.1 Method 29

Method 29, "Determination of Metals Emissions from Stationary Sources" is an EPA Method for determining antimony (Sb), arsenic (As), barium (Ba), beryllium(Be), cadmium (Cd), chromium (Cr), cobalt (Co), copper (Cu), lead (Pb), manganese (Mn), mercury (Hg), nickel (Ni), phosphorus (P), selenium (Se), silver (Ag), thallium (T1), and zinc (Zn) emissions from stationary sources. It has been an approved method for measuring metal emissions from stationary sources since 1996[2], and is codified at 40 CFR Part 60 Appendix A (incorporated by reference in Section 225.140).

### 3.1.2 Method 30A and Method 30B

In response to comments to USEPA[3] objecting to the Ontario Hydro Method being used for RATA tests of mercury monitors, USEPA approved two alternative methods for measuring mercury in a stack test of a stationary source. These two methods are Method 30A, "Determination of Total Vapor Phase Mercury Emissions from Stationary Sources (Instrumental Analyzer Procedure)"[3] and Method 30B, "Use of Sorbent Traps to Measure Total Vapor Phase Mercury Emissions from Coal-Fired Combustion Sources"[4]. These two methods were approved as alternatives because both the Ontario Hydro Method and Method 29 are wet chemistry methods, and the Ontario Hydro Method is considered to be accurate, but complex. Both methods, 30A and 30B, were approved by the USEPA for the measurement of mercury emissions from stationary source in 2007[3], and are codified at 40 CFR Part 60 Appendix A-8 (incorporated by reference in Section 225.140).

## 3.2 Economic Reasonableness

The Periodic Emissions Testing Alternative Requirements have been proposed as amendments to the Illinois mercury rule in order to provide an alternative to mass emissions monitoring methods previously required by Part 75, and are now proposed as amendments in Part 225 Appendix B. The alternative emissions testing provisions may be a lower cost option to sources for the three year interval for which they are proposed, and may provide additional flexibility in demonstrating compliance with Illinois mercury emission standards while transitioning to new monitoring equipment and requirements. For these reasons, and because it is an *additional* option for monitoring and compliance demonstration, it is considered to be an economically reasonable addition to the Illinois mercury rule without consideration of specific cost estimates for emissions testing. Notwithstanding, the Illinois EPA in consultation with several source emission testing companies, estimates an average cost of approximately $50,000 per test. For many Illinois sources, emissions testing on a quarterly or semi-annual basis may prove to be comparable in cost or lower in cost to proposed Part 225 Appendix B monitoring requirements. As noted earlier, affected sources may determine which method of emissions determination will best address their particular situations.

### 3.3 Compliance Demonstration

Sources opting to demonstrate compliance with Illinois mercury emissions standards using the Periodic Emissions Testing Alternative Requirements will report to the Illinois EPA: emissions test results; parametric monitoring data during the emissions test; and parametric monitoring data from the compliance interval. This data will be used to determine whether the source is complying with the 90% mercury removal standard or the 0.0080 lbs/MW output-based standard. This optional alternative will provide additional flexibility to sources in their monitoring strategy while not diminishing the integrity of the Illinois mercury emission standards during the three-year interval that the alternative is available.

## 4.0 Units Complying with Multi-Pollutant and Combined-Pollutant Standards

Units complying with the Multi-Pollutant Standard ("MPS") or the Combined-Pollutant Standard ("CPS") can choose to comply with the proposed Part 225 Appendix B monitoring requirements, or to comply with semi-annual stack testing requirements proposed at Section 225.239(d)(2). Units complying with the MPS and CPS are not immediately required by Part 225 to meet mercury emission standards, but instead are required to comply with prescribed mercury control protocols, including the requirement to inject halogenated activated carbon in an optimum manner. Semi-annual stack testing, along with existing recordkeeping and reporting, is adequate for evaluation and verification by the Illinois EPA that the installed mercury control system has been designed for effective absorption of mercury, is utilizing an approved sorbent, and is injecting sorbent at the required minimum rates, as required by the rule.

## 5.0 Bias Adjustment Factor

The bias adjustment factor (BAF) for mercury monitoring was originally promulgated in 40 CFR Part 75, Appendix A, Section 7.6, and was vacated along with CAMR. The BAF was intended to ensure CEMS did not record mercury readings lower than emissions measured by a Reference Method. Upon completion of a relative accuracy test audit ("RATA"), the data sets would be tested for bias. For the purposes of the vacated CAMR, the BAF was included for use in cases where the data set from the RATA test had a mean difference greater than the absolute value of the confidence coefficient. In the case where mercury measured by a Reference Method was greater than the values recorded by the monitoring system, the system was considered to have failed the bias test. Values obtained from monitors failing a bias test could then be adjusted using the BAF. The BAF would be calculated by adding the mean difference of the Reference Method and monitor, divided by the monitor average, and then adding one. All data points from monitors failing a bias test would be multiplied by their corresponding BAF. Any BAF would necessarily be greater than one, and so always results in higher measurements of mass mercury emissions after its application.

The unidirectional BAF was instituted as a policy decision by USEPA for CAMR. These procedures were originally included in the Illinois mercury rule despite the rule being a command and control regulation because the state is still required to demonstrate that mercury emissions from covered units do not exceed the state's emissions cap under CAMR. The inclusion of the BAF was intended to maintain consistency with the federal CAMR program and the monitoring provisions therein that were relied upon. However, subsequent to the vacatur of CAMR, other federal regulations were examined to determine the necessity of a BAF for the Illinois mercury rule. Provisions promulgated in the New Source Performance Standards ("NSPS") provided some guidance in determining the need for a BAF for mercury emissions monitors. Provisions at 40 CFR 60.49, Da(b)(4)(iii) state that $SO_2$ data reported for compliance purposes shall not be bias adjusted according to the procedures of Part 75. Additionally, because CAMR was a national trading program, higher measurements of mercury emissions could have only

resulted in a source being required to purchase additional allowances. In the absence of a trading program where establishing certainty of mass emissions is necessary, and under a command and control regime, a BAF could in some cases result in a source being calculated to be out of compliance when they may not be. In light of these considerations, the Illinois EPA has not included the BAF in its amendments to Part 225 Appendix B in its efforts to reconstitute the vacated CAMR monitoring provisions.

## 6.0 Missing Data Procedure

Similar to the BAF, the missing data substitution procedure provisions were a policy decision by USEPA for the CAMR. They were included to ensure that affected sources would operate their CEMS with the least possible down time in order to generate a complete record of a source's mass mercury emissions. Missing data procedures were used to provide otherwise absent data for periods when monitors were offline. This procedure results in a conservative estimate of mercury emissions during the CEMS downtime. This kind of procedure is a requirement of rules that involve a trading program, and like the BAF, were included in the Illinois mercury rule to maintain consistency with CAMR and the relied upon monitoring provisions therein.

However, in a command and control regulation, such as the Illinois mercury rule, these procedures can be seen as overly conservative because the missing data procedures assume emission rates during monitor downtime to be much higher than would be common. Again, similar to the BAF, while a trading program would allow for a source to purchase more allowances, under a command and control regime these values could result in a source being calculated to be out of compliance when such is not the case. Additionally, prior to the vacatur of CAMR, retaining the missing data procedures was required for the approval by the USEPA of the Illinois mercury rule in order that Illinois could demonstrate compliance with the CAMR-mandated mercury emissions cap for the state. In the absence of the CAMR trading program and the mercury emissions cap for the state, the Illinois EPA has not included the missing data procedures in its amendments

to Part 225 Appendix B in its efforts to reconstitute the vacated CAMR monitoring provisions.

Also included in proposed amendments to Part 225 are provisions requiring monitor availability for 75% of any given quarter. This level of availability has been found to be achievable by USEPA and is comparable to the level of monitor availability for mercury monitoring of new sources required by 40 CFR 60.49Da(p)(4)(i). This requirement does not include periods of unavailability due to regular calibration of the monitor. The proposed amendments for monitoring include an additional degree of flexibility in this regard. In the event that a source monitor may be unavailable for more than 25% of a given quarter, the proposed alternative stack test provisions are an additional option for sources to demonstrate compliance for that quarter.

## 7.0 Summary

In preparing this technical support document for the proposed amendments to the Illinois mercury rule, the Illinois EPA has sought to outline significant changes that have been made to the adopted rules and the manner that affected sources may be impacted by the proposed amendments. As previously stated, all efforts were made while drafting the proposed amendments to ensure that sources that had been moving forward with a monitoring plan for mercury emissions could do so in a fashion consistent with what was required under the vacated CAMR. This is evident in the reconstituted Part 75 monitoring provisions included at Part 225 Appendix B. Additionally, efforts have been made to mitigate any effects of the uncertainty introduced by the vacatur of CAMR over recent months. These considerations have led to the postponement of the effective date on which monitoring will be required, the addition of alternative stack testing provisions available for the first three years of monitoring, and the omission of the BAF and missing data procedures from monitoring protocols.

Much of the detailed feasibility and cost considerations and documentation typically contained in a technical support document have been provided in the earlier rulemaking

process for the Illinois mercury rule. The amendments proposed for Part 225 require no technology previously unknown to affected sources, the Illinois EPA, or considered by the Board prior to the adoption of the Illinois mercury rule.

It has been documented herein that the Board has previously concluded that the CAMR monitoring requirements were adequate for the purposes of the Illinois mercury rule, and that they were technically feasible and a cost-effective means for the measurement of mercury emissions from coal-fired EGUs.

The inclusion of the Periodic Emissions Testing Alternative Requirements in proposed amendments involves testing of sources in a manner that was required under CAMR for RATA audits. As an alternative to proposed Part 225 Appendix B monitoring provisions, it will be left to individual sources to determine whether the option is more economically reasonable in specific cases.

The omission of the BAF and missing data procedures from the reconstituted Part 75 provisions requires no discussion of feasibility, and certainly will not result in negative economic impacts to affected sources. Indeed, affected sources have specifically requested that the Illinois EPA remove both of these. Likewise, there should be no substantive change resulting from placing the provisions of the CPS (Part 225 Subpart F) in the more appropriate Subpart B.

## 8.0 References


1. United States Court of Appeals, District of Columbia Circuit: State of NEW JERSEY, et al., Petitioners v. ENVIRONMENTAL PROTECTION AGENCY, Respondent, Feb. 8, 2008.

2. Standards of Performance for New Stationary Sources National Emission Standards for Hazardous Air Pollutants Addition of Method 29 to Appendix A of Part 60 and Amendments to Method 101A of Appendix B of Part 61, 61 Federal Register 18260 (April 25, 1996).

3. Accuracy Test Audits of Mercury Monitoring Systems Installed on Combustion Flue Gas Streams and Several Amendments to Related Mercury Monitoring Provisions, 72Federal Register 51494 (September 7, 2007).