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**TITLE 326 AIR POLLUTION CONTROL BOARD****SECOND NOTICE OF COMMENT PERIOD**

LSA Document #05-330

**DEVELOPMENT OF AMENDMENTS TO RULES CONCERNING COMPLIANCE MONITORING****PURPOSE OF NOTICE**

The Indiana Department of Environmental Management (IDEM) has developed draft rule language for amendments to [326 IAC 3](#) concerning compliance monitoring and [326 IAC 7-2](#) concerning sulfur dioxide compliance requirements. By this notice, IDEM is soliciting public comment on the draft rule language. IDEM seeks comment on the affected citations listed and any other provisions of Title 326 that may be affected by this rulemaking.

**HISTORY**

First Notice of Comment Period: December 1, 2005, Indiana Register (29 IR 899).

**CITATIONS AFFECTED:** [326 IAC 3](#); [326 IAC 7-2](#).

**AUTHORITY:** [IC 13-14-8](#); [IC 13-17-3-4](#); [IC 13-17-3-11](#).

**SUBJECT MATTER AND BASIC PURPOSE OF RULEMAKING****Basic Purpose and Background**

The purpose of this rulemaking is to correct deficiencies identified by U.S. EPA to obtain federal approval of these rules into the state implementation plan, to address certain testing requirements for peaking units, and to make various corrections and clarifications identified by IDEM staff. IDEM is also soliciting comments specific to [326 IAC 3](#) where other opportunities may exist to consider alternative compliance strategies.

This rulemaking addresses deficiencies in the monitoring rules at [326 IAC 3](#) identified by U.S. EPA (February 8, 1994, 59 FR 5742). U.S. EPA found that language providing "Commissioner's discretion", in some cases, would allow the Commissioner to remove or modify federally enforceable requirements. IDEM is amending this language to ensure that when the Commissioner exercises discretion to modify or remove federally enforceable requirements, the exercise of this discretion is accompanied by U.S. EPA approval as a revision to the state implementation plan (SIP).

IDEM proposes a change to monitoring requirements that affect peaking units subject to the acid rain provisions of 40 CFR 75. Peaking units that must operate a continuous emission monitoring system (CEMS) to comply with 40 CFR 60 or [326 IAC 3-5](#) are currently required to perform an annual relative accuracy test as well as quarterly quality assurance functions pursuant to these rules. Because peaking units are not always operating, a requirement that they be started only to conduct these quality assurance functions is unnecessary. IDEM proposes to amend [326 IAC 3-5](#) to allow these peaking units to comply with the Continuous Emission Monitoring provisions in 40 CFR 75 instead of those under the New Source Performance Standards in 40 CFR 60.

IDEM has also added a new provision at [326 IAC 3-5-1\(c\)\(2\)\(A\)\(iv\)](#) that would allow the use of a CEMS for measuring particulate matter rather than a continuous opacity monitoring system (COMS) if certain criteria are met and it is approved by IDEM.

IDEM has identified technical corrections and clarifications that are needed in existing rules in [326 IAC 3](#) and [326 IAC 7](#) concerning emissions monitoring requirements. IDEM proposes the following:

- Clarification of data availability requirements concerning CEMS.
- Corrections to [326 IAC 3-6](#) to include references to source sampling procedures conducted under 40 CFR 61.
- Clarification of requirements in [326 IAC 3-6-5](#) for source testing to demonstrate compliance with the limit on particulate matter having aerodynamic diameters less than ten microns in diameter (PM<sub>10</sub>).
- Deletion of [326 IAC 7-2-1\(f\)](#) because it does not adequately address the problem of conflicting test results to demonstrate compliance, and the issue is now addressed by the credible evidence rule in [326 IAC 1-1-6](#).
- Addition of particulate matter (PM) to the list of pollutants in [326 IAC 3-5-2\(2\)\(B\)](#) and [326 IAC 3-5-5\(a\)](#).
- Amendments to [326 IAC 3-5-2\(7\)](#) to allow U.S. EPA the authority to request monitoring system evaluation.
- Deletion of language allowing COMS data obtained in out of control periods to be used in compliance determination in [326 IAC 3-5-5\(c\)\(4\)\(B\)](#).
- Deletion of language requiring written notification by the source to use CEMS data for compliance in [326 IAC 7-2-1\(g\)](#).
- Other corrections or clarifications that may be identified during the course of this rulemaking.

IDEM seeks comment on the affected citations listed and any other provisions related to the subject matter of this notice. More specifically, IDEM is seeking comment on opportunities for including provisions encouraging the

use of new and emerging emission monitoring equipment, alternative compliance monitoring strategies and frequencies commensurate with the level of environmental performance.

**IC 13-14-9-4 Identification of Restrictions and Requirements Not Imposed Under Federal Law**

No element of the draft rule imposes either a restriction or a requirement on persons to whom the draft rule applies that is not imposed under federal law.

**Potential Fiscal Impact**

Currently, peaking units must comply with certain testing requirements that mean the units may have to be started up for the sole purpose of conducting the test. By allowing these units to use alternate testing requirements, the company could save the cost associated with starting up and running equipment, conducting tests, and submitting reports at times when the plant would not normally be in operation. This could result in an estimated savings of \$4,000 to \$5,000 for an annual relative accuracy test and an estimated savings of \$500 to \$1,000 per source for the quarterly quality assurance audits.

Corrections to address deficiencies identified by U.S. EPA and other corrections and clarifications will have a negligible fiscal impact because these amendments will not substantively change existing requirements. IDEM invites comment on any potential fiscal impacts of this rulemaking.

**Public Participation and Workgroup Information**

A list of interested parties has been compiled based on interest shown in the previous notices on this subject and those who attended a public meeting on March 15, 2007, to discuss the rulemaking. Additional meetings may be held to discuss issues involved in this rulemaking. If you wish to attend meetings, provide comments to the workgroup on the rulemaking, or have suggestions related to the workgroup process, please contact Susan Bem, Rule and State Implementation Plan (SIP) Development Section, Office of Air Quality at (317) 233-5697 or (800) 451-6027 (in Indiana). Please provide your name, phone number, and e-mail address, if applicable, where you can be contacted. The public is also encouraged to submit comments and questions to members of the workgroup who represent their particular interests in the rulemaking.

**SUMMARY/RESPONSE TO COMMENTS FROM THE FIRST COMMENT PERIOD**

IDEM requested public comment from December 1, 2005, through January 2, 2006, on alternative ways to achieve the purpose of the rule and suggestions for the development of draft rule language. IDEM received comments from the following parties by the comment period deadline:

- ALCOA Inc., Warrick Operations (ALC)
- Barnes & Thornburg LLP, on behalf of PSEG Lawrenceburg LLC (PSEG)
- Eli Lilly and Company (ELC)
- Indiana Manufacturers Association (IMA)
- Purdue University (PUR)

Following is a summary of the comments received and IDEM's responses thereto:

**General Comments**

*Comment:* As monitoring requirements continue to evolve at both the federal and state level, Lilly encourages IDEM to focus on consistency of requirements and strive to reduce the degree of complexity associated with continuous monitoring. Lilly believes that state programs should incorporate federal monitoring requirements wherever possible with minimal or no changes.

Lilly strongly believes Indiana's compliance monitoring requirements must represent a balance between protecting air quality, assuring compliance, providing clarity, and reducing administrative burdens. (ELC) (IMA)

*Comment:* IMA believes that Indiana's rules for compliance monitoring, in particular the rules for continuous emissions monitoring systems, should be consistent with federal monitoring requirements. IDEM should adopt provisions in its rules that assure a source is not in violation of the rules when a monitoring system is not collecting valid data due to quality assurance and maintenance activities, or due to malfunctions. The federal monitoring rules provide exclusions of this nature and it is imperative that Indiana's rules are consistent on this matter. (IMA)

*Response:* The monitoring requirements in [326 IAC 3](#) establish the monitoring requirements for both state and federal programs. IDEM recognizes the need to provide consistency and clarity in the rules. However, monitoring requirements applicable to a source or emissions unit in the federal rules such as the New Source Performance Standards (NSPS), National Emission Standards for Hazardous Air Pollutants (NESHAPs), and the Continuous Emission Monitoring requirements for Acid Rain may differ. IDEM considers the monitor operations such as daily zero, span checks, and other quality assurance functions to be a part of the necessary quality assurance/quality controls needed to operate and maintain an effective monitoring system. These activities are not considered deviations of an applicable standard. The daily zero and span checks are not used in calculating the percent monitor data availability. Additionally, IDEM does not consider monitor downtime resulting from maintenance or malfunctions of the monitor as violations of an applicable emission standard.

**CEMS Malfunctions Reporting**

*Comment:* The proposed reinstatement of reporting of malfunctions of continuous monitoring equipment will be an increased burden. IDEM should provide information about how this reporting will be used by IDEM staff.

How has IDEM been hampered by not having these reports sooner than a quarterly excess emissions and CEM/COM downtime report? The obligation to operate the continuous monitoring system lies with the source owner/operator, so reporting a malfunction to IDEM prior to the quarterly report is not anticipated to result in the monitoring system malfunction being remedied any sooner than it would have been without the reporting requirement. (PUR)

*Comment:* We believe that immediate reporting of monitoring system malfunctions should not be required. Sources already report monitoring system malfunctions in their quarterly or semi-annual compliance reports, and we believe any additional reporting would be redundant and excessive. Monitoring system malfunctions do not have the same potential for air quality concerns as a control device malfunction, and therefore, this type of equipment malfunction does not warrant immediate notification to IDEM. (IMA)

*Comment:* Lilly believes that immediate reporting of continuous monitoring system malfunctions would be redundant, and therefore impose unnecessary costs on regulated sources. [326 IAC 3-5-7\(c\)\(5\)](#) already requires reporting of continuous monitoring system instrument downtime as part of the quarterly excess emission report. Malfunctions that affect the ability of the CEMS to collect required data should be reported as downtime in these reports. Lilly recommends that as an alternative to adding a separate reporting requirement, IDEM amend [326 IAC 3-5-7\(c\)\(5\)](#) to clarify that "downtime" includes malfunctions that affect the ability of the CEMS to collect required emissions data. This alternative would lessen the burden on both IDEM and regulated sources while allowing IDEM to receive the same information regarding continuous emission monitoring system performance.

Unlike emission control equipment malfunctions, which are arguably more related to potential public health issues, a monitoring system failure does not create a sense of urgency for IDEM or the public. IDEM is not likely to respond to reports of CEMS malfunctions with a site-visit, and a malfunction of emissions monitoring equipment does not have a direct adverse impact on air quality. Thus, the additional administrative burden of immediate reporting for the regulated community is without a clear benefit. (ELC) (IMA)

*Response:* Upon consideration of the comments and further discussion, IDEM concurs and has not included draft rule language in the second notice that would require immediate reporting of malfunctions since they would be reported on the quarterly report.

*Comment:* IDEM should modify the definition of "monitoring system malfunction" found in [326 IAC 3-4-1\(8\)](#) in order to make it more consistent with the definitions of "malfunctions" found in the federal rules, specifically 40 CFR 60.2 and 40 CFR 63.2. (ELC) (IMA)

*Response:* IDEM is proposing to delete the definition of "monitoring system malfunction" found in [326 IAC 3-4-1\(8\)](#) and add a definition of "malfunction" at [326 IAC 3-4-1\(13\)](#) in the draft language that is similar to the definition in 40 CFR 60.2 and 40 CFR 63.2. Since the term "monitoring system malfunction" is not used anywhere in Article 3 the definition of "malfunction" was added with reference to continuous monitoring equipment since the definition of "malfunction" in 40 CFR 60.2, 40 CFR 63.2, and [326 IAC 1-2-39](#) does not specifically refer to monitoring equipment.

*Comment:* IDEM should reconfigure its monitor downtime reporting to require only a summary of downtime, rather than details of each event, for monitoring systems with good performance. This approach would be consistent with the reporting requirements found in the MACT General Provisions at 40 CFR 63.10(e)(3)(vii) and (viii). (ELC) (IMA)

*Response:* Simply reporting the summary of downtime instead of the details of each event would prevent IDEM from determining the nature of the problems causing the downtime and would limit IDEM's ability to determine if specific actions are needed to correct a recurring problem. For example, a force majeure event may be viewed much differently than a monitoring system which continues to go off-line due to a failure to perform the required upkeep and maintenance. In cases where down time is caused by a reoccurring problem that should be addressed, failure to report on the nature of the downtime prevents IDEM from initiating the appropriate response. Downtime occurrences that may be preventable with some degree of intervention could not be identified if details of each event were not given.

### **CEMS Data Availability Requirements**

*Comment:* Lilly agrees that additional clarification regarding CEMS data availability requirements is very important. Systems for collecting and recording compliance monitoring data are not capable of accurate measurements of compliance-related data 100% of the time no matter how hard a company strives to achieve that goal. Indiana's compliance monitoring rules must recognize this fact and provide clear guidelines for when a source fails to measure, collect, or record compliance-related data. These rules must also take into account that failure to measure, collect, or record data is not an indicator that the source has violated its emission limits and other direct compliance obligations.

In general, Lilly believes the rules should allow for no data collection whenever the source is undertaking an activity that is for the benefit of the monitoring system (i.e., quality assurance and maintenance), or when the monitor is not working due to unplanned events beyond the reasonable control of the source.

Therefore, Lilly recommends that the state rules defer to the data availability requirements in the underlying federal rules which provide allowances for sources to miss data collection for quality assurance and maintenance activities, and for monitor malfunctions. For those circumstances where no underlying federal rule exists, the state

data availability requirements should maintain consistency with other federal programs by providing allowances for downtime due to equipment maintenance, routine quality assurance activities (daily, quarterly, and annually), and malfunctions (i.e., sudden and unavoidable failures which are not caused by poor maintenance or careless operation). (ELC) (IMA)

*Response:* IDEM recognizes that CEMS are not capable of accurate measurements of compliance-related data one hundred percent (100%) of the time and understands that monitors cannot collect data when calibration, maintenance, quality assurance, and malfunctions occur. Calibration, maintenance, and quality assurance activities are vital to operation of the CEMS and their ability to provide true and accurate data. IDEM evaluates each CEMS' calibration, maintenance, quality assurance, and malfunctions. IDEM has consistently applied enforcement discretion to the calibration, maintenance, and quality assurance activities that benefit the ability of CEMS to provide true and accurate data. CEMS downtime related to malfunctions can occur for a variety of reasons and IDEM must evaluate the cause behind each malfunction. Because of the variety of reasons for a CEMS to malfunction, IDEM will continue to evaluate each CEMS malfunction on a case by case basis when a unit fails to measure, collect, or record data. IDEM proposes to add [326 IAC 3-5-8](#), Maintenance of Continuous Emission Monitoring and Continuous Opacity Monitoring Equipment, to address these comments.

#### **Monitoring Requirements for Peaking Units**

*Comment:* As the owner and operator of an infrequently operated unit subject to 40 CFR 75 and 40 CFR 60 requirements, we strongly support IDEM's proposed revision to [326 IAC 3-5](#) to allow these units to comply with 40 CFR 75 instead of 40 CFR 60. (PUR)

*Comment:* The Air Pollution Control Board is encouraged to amend the monitoring requirements for units that operate CEMS in accordance with the acid rain program to remove the requirements of the New Source Performance Standards in 40 CFR 60 to perform annual relative accuracy tests as well as quarterly assurance functions, and instead to allow such units to comply with the continuous emission monitoring provisions of the acid rain program under 40 CFR 75. Such an amendment would be consistent with U.S. EPA's announcements on this topic and would help prevent the wastefulness of starting up and operating units solely for the purpose of performing these quality assurance tests. (PSEG)

*Comment:* The amendment for monitoring under 40 CFR 75 should be applicable to units based on the frequency of operation, and not based on whether a unit is classified as a "peaking unit". Although the term "peaking unit" is defined generally under 40 CFR 75, a unit's status as a "peaking unit" is not the basis for whether an operator must conduct certain quality assurance requirements. Instead, 40 CFR 75 utilizes other thresholds, such as hours of operation per quarter, and the number of quarters during which a unit operates for a certain minimum number of hours. For example, the determining factor of whether a unit must conduct a relative accuracy test audit is based, in part, upon whether a unit has operated for 168 unit operating hours in a calendar quarter, which is defined in 40 CFR 75 as a "QA Operating Quarter." Therefore, in order to avoid inconsistency with the U.S. EPA's rules, the rule should apply the requirements as stated in 40 CFR 75. (PSEG)

*Response:* IDEM concurs that allowing peaking units to comply with the monitoring requirements of 40 CFR 75 rather than 40 CFR 60 is reasonable and reduces an unnecessary burden on the source. At this time, IDEM does not have enough information about any other category of emission units that could be addressed in the same way. If sufficient information is provided, IDEM will consider changing the monitoring requirements for other categories of emission units in this rulemaking or in a future rulemaking.

#### **Daily Calibration Error Testing**

*Comment:* Current rules at [326 IAC 3-5-7\(5\)](#) and language in the Title V operating permits requires the submittal of daily zero and span checks of continuous emissions monitoring systems. We believe this requirement is a burden to both IDEM and the regulated source. A more effective solution would require the source to create a permanent record of the calibrations kept on site in a format suitable for inspection. This data would not be confidential and would be available at IDEM's request. (PUR)

*Response:* IDEM concurs and has changed the existing reporting requirement to a record keeping requirement in [326 IAC 3-5-6](#).

#### **Emission Testing**

*Comment:* The requirement in [326 IAC 3-6-3\(b\)\(1\)](#) to test sources at ninety-five percent (95%) to one hundred percent (100%) of permitted operating capacity is impractical for many sources, due to such factors as restrictions in raw material feed, current production requirements, etc. We suggest a more achievable requirement of ninety percent (90%) to one hundred percent (100%) of permitted operating capacity. (ALC)

*Response:* Whether IDEM requires ninety-five percent (95%) or ninety (90%) of maximum capacity, the problems many sources have with reaching maximum capacity will continue to exist. In order to demonstrate compliance at worst case conditions sources must strive to maximize their production rates during compliance testing. Sources who cannot reach maximum capacity have the ability to get approval under [326 IAC 3-6-3\(b\)\(1\)\(C\)](#) for an alternative capacity during testing, derate the unit, or may choose to conduct another compliance test after conditions resume where maximum hourly production rates can be reached. Therefore, IDEM has not changed this requirement.

#### **Visible Emissions Evaluations**

*Comment:* ALCOA Inc.-Warrick Operations has many sources of particulate emissions which have very low opacity (near zero). Many of these sources are controlled by baghouses which have broken bag detectors. The broken bag detectors normally alarm at very low levels of opacity, before any visible emissions (VE) would be detected. When conducting particulate emissions tests on these types of sources, the requirement to conduct at least thirty (30) minutes of visible emissions readings per hour of sampling time in [326 IAC 3-6-5\(2\)](#) is burdensome, requiring additional personnel. We suggest including an optional waiver of the VE readings by the onsite IDEM staff person if the opacity is zero for the first thirty (30) minutes of sampling time. (ALC)

*Response:* The requirement to read thirty (30) minutes of visible emissions during each one hour source sampling test is important in case a bag detector fails to operate properly. A bag detector does not indicate whether or not the unit is in compliance, it is only an indication of change. In addition, visible emissions tests must be conducted to comply with 40 CFR 60.11(b) and 40 CFR 63.6(h)(4). Visible emissions can be quantified by any trained reader. Therefore, these are done with the performance test with the expectation that the source will demonstrate compliance and that during the test an opacity value will be observed that generally shows compliance. For instance, if the opacity during a test was five percent (5%) and the source had a limit of 10 lbs/hr and the test results showed them at 9.0 lbs/hr an inspector could go out to the site at any time and should see opacity values around five percent (5%). Therefore, the inspector would feel confident the source was still in compliance with their lbs/hr limit. However, if the inspector saw opacity at thirty percent (30%), there would be reason to believe the source was no longer in compliance with their limit since at five percent (5%) opacity they emitted 9.0 lbs/hr and the opacity has increased from five percent (5%) to twenty-five percent (25%).

#### **Other Comments**

*Comment:* The broad statement in [326 IAC 3-5-1](#) that any source subject to NSPS or NESHAP requirements in 40 CFR 60, 61, or 63 rules are subject to the compliance monitoring requirements of [326 IAC 3-5](#) creates significant opportunity for conflicting and overlapping requirements. For example, emission monitoring requirements found in standards promulgated at 40 CFR 63 contain performance specifications (instrument span value and ranges, for example) which may differ from those found at [326 IAC 3](#). Lilly recommends that when emission units are subject to requirements in federal rules, they should not be subject to Article 3 requirements.

As an alternative, the rule language could be crafted so that in the event of a conflict between specific compliance monitoring requirements in federal regulations (such as an NSPS or NESHAP) and the state rules, the federally mandated specifications and provisions should prevail. Or, rule language could clearly state that affected units should comply with the specifications and provisions under the federal rule in the event of a conflict between the federal rule regulations and [326 IAC 3](#). For example, the current rule at [326 IAC 3-5-5\(a\)](#) and (b) provides that affected electric utility boilers should comply with the provisions of the Acid Rain Program at 40 CFR 75. (ELC) (IMA)

*Comment:* Lilly recommends the language in [326 IAC 3-5-5\(a\)](#), referring to quality assurance requirements, be revised to incorporate the quality assurance requirements in 40 CFR 63. Lilly believes that the state rules should defer to the quality assurance requirements in the underlying federal rule, 40 CFR 75, 40 CFR 60, or 40 CFR 63. (ELC) (IMA)

*Response:* States must require monitoring in accordance with 40 CFR 60, 40 CFR 61, 40 CFR 63, 40 CFR 70, and 40 CFR 75. IDEM believes there is value in having both the state and federal quality assurance rules apply to ensure consistency in the quality assurance of continuous emission monitoring systems. Some federal rules (especially those found in 40 CFR Part 63) have different quality assurance requirements built into each specific rule. For instance, 40 CFR Part 63, Subpart GGG only requires total organic compound monitors to perform quarterly cylinder audits after the initial certification of the system. While this is specific to this rule, cylinder gas audits (CGAs) only quality assure part of the CEMS system and IDEM does not believe that CGA's are sufficient to demonstrate these monitors are still providing accurate data. IDEM believes that continuous emission monitoring systems should have a consistent quality assurance approach for reliable information and data. Rule [326 IAC 3-5-5](#) helps bridge the gap between the federal rules and state rules to ensure consistency in the quality assurance of continuous emission monitoring systems.

*Comment:* Lilly suggests that IDEM consider adding language to [326 IAC 3-5-2\(1\)](#) that would allow a source to request approval of an alternative monitoring plan in lieu of the performance specifications in 40 CFR 60, Appendix B. The use of alternative monitoring plans encourages development of new technologies, provides flexibility, and enables sources to streamline requirements for monitoring multiple pollutants from a single stack. Similar language allowing sources to request approval for alternative instrument span values and installation locations has already been incorporated into the current versions of [326 IAC 3-5-2\(5\)](#) and (6), respectively. (ELC) (IMA)

*Response:* 40 CFR 60, Appendix B provides criteria that a monitor must meet to ensure proper performance. It is unclear to IDEM what alternative a source might consider requesting that would ensure proper performance. If further information is provided to demonstrate that valid alternatives exist to the criteria in 40 CFR 60, Appendix B, IDEM will discuss with U.S. EPA whether the alternatives could be federally approvable.

*Comment:* Lilly would appreciate additional clarification of the reporting requirements for relative accuracy test audits (RATAs). Lilly believes RATA reports are to be submitted to the department within 30 days after the

end of each calendar quarter, consistent with the language in [326 IAC 3-5-5\(e\)](#). However, we also recognize that common practice has been to submit the report within 45 days after completion of the test, as described in [326 IAC 3-6-4\(b\)](#). (ELC) (IMA)

*Response:* IDEM's preference is to have RATA reports sooner than thirty (30) days after the end of the calendar quarter, therefore, the reports should be submitted forty-five (45) days after the completion of the test.

*Comment:* To improve consistency with recent federal monitoring rules, the minimum frequency for excess emission reports, stated in [326 IAC 3-5-7](#), should be changed from quarterly to semiannually. (ELC) (IMA)

*Response:* While federal rules such as 40 CFR 63.10(e) and 40 CFR 60.7(c) allow for the submittal of excess emission reports on a semiannual basis, other federal rules, such as 40 CFR 51, Appendix P, require quarterly submittals of excess emission reports. Because the reporting requirements of [326 IAC 3-5-7](#) are of general applicability, they must meet minimum federal requirements. Allowing sources to submit reports on a semi-annual basis means IDEM may not be aware of excess emissions, deviations, or potential violations for up to two hundred ten (210) days. IDEM feels this is an excessive amount of time to elapse before we are aware of these violations and can take appropriate responses. Reporting on a quarterly basis is consistent with IDEM's implementation of the Part 70 requirements and the reporting of deviations from permitting requirements.

*Comment:* Gap-filling Title V compliance monitoring should not be required on a once-per-shift basis, and redundant monitoring requirements should be eliminated. The IMA supports creation of an incentive program for monitoring or other alternatives to reduce the frequency of testing, paperwork, record keeping, etc. when historical data shows compliance. (IMA)

*Response:* IDEM has included once-per-shift monitoring in the past, but in most cases the minimum frequency has been changed to once-per-day. There still may be some situations where more frequent monitoring will be required, especially for larger units subject to 40 CFR 64, Compliance Assurance Monitoring.

*Comment:* IMA has concerns about monitoring requirements imposed in permits issued by IDEM. Construction and operating permits should not include detailed and excessive compliance monitoring terms without regulatory authority for such terms. There should be no compliance monitoring requirements for trivial activities, insignificant activities, and low-emitting emission units. Compliance monitoring requirements should apply only to emission units that have the potential to cause significant air quality impacts, and such requirements should correspond to the level of potential impacts. (IMA)

*Response:* [326 IAC 2-5.1-3\(e\)\(2\)](#), [326 IAC 2-6.1-5\(a\)\(2\)](#), [326 IAC 2-7-5\(3\)](#), [326 IAC 2-7-6\(1\)](#), [326 IAC 2-8-4\(3\)](#) and [326 IAC 2-8-5\(1\)](#) require that all construction and operating permits contain monitoring, testing, record keeping, and reporting requirements to assure compliance with applicable requirements. Compliance monitoring will generally not be required for units with a potential to emit less than twenty-five (25) tons per year unless the owner/operator has accepted enforceable limits to avoid an applicable requirement or the unit is subject to a specific applicable requirement that includes compliance monitoring or work practice standards. For example, if a unit is limited to less than fifteen (15) tons per year of PM10 to avoid PSD requirements, compliance monitoring may still be required to demonstrate compliance with the synthetic minor limit. Units that are regulated by a specific applicable requirement that include compliance monitoring provisions in a rule are required to be included in a permit. For example, degreasers may require specific work practice standards under [326 IAC 8](#) and would be included in a permit. While many trivial, insignificant, and low-emitting units may have a lower impact than larger emitting units, IDEM cannot ignore those instances where specific applicable requirements apply to those units and the applicable requirements include means to assure compliance.

## REQUEST FOR PUBLIC COMMENTS

This notice requests the submission of comments on the draft rule language, including suggestions for specific revisions to language to be contained in the draft rule. Mailed comments should be addressed to:

#05-330(APCB) Compliance Monitoring  
Susan Bem Mail Code 61-50  
Rule and SIP Development Section  
Office of Air Quality  
Indiana Department of Environmental Management  
100 North Senate Avenue  
Indianapolis, Indiana 46204

Hand delivered comments will be accepted by the receptionist on duty at the tenth floor reception desk, Indiana Department of Environmental Management, 100 North Senate Avenue, Indianapolis, Indiana.

Comments may be submitted by facsimile at the IDEM fax number: (317) 233-5967, Monday through Friday, between 8:15 a.m. and 4:45 p.m. Please confirm the timely receipt of faxed comments by calling the Air Programs Branch at (317) 234-6530.

## COMMENT PERIOD DEADLINE

Comments must be postmarked, faxed, or hand delivered by April 30, 2010.

Additional information regarding this action may be obtained from Susan Bem, Rule and State

**DRAFT RULE**

SECTION 1. [326 IAC 3-4-1](#) IS AMENDED TO READ AS FOLLOWS:

**[326 IAC 3-4-1](#) Definitions**

**Authority:** [IC 13-14-8](#); [IC 13-17-3-4](#); [IC 13-17-3-11](#)

**Affected:** [IC 13-11](#); [IC 13-15](#); [IC 13-17](#)

Sec. 1. In addition to the definitions provided in [IC 13-11](#), [326 IAC 1-2](#), and [326 IAC 2-7](#), the following definitions apply throughout this article unless expressly stated otherwise:

(1) "Applicable emission limitation or standard" means any of the following:

(A) A state or federal emission limitation or standard applicable to a regulated hazardous air pollutant under 40 CFR 61\* or 40 CFR 63\*.

(B) A state or federal emission limitation or standard applicable to a regulated air pollutant, other than a hazardous air pollutant under Section 112 of the CAA, for which the source is classified as a major source.

(1) "Boiler operating day" means a twenty-four (24) hour period between midnight and the following midnight during which any fuel is combusted at any time in the steam-generating unit. It is not necessary for fuel to be combusted the entire twenty-four (24) hour period.

(2) "Calendar quarter" means a consecutive three (3) month period (**nonoverlapping**) beginning on:

(A) January 1;

(B) April 1;

(C) July 1; or

(D) October 1.

(3) "Certified emissions monitor" means an emissions monitor that meets all applicable performance specifications of 40 CFR 60\* or any other performance specification, and for which performance data has been submitted to and approved by the department.

(3) "Capture system" means the equipment, including hoods, ducts, fans, and booths, that is used to contain, capture, and transport a pollutant to a control device.

(4) "Continuous emission monitoring system" or "CEMS" means the equipment required by the applicable permit, state rule, or federal regulation used to sample, analyze, measure, and provide a continuous, permanent record of emissions in units of the applicable standard or other form, as specified by the U.S. EPA pursuant to regulations under Section 412 of the Clean Air Act.

(5) "Continuous opacity monitoring system" or "COMS" means the equipment required by the applicable permit, state rule, or federal regulation used to measure the opacity of the effluent on a continuous basis as either of the following:

(A) The optical density of the effluent gas.

(B) The opacity of the effluent gas.

(6) "Control device" means equipment, other than inherent process equipment, that is used to destroy or remove air pollutants prior to discharge to the atmosphere. The types of equipment that may commonly be used as control devices include the following:

(A) Fabric filters.

(B) Mechanical collectors.

(C) Electrostatic precipitators.

(D) Inertial separators.

(E) Afterburners.

(F) Thermal or catalytic incinerators.

(G) Adsorption devices, such as carbon beds.

(H) Condensers.

(I) Scrubbers, such as wet collection and gas absorption devices.

(J) Selective catalytic or noncatalytic reduction systems.

(K) Flue gas recirculation systems.

(L) Spray dryers.

(M) Spray towers.

(N) Mist eliminators.

(O) Acid plants.

(P) Sulfur recovery plants.

**(Q) Injection systems, such as:**

- (i) water;
- (ii) steam;
- (iii) ammonia;
- (iv) sorbent; or
- (v) limestone;

injection.

**(R) Combustion devices independent of the particular process being conducted at an emissions unit, for instance, the destruction of emissions achieved by venting process emission streams to flares, boilers, or process heaters.**

**(S) Other devices acceptable to the department and U.S. EPA.**

For purposes of this article, the term does not include passive control measures that act to prevent pollutants from forming, such as the use of seals, lids, or roofs to prevent the release of pollutants, use of low polluting fuel or feedstocks, or the use of combustion or other process design features or characteristics. If an applicable requirement establishes that particular equipment that otherwise meets this definition of a control device does not constitute a control device as applied to a particular pollutant-specific emissions unit, then that requirement shall be binding for purposes of this article.

**(7) "Data" means the results of any type of monitoring or method, including the results of:**

- (A) instrumental or noninstrumental monitoring;**
- (B) emission calculations;**
- (C) manual sampling procedures;**
- (D) record keeping procedures; or**
- (E) any other form of information collection procedure used in connection with any type of monitoring or method.**

**(8) "Emission limitation or standard" means the following:**

**(A) Any applicable requirement, including the following, as defined under the CAA:**

- (i) An emission limitation or standard.
- (ii) A standard of performance.
- (iii) A means of emission limitation.

**(B) An emission limitation or standard may be expressed:**

- (i) in terms of the pollutant, either as:
  - (AA) a specific quantity, rate, or concentration of emissions; or**
  - (BB) the relationship of uncontrolled to controlled emissions; or**
- (ii) as either:
  - (AA) a work practice process; or**
  - (BB) another form of:**
    - (aa) design;**
    - (bb) equipment operation;**
    - (cc) production limit; or**
    - (dd) operation and maintenance requirement.**

**(C) For purposes of [326 IAC 3-8](#), an emission limitation or standard shall not include general operation requirements that an owner or operator may be required to meet.**

**(4) (9) "Emission test", ~~"source sampling test"~~, "compliance test", or "performance test" means a procedure for sampling a gas stream from a single sampling location at a ~~facility~~, **source, emissions** unit, or pollution control equipment, to determine a pollutant emission rate, concentration, or parameter while the ~~facility~~, **source, an emissions** unit, or pollution control equipment is operating at conditions that result in measurement of the highest emission or parameter values (prior to any control device), or at other operating conditions approved by the department or U.S. EPA. A test shall comprise three (3) sampling runs for a specified sampling time span. Additional conditions may be required by applicable rules, permit, or enforcement order. The ~~test owner or operator shall be performed~~ **perform the test** using sampling and analytical procedures approved by the department or U.S. EPA for the specific pollutant or parameter and ~~facility~~, **source, emissions** unit, pollution control equipment, process, or operation.**

**(5) (10) "Emissions unit", for the purposes of this article, means any part of or activity at a source that emits or has the potential to emit any regulated air pollutant for which an emission limitation or standard has been established. This ~~The~~ term does not alter or affect the definition of the term "unit" for purposes of Title IV of the CAA or of the term "emissions unit" for purposes of Title V of the CAA.**

**(11) "Exceedance" means a condition that:**

- (A) is detected by monitoring that provides data in terms of an emission limitation or standard; and**
- (B) indicates that emissions (or opacity) are greater than the applicable emission limitation or standard (or less than the applicable standard in the case of a percent reduction requirement) consistent with any averaging period specified for averaging the results of the monitoring.**

(12) "Inherent process equipment" means equipment that is necessary for the proper or safe functioning of the process, or material recovery equipment that the owner or operator documents is installed and operated primarily for purposes other than compliance with air pollution regulations. The term does not include equipment that must be operated at an efficiency higher than that achieved during normal process operations in order to comply with the applicable emission limitation or standard. For the purposes of this article, inherent process equipment is not considered a control device.

(13) "Malfunction" means any sudden, infrequent, and not reasonably preventable failure of air pollution control equipment, process equipment, or a process to operate in a normal or usual manner. Failures that are caused in part by poor maintenance or careless operation are not malfunctions. For purposes of this article, a CEMS or COMS is considered process equipment.

~~(6) (14) "Major source" means any major stationary source or any group of stationary sources as defined described in 326 IAC 2-7-1(22). excluding any source described in 326 IAC 2-7-1(22)(A).~~

~~(7) (15) "Monitoring" means any form of collecting data on a routine basis to determine or otherwise assess compliance with emission limitations or standards. The term includes the following:~~

~~(A) Record keeping, if records are used to determine or assess compliance with an emission limitation or standard, including:~~

~~(i) records of raw material content and usage;~~

~~(ii) records that document compliance with work practice requirements; or~~

~~(iii) other records used to determine or assess compliance with an emission limit or standard.~~

~~(B) Compliance method tests that are conducted on a routine periodic basis.~~

~~(C) One (1) or more of the following data collection techniques, where appropriate, for a particular circumstance:~~

~~(i) Continuous emission or opacity monitoring systems.~~

~~(ii) Continuous process, capture system, control device, or other relevant parameter monitoring systems or procedures, including a PEMS.~~

~~(iii) Emission estimation and calculation procedures.~~

~~(iv) Maintenance and analysis of records of fuel or raw materials usage.~~

~~(v) Recording results of a program or protocol to conduct specific operation and maintenance procedures.~~

~~(vi) Verification of emissions, process parameters, capture system parameters, or control device parameters, using portable or in situ measurement devices.~~

~~(vii) Visible emission observations.~~

~~(viii) Any other form of measuring, recording, or verifying on a routine basis emissions, process parameters, capture system parameters, control device parameters, or other factors relevant to assessing compliance with emission limitations or standards.~~

~~(8) "Monitor system malfunction" means any interruption in the collection of valid data as a result of the failure of any component of the system to operate within the specifications of the applicable performance specification.~~

~~(9) (16) "Out of control" means any data collected by a continuous monitoring system during periods immediately following an out of tolerance quality assurance assessment and prior to an acceptable quality assurance assessment.~~

(17) "Owner or operator" means any person who:

(A) owns;

(B) leases;

(C) operates;

(D) controls; or

(E) supervises;

a stationary source subject to this article.

(18) "Peaking unit" means the following:

(A) An emissions unit that has:

(i) an average capacity factor of not more than ten and zero-tenths percent (10.0%) during the previous three (3) calendar years; and

(ii) a capacity factor of not more than twenty and zero-tenths percent (20.0%) in each of those calendar years.

(B) For purposes of 40 CFR 75\*, an emissions unit may initially qualify as a peaking unit if the designated representative demonstrates to the satisfaction of the commissioner that the requirements of clause (A) are met, or will in the future be met, through one (1) of the following submissions:

(i) For a unit for which a monitoring plan has not been submitted under 40 CFR 75.62\*, the designated representative submits either:

(AA) capacity factor data for the emissions unit for the three (3) calendar years immediately preceding the date of initial submission of the monitoring plan for the emissions unit under 40 CFR 75.62\*; or

(BB) if an emissions unit does not have capacity factor data for one (1) or more of the three (3) calendar years immediately preceding the date of initial submission of the monitoring plan for the unit under 40 CFR 75.62\*, all available capacity factor data, beginning with the date on which the emissions unit commenced commercial operation, and projected capacity factor data.

(ii) For a unit for which a monitoring plan has already been submitted under 40 CFR 75.62\*, that has not qualified as a peaking unit under item (i), and where capacity factor changes, the designated representative submits either:

(AA) three (3) calendar years of data following the change in the emissions unit's capacity factor showing an average capacity factor of not more than ten and zero-tenths percent (10.0%) during the three (3) previous calendar years and a capacity factor of not more than twenty and zero-tenths percent (20.0%) in each of those calendar years; or

(BB) one (1) calendar year of data following the change in the emissions unit's capacity factor showing a capacity factor of not more than ten and zero-tenths percent (10.0%) and a statement that this changed pattern of operation resulting in a capacity factor less than ten and zero-tenths percent (10.0%) is considered permanent and is projected to continue for the foreseeable future.

(C) For purposes of 40 CFR 75\*, an emissions unit that initially qualifies as a peaking unit must meet the criteria in clause (A) each year in order to continue to qualify as a peaking unit. If such an emissions unit fails to meet such criteria for a given year, the emissions unit no longer qualifies as a peaking unit starting January 1 of the year after the year for which the criteria are not met. If an emissions unit failing to meet the criteria in clause (A) initially qualified as a peaking unit under clause (B), the emissions unit may qualify as a peaking unit for a subsequent year only if the designated representative submits the data specified in clause (B)(ii)(AA).

(D) An emissions unit required to comply with the provisions of Subpart H of 40 CFR 75\*, under a state or federal NO<sub>x</sub> mass emissions reduction program, may, pursuant to 40 CFR 75.74(c)(11)\*, qualify as a peaking unit on an ozone season basis rather than an annual basis, if the owner or operator reports NO<sub>x</sub> mass emissions and heat input data only during the ozone season.

~~(10)~~ (19) "Permit" means any applicable permit issued, renewed, amended, revised, or modified under: [326 IAC 2-1](#);

(A) [326 IAC 2-1.1](#);

(B) [326 IAC 2-2](#);

(C) [326 IAC 2-3](#);

(D) [326 IAC 2-5.1](#);

(E) [326 IAC 2-6.1](#);

(F) [326 IAC 2-7](#);

(G) [326 IAC 2-8](#); or

(H) [326 IAC 2-9](#).

(20) "Potential to emit" shall have the same meaning as provided under [326 IAC 2-7-1\(29\)](#), provided that it shall be applied with respect to:

(A) an emissions unit as defined under subdivision (10); and

(B) a stationary source as defined under [326 IAC 2-7-1\(38\)](#).

(21) "Predictive emission monitoring system" or "PEMS" means a system that uses process and other parameters as inputs to a computer program or other data reduction system to produce values in terms of the applicable emission limitation or standard.

(22) "QA operating quarter" means a calendar quarter in which there are at least one hundred sixty-eight (168) unit operating hours, as defined in subdivision (25), or, for a common stack or bypass stack, a calendar quarter in which there are at least one hundred sixty-eight (168) stack operating hours, as defined in subdivision (24).

~~(14)~~ (23) "Quality assurance" means those activities performed to ensure that monitoring data are sufficiently representative, accurate, precise, reliable, frequent, and timely. Those activities include, but are not limited to, frequent activities (daily) and less frequent activities (weekly, monthly, quarterly, and yearly). **establish validity of data used to demonstrate compliance.**

(24) "Stack operating hour" means a clock hour during which flue gases flow through a particular stack or duct, either for the entire hour or for part of the hour, while all associated emissions units are combusting fuel.

(25) "Unit operating hour" means a clock hour during which an emissions unit combusts any fuel, either for part of the hour or for the entire hour.

\*These documents are incorporated by reference. Copies may be obtained from the Government Printing Office, 732 North Capitol Street NW, Washington, D.C. 20401 or are available for review and copying at the Indiana Department of Environmental Management, Office of Air Quality, Indiana Government Center North, Tenth Floor, 100 North Senate Avenue, Indianapolis, Indiana 46204.

(Air Pollution Control Board; [326 IAC 3-4-1](#); filed Jan 30, 1998, 4:00 p.m.: 21 IR 2062; readopted filed Jan 10, 2001, 3:20 p.m.: 24 IR 1477; errata filed Dec 12, 2002, 3:35 p.m.: 26 IR 1566; filed Aug 26, 2004, 11:30 a.m.: 28 IR 30)

SECTION 2. [326 IAC 3-4-2](#) IS AMENDED TO READ AS FOLLOWS:

### **[326 IAC 3-4-2](#) Certification**

**Authority:** [IC 13-14-8](#); [IC 13-17-3-4](#); [IC 13-17-3-11](#)

**Affected:** [IC 13-14-4-3](#); [IC 13-15](#); [IC 13-17](#)

Sec. 2. Each report submitted under this article **rule and [326 IAC 3-5](#) through [326 IAC 3-7](#)** shall contain a certification of truth, accuracy, and completeness. This certification and any other certification required under this article shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete. **Reports submitted under [326 IAC 3-8](#) shall meet the certification requirements of [326 IAC 2-7-4\(f\)](#).**

(Air Pollution Control Board; [326 IAC 3-4-2](#); filed Jan 30, 1998, 4:00 p.m.: 21 IR 2063; readopted filed Jan 10, 2001, 3:20 p.m.: 24 IR 1477)

SECTION 3. [326 IAC 3-4-3](#) IS AMENDED TO READ AS FOLLOWS:

### **[326 IAC 3-4-3](#) Conversion factors**

**Authority:** [IC 13-14-8](#); [IC 13-17-3-4](#); [IC 13-17-3-11](#)

**Affected:** [IC 13-15](#); [IC 13-17](#)

Sec. 3. (a) Owners or operators of facilities **emissions units** subject to this article shall use the following procedures for converting monitoring data to units of the standard where necessary:

(1) ~~For The owner or operator of a fossil fuel-fired steam generators;~~ **generator shall use** the following procedures ~~shall be used~~ to convert gaseous emission monitoring data in parts per million (ppm) to pounds per million British thermal units (Btu) (lbs/MMBtu) where necessary:

(A) When the owner or operator of a fossil fuel-fired steam generator elects under this article to measure oxygen (O<sub>2</sub>) in flue gases, ~~the measurements of owner or operator shall measure~~ the pollutant concentration and oxygen ~~shall be~~ on a dry basis and **use** the following conversion procedure: ~~used:~~

$$E = CF \frac{(20.9)}{(20.9 - \%O_2)}$$

(B) When the owner or operator elects under this article to measure carbon dioxide (CO<sub>2</sub>) in flue gases, ~~the measurement of owner or operator shall measure~~ the pollutant concentration and the CO<sub>2</sub> concentration ~~shall each be~~ on a consistent basis (wet or dry) and **use** the following conversion procedure: ~~used:~~

$$E = CF_c \frac{(100)}{(\%CO_2)}$$

(C) When the owner or operator elects under this article to measure sulfur dioxide (SO<sub>2</sub>) or nitrogen oxides (NO<sub>x</sub>) in the flue gases, ~~the measurement of owner or operator shall measure~~ the diluent concentration and the SO<sub>2</sub> ~~and or~~ the NO<sub>x</sub> concentration ~~shall each be~~ on a wet basis and **use** the following conversion procedure, ~~used~~, except where wet scrubbers are employed or where moisture is otherwise added to the stack gases:

$$E = C_{ws} F_w \frac{(20.9)}{(20.9 (1 - B_{ws}) - \%O_{2ws})}$$

(D) When the owner or operator elects under this article to measure SO<sub>2</sub> or NO<sub>x</sub> in the flue gases, the measurement of **owner or operator shall measure** the diluent concentration and the SO<sub>2</sub> and or the NO<sub>x</sub> concentration shall each be on a wet basis and **use** the following conversion procedure, ~~shall be used~~ where wet scrubbers or moisture is otherwise present in the stack gases, provided water vapor content of the stack gas is measured at least once every fifteen (15) minutes at the same point as the pollutant and oxygen measurements are made:

$$E = C_{ws} F \frac{(20.9)}{(20.9 (1 - B_{ws}) - \%O_{2ws})}$$

(E) The values used in the equations under this subdivision are derived as follows:

- C<sub>ws</sub> = Pollutant concentration at stack conditions in grams per wet standard cubic meter (g/wscm) or pounds per wet standard cubic meter (lbs/wscm), determined by multiplying the average concentration in parts per million (ppm) for each one (1) hour period by 4.15 × 10<sup>-5</sup> M g/wscm per ppm or 2.59 × 10<sup>-9</sup> M lbs/wscm per ppm, where M is pollutant molecular weight in grams per gram-mole (g/g-mole) or pounds per pound-mole (lb/lb-mole).
- M = 64.07 for SO<sub>2</sub> and 46.01 for oxides of nitrogen (NO<sub>x</sub>) as NO<sub>2</sub>.
- C = Pollutant concentration at stack conditions in pounds per dry standard cubic meter (lbs/dscm) or grams per dry standard cubic meter (g/dscm).
- F, F<sub>c</sub> = A factor representing a ratio of the volume of dry flue gases generated to the calorific value of the fuel combusted (F), and a factor representing a ratio of the volume of carbon dioxide generated to the calorific value of the fuel combusted (F<sub>c</sub>), respectively. Values of F and F<sub>c</sub> are given in 40 CFR 60, Appendix A, Method 19\*, as applicable.
- F<sub>w</sub> = A factor representing a ratio of the volume of wet flue gases generated to the calorific value of the fuel combusted. Values of F<sub>w</sub> are given in 40 CFR 60, Appendix A, Method 19\*.
- B<sub>wa</sub> = Proportion by volume of water vapor in the ambient air.
- B<sub>ws</sub> = Proportion by volume of water vapor in the stack gas.
- E = Pollutant emission, lbs/MMBtu.
- Percent O<sub>2</sub>,  
percent CO<sub>2</sub> = Oxygen or carbon dioxide volume (expressed as percent) determined with equipment specified under this article.
- Percent O<sub>2ws</sub> = Oxygen volume (expressed as percent) measurements made at stack conditions on a wet basis.

(2) For sulfuric acid plants or production facilities, **emissions units**, the owner or operator shall:

- (A) establish a conversion factor three (3) times daily according to the procedures of 40 CFR 60.84(b)\*;
- (B) multiply the conversion factor by the average sulfur dioxide (SO<sub>2</sub>) concentration in the flue gases to obtain average SO<sub>2</sub> emissions in pounds per ton (lbs/ton); and
- (C) report the average sulfur dioxide emissions for each three (3) hour period in excess of the emission standard set forth in [326 IAC 7](#) in the quarterly **summary report**.

(b) **The department may approve** alternate procedures for computing emission averages that do not require integration of data or alternative methods of converting pollutant concentration measurements to units of the emission standard ~~may be approved by the department~~ if the owner or operator shows that the alternate

procedures are at least as accurate as those in this rule.

\*These documents are incorporated by reference. Copies may be obtained from the Government Printing Office, 732 North Capitol Street NW, Washington, D.C. 20401 or are available for review and copying at the Indiana Department of Environmental Management, Office of Air Quality, Indiana Government Center North, Tenth Floor, 100 North Senate Avenue, Indianapolis, Indiana 46204.

(Air Pollution Control Board; [326 IAC 3-4-3](#); filed Jan 30, 1998, 4:00 p.m.: 21 IR 2063; readopted filed Jan 10, 2001, 3:20 p.m.: 24 IR 1477; errata filed Dec 12, 2002, 3:35 p.m.: 26 IR 1566; filed Aug 26, 2004, 11:30 a.m.: 28 IR 31)

SECTION 4. [326 IAC 3-5-1](#) IS AMENDED TO READ AS FOLLOWS:

**[326 IAC 3-5-1](#) Applicability; continuous monitoring requirements for applicable pollutants**

**Authority:** [IC 13-14-8](#); [IC 13-17-3-4](#); [IC 13-17-3-11](#)

**Affected:** [IC 13-14-4-3](#); [IC 13-15](#); [IC 13-17](#)

Sec. 1. (a) This rule establishes the following:

- (1) Substantive requirements for **continuous** monitoring of certain types of sources **and emissions units**.
- (2) A process for developing suitable **continuous** monitoring requirements for other types of sources **and emissions units**.

(b) This rule applies to the following sources and facilities **emissions units** hereinafter referred to as affected facilities: **sources and emissions units**:

- (1) Any facility **source or emissions unit** required to perform continuous monitoring under:
  - (A) [326 IAC 12](#); which incorporates by reference the requirements of 40 CFR 60\*, or by a standard for hazardous air pollutants under
  - (B) [326 IAC 14](#); which incorporates by reference the requirements of 40 CFR 61\*, or
  - (C) [326 IAC 20](#). which incorporates by reference the requirements of 40 CFR 63\*.
- (2) Fossil fuel-fired steam generators of greater than one hundred million (100,000,000) British thermal units ~~(Btus)~~ **(Btu)** per hour heat input capacity.
- (3) Sulfuric acid plants or production facilities of greater than three hundred (300) tons per day acid production capacity.
- (4) Petroleum refinery catalyst regenerators for fluid bed catalytic cracking units of greater than twenty thousand (20,000) barrels or eight hundred forty thousand (840,000) gallons per day fresh feed capacity.
- (5) Portland cement plants.
- (6) ~~Facilities~~ **Sources or emissions units** that combust sewage sludge.
- (7) Sources **or emissions units** making coke from raw materials, including the following:
  - (A) Coal refining byproducts.
  - (B) Petroleum refining byproducts.
- (8) ~~Facilities~~ **Emissions units** in Clark and Floyd Counties that:
  - (A) have potential to emit **nitrogen oxides (NO<sub>x</sub>)** of greater than or equal to forty (40) tons per year; and
  - (B) are located at sources that have potential to emit NO<sub>x</sub> of greater than or equal to one hundred (100) tons per year as described in [326 IAC 10](#).

(c) **Owners and operators of** sources and facilities **emissions units** described in subsection (b) are subject to the following requirements:

- (1) Any facility **source or emissions unit** subject to [326 IAC 12](#), which incorporates by reference the requirements of 40 CFR 60\*, [326 IAC 14](#), which incorporates by reference the requirements of 40 CFR 61\* or [326 IAC 20](#) which incorporates by reference the requirements of 40 CFR 61\*, shall comply with the following:
  - (A) The monitoring and reporting requirements as specified for the applicable rule.
  - (B) All requirements of this rule.
- (2) **The owner or operator of** fossil fuel-fired steam generators of greater than one hundred million (100,000,000) Btu per hour heat input capacity shall **continuously** monitor the following:
  - (A) Opacity, unless **one (1) of the following occurs**:
    - (i) Gaseous fuel is the only fuel combusted.
    - (ii) Oil or a mix of gas and oil are the only fuels combusted and the facility **source or emissions unit** is

able to comply with both of the following **rules** without using particulate matter collection equipment:

(AA) [326 IAC 5-1](#).

(BB) [326 IAC 6-2](#).

(iii) An alternative monitoring requirement request has been granted by the department **and approved by U.S. EPA. The owner or operator may request** an alternative monitoring requirement ~~may be requested~~ when installation of an opacity monitoring system would not provide accurate determinations of emissions as a result of interference from condensed uncombined water vapor. Any alternative monitoring requirement request shall address the following:

(AA) Information pertaining to the inability of the affected ~~facility~~ **source or emissions unit** to find an acceptable monitoring location prior to the source of the condensed, uncombined water vapor.

(BB) A list of proposed alternative monitoring requirements. For each proposed alternative monitoring requirement, the request must provide a detailed description of thresholds or triggers for corrective action resulting from deviation from normal operating parameters and how deviations from key surrogate parameters shall be addressed to ~~insure~~ **ensure** continuous compliance with all applicable particulate and opacity requirements. An example of an acceptable alternative monitoring requirement is a particulate compliance demonstration that is ~~no less frequent than annual~~ **performed at least annually**, in accordance with [326 IAC 3-6](#) and a compliance monitoring plan that, at a minimum, satisfies monitoring requirements under [326 IAC 2-7](#) or [326 IAC 2-8](#).

(CC) Record keeping that is consistent with section 6 of this rule.

(DD) Reporting frequency that is no less frequent than that required in section 7 of this rule.

(iv) **Upon approval by the department, the owner or operator of a source required to continuously monitor opacity under this section may be exempted from the requirement to install, certify, and operate a COMS if:**

**(AA) a particulate CEMS for measuring PM emissions is used to demonstrate continuous compliance on a boiler operating day with any applicable emissions limit; and**

**(BB) the particulate CEMS is installed, certified, operated, and maintained on the affected source in accordance with the requirements of Performance Specification 11 (PS-11)\* and Procedure 2 of 40 CFR 60, Appendix F\*.**

~~(iv)~~ (v) An alternative monitoring requirement request granted by the department under item (iii) shall be submitted to U.S. EPA as a **state implementation plan** (SIP) revision and shall not be in effect until approved as a SIP revision.

(B) Sulfur dioxide (SO<sub>2</sub>) under the following conditions:

(i) SO<sub>2</sub> pollution control equipment has been installed.

(ii) A monitor is required to determine compliance with either: ~~of the following:~~

(AA) [326 IAC 12](#); **or**

(BB) a **new** construction permit **or operating permit** required under [326 IAC 2](#).

(C) Nitrogen oxide (NO<sub>x</sub>) under the following conditions:

(i) NO<sub>x</sub> pollution control equipment has been installed.

(ii) A monitor is required to determine compliance with either: ~~of the following:~~

(AA) [326 IAC 12](#); **or**

(BB) a **new** construction permit **or operating permit** required under [326 IAC 2](#).

(D) The percent **oxygen** (O<sub>2</sub>) **or carbon dioxide** (CO<sub>2</sub>) if measurements of O<sub>2</sub> or CO<sub>2</sub> in the flue gas are required to convert either SO<sub>2</sub> or NO<sub>x</sub> continuous monitoring data, or both, to units of the emission limitation for the particular ~~facility:~~ **emissions unit**.

(3) Sulfuric acid plants ~~or production facilities~~ of greater than three hundred (300) tons per day acid production capacity shall monitor SO<sub>2</sub> for each sulfuric acid producing ~~facility~~ **emissions unit** within the source.

(4) Petroleum refinery catalyst regenerators for fluid bed catalytic cracking units of greater than twenty thousand (20,000) barrels **or** eight hundred forty thousand (840,000) gallons per day fresh feed capacity shall monitor opacity for each regenerator within the source.

(5) Portland cement plants shall monitor opacity at the following ~~facilities:~~ **emissions units:**

(A) Kilns.

(B) Clinker coolers.

(6) ~~Facilities~~ **Sources or emissions units** that combust sewage sludge shall monitor from the effluent gas exiting ~~the~~ incinerator the following:

(A) Total hydrocarbons.

(B) Oxygen.

(C) Moisture, unless an alternative method is approved by the department and the U.S. EPA.

(D) Temperature.

(7) Sources **or emissions units** making coke from coal shall monitor opacity on the underfire stack associated with each coke oven battery.

(8) ~~Facilities~~ **Emissions units** in Clark and Floyd counties that have potential to emit NO<sub>x</sub> greater than or

equal to forty (40) tons per year and are located at sources that have potential to emit NO<sub>x</sub> greater than or equal to one hundred (100) tons per year shall install NO<sub>x</sub> continuous emission monitors as described in [326 IAC 10-1](#).

(d) The department may require, as a condition of a construction or operating permit issued under [326 IAC 2-1](#), [326 IAC 2-2](#), [326 IAC 2-3](#), [326 IAC 2-7](#), [326 IAC 2-8](#), or [326 IAC 2-9](#) that the owner or operator of a new or existing source of air emissions monitor emissions to ensure compliance with the following:

- (1) An emission limitation or standard established in one (1) of the permits listed in this subsection.
- (2) Permit requirements.
- (3) Monitoring requirements in [326 IAC 7](#).

(e) Unless explicitly stated otherwise, nothing in this rule shall:

- (1) Excuse the owner or operator of a source **or emissions unit** from any monitoring, record keeping, or reporting requirement that applies under any provision of the CAA or state statutes or regulations.
- (2) Restrict the authority of the department to impose additional or more restrictive monitoring, record keeping, testing, or reporting requirements on any owner or operator of a source **or emissions unit** under any other provision of the CAA, including Section 114(a)(1), or state statutes or regulations, as applicable.

~~(f) Within one hundred eighty (180) days of startup or, for a source existing on the effective date of this rule, within three hundred sixty five (365) days of becoming an affected facility under this rule, All continuous monitoring systems shall be installed and operational and have the certification testing complete pursuant to~~  
**under section 3 of this rule within one hundred eighty (180) days of start-up.**

\*Copies of these documents may be obtained from the Government Printing Office, 732 North Capitol Street NW, Washington, D.C. 20401 or are available for review and copying at the Indiana Department of Environmental Management, Office of Air Quality, Indiana Government Center North, Tenth Floor, 100 North Senate Avenue, Indianapolis, Indiana 46204.

*(Air Pollution Control Board; [326 IAC 3-5-1](#); filed Jan 30, 1998, 4:00 p.m.: 21 IR 2064; filed Dec 20, 2001, 4:30 p.m.: 25 IR 1596; errata filed Jan 7, 2002, 2:20 p.m.: 25 IR 1644)*

SECTION 5. [326 IAC 3-5-2](#) IS AMENDED TO READ AS FOLLOWS:

### **[326 IAC 3-5-2](#) Minimum performance and operating specifications**

**Authority:** [IC 13-14-8](#); [IC 13-17-3-4](#); [IC 13-17-3-11](#)

**Affected:** [IC 13-14-4-3](#); [IC 13-15](#); [IC 13-17](#)

Sec. 2. Owners and operators of monitoring equipment installed to comply with this rule shall comply with the performance specifications and operating requirements as follows:

- (1) Performance specifications set forth in 40 CFR 60, Appendix B\*, shall be used to certify monitoring equipment installed pursuant to this rule; however, where reference is made to the administrator in 40 CFR 60, Appendix B\*, the term "department" shall be inserted for purposes of this rule, and where continuous emissions monitors were installed prior to March 1983 for measuring opacity, the performance specifications in 40 CFR 60, Appendix B\*, 1982 Edition, shall apply.
- (2) Cycling times, which include the total time a monitoring system requires to sample, analyze, and record an emission measurement, shall be as follows:
  - (A) Continuous monitoring systems for measuring opacity shall complete a minimum of one (1) cycle of operation (sampling, analyzing, and data recording) for each successive ten (10) second period.
  - (B) Continuous monitoring systems that measure the following emissions shall complete a minimum of one (1) cycle of operation (sampling, analyzing, and data recording) for each successive fifteen (15) minute measuring period:
    - (i) Carbon dioxide (CO<sub>2</sub>).
    - (ii) Carbon monoxide (CO).
    - (iii) Hydrogen sulfide (H<sub>2</sub>S).
    - (iv) Oxides of nitrogen (NO<sub>x</sub>).
    - (v) Oxygen (O<sub>2</sub>).
    - (vi) Sulfur dioxide (SO<sub>2</sub>).

- (vii) Total hydrocarbons (THC).
- (viii) Total reduced sulfur (TRS).
- (ix) Volatile organic compounds (VOC).

**(x) Particulate matter (PM).**

(3) For opacity monitoring when effluent from two (2) or more affected facilities is **emissions units** are combined before being released to the atmosphere, the owner or operator may either **install a COMS:**

- (A) ~~install a continuous opacity monitoring system~~ on the combined effluent; or
- (B) ~~install a continuous opacity monitoring system~~ comprised of, and capable of combining the signals from, component transmissometers on each effluent stream.

Results shall be reported on combined effluent. This requirement shall not apply to ~~facilities utilizing~~ **emissions units using** wet flue gas desulfurization equipment. For ~~facilities~~ **emissions units** using wet flue gas desulfurization equipment, opacity may be reported on the combined exhaust or on individual exhausts except as provided for ~~facilities~~ **emissions units** affected by an NSPS as described at 40 CFR 60.13(i)\*.

Compliance for ~~facilities~~ **emissions units** that opt to report on the individual exhausts shall be determined on the individual exhausts based on data provided in accordance with section 7 of this rule.

(4) When the effluent from two (2) or more affected ~~facilities~~ **emissions units** subject to the same emission standard, other than opacity, are combined before being released to the atmosphere, the owner or operator may report the results as required for each affected ~~facility~~ **emissions unit** or for the combined effluent.

(5) Instrument full-scale response or upper limit of concentration measurement range for all opacity monitoring systems shall be set at one hundred percent (100%) opacity if possible. If the monitoring system is a ~~requirement required by~~ of 40 CFR 60\*, 40 CFR 61\*, 40 CFR 63\*, or 40 CFR 75\*, then the appropriate instrument span values and cycling times pursuant to the applicable part shall be used. In all cases, the manufacturer's procedures for calibration shall be followed and may result in an upscale maximum response of less than one hundred percent (100%). The minimum instrument full-scale response for gaseous monitoring systems shall be set at two hundred percent (200%) of the expected instrument data display output corresponding to the emission limitation for the ~~facility~~ **emissions unit** unless a request for an alternative setting that provides the following information is submitted to and approved by the department **and U.S. EPA** in writing:

- (A) The proposed alternate instrument span value.
- (B) The expected range of pollutant measured concentrations.
- (C) The control device in use.
- (D) The process to be controlled.
- (E) The location of the monitor, such as stack or duct.
- (F) The reason for requesting the alternate instrument span value.

(6) **The department and U.S. EPA may approve** locations for installing continuous monitoring systems or monitoring devices that vary from locations provided under the performance specifications of 40 CFR 60, Appendix B\*, ~~shall be approved by the department and the U.S. EPA~~ upon a demonstration by the owner or operator that installation at alternative locations will enable accurate and representative measurements.

(7) Owners or operators of affected ~~facilities~~ **emissions units** shall conduct ~~continuous emission monitoring system~~ **CEMS** performance evaluations, upon the request of the department **or U.S. EPA**, to demonstrate continuing compliance of the ~~continuous emission monitoring systems~~ **CEMS** with performance specifications as follows:

(A) A performance evaluation is a quantitative and qualitative evaluation of the performance of the continuous emission monitor in terms of:

- (i) accuracy;
- (ii) precision;
- (iii) reliability;
- (iv) representativeness; and
- (v) comparability;

of the data acquired by the monitoring system.

(B) The department **or U.S. EPA** may request owners or operators of affected ~~facilities;~~ **emissions units**, as **defined described** in section 1(b) of this rule, to conduct ~~continuous emission monitoring system~~ **CEMS** performance evaluations if the department has reason to believe, based on review of monitoring data, quality assurance data, inspections, or other information, that the ~~continuous emission monitoring system~~ **CEMS** is malfunctioning or may be providing invalid data over an extended period.

(C) **The owner or operator of an affected emissions unit shall submit** a written report containing the complete information of the performance evaluations ~~shall be furnished~~ to the department within forty-five (45) days after the test date. The department **or U.S. EPA** may conduct performance evaluations of the ~~continuous emission monitoring systems~~ **CEMS** at any time in order to verify the continued compliance of the systems with the performance specifications.

\*These documents are incorporated by reference. Copies may be obtained from the Government Printing Office, 732 North Capitol Street NW, Washington, D.C. 20401 or are available for review and copying at the Indiana Department of Environmental Management, Office of Air Quality, Indiana Government Center North, Tenth Floor, 100 North Senate Avenue, Indianapolis, Indiana 46204.

(Air Pollution Control Board; [326 IAC 3-5-2](#); filed Jan 30, 1998, 4:00 p.m.: 21 IR 2066; errata filed Dec 12, 2002, 3:35 p.m.: 26 IR 1566; filed Aug 26, 2004, 11:30 a.m.: 28 IR 32)

SECTION 6. [326 IAC 3-5-3](#) IS AMENDED TO READ AS FOLLOWS:

**[326 IAC 3-5-3](#) Monitor system certification**

**Authority:** [IC 13-14-8](#); [IC 13-17-3-4](#); [IC 13-17-3-11](#)

**Affected:** [IC 13-14-4-3](#); [IC 13-15](#); [IC 13-17](#)

Sec. 3. Monitor system certification requirements apply to sources and ~~facilities~~ **emissions units** subject to this rule as follows:

(1) The owner or operator shall conduct the applicable performance specifications tests in accordance with the procedures specified in 40 CFR 60\*, or other applicable federal regulations, for the required monitoring system as follows:

(A) Not later than one hundred eighty (180) days after a ~~facility~~ **source or emissions unit** start-up or initial monitor installation date.

(B) Not later than forty-five (45) **source or emissions** unit operating days after **the date of** monitor replacement, ~~date~~, or significant monitor repair as described in IDEM's ~~Quality Assurance~~ **Compliance Branch Continuous Emissions Monitoring Guidance** Manual, Chapter 20 ~~(dated June 20, 1997)\*\*~~ **1\* (December 1999)**, which affects the ability of the analyzer to ~~function date:~~ **measure emissions accurately.**

(2) The owner or operator shall notify the department in writing as follows:

(A) No less than fourteen (14) days in advance of the start of continuous opacity monitor (COM) certification.

(B) No less than thirty-five (35) days in advance of the certification of a gaseous monitoring system.

(3) The owner or operator shall submit all ~~of~~ the required test data and information in the form of a written report to the department for review and approval within forty-five (45) days of completion of the performance specification test.

(4) The department shall issue a written notice of certification status upon review of the complete certification test report. A required monitoring system is certified when the department issues a certification letter stating that the required monitoring system, including all applicable components, has satisfactorily met all federal and state monitoring requirements.

(5) The department may decertify a required monitoring system if an audit or performance evaluation reveals that ~~such~~ **the** monitoring system or a component thereof does not meet applicable performance specifications or requirements. The owner or operator shall repeat the certification process for the required monitoring system within forty-five (45) days of the date of the department's decertification of the required monitoring system.

~~\*This document is~~ **\*These documents are** incorporated by reference. Copies may be obtained from the Government Printing Office, 732 North Capitol Street NW, Washington, D.C. 20401 or are available for review and copying at the Indiana Department of Environmental Management, Office of Air Quality, Indiana Government Center North, Tenth Floor, 100 North Senate Avenue, Indianapolis, Indiana 46204.

~~\*\*This document is incorporated by reference. Copies are available for review and copying at the Indiana Department of Environmental Management, Office of Air Quality, Indiana Government Center North, Tenth Floor, 100 North Senate Avenue, Indianapolis, Indiana 46204.~~

(Air Pollution Control Board; [326 IAC 3-5-3](#); filed Jan 30, 1998, 4:00 p.m.: 21 IR 2067; errata filed Dec 12, 2002, 3:35 p.m.: 26 IR 1567; filed Aug 26, 2004, 11:30 a.m.: 28 IR 33)

SECTION 7. [326 IAC 3-5-4](#) IS AMENDED TO READ AS FOLLOWS:

**[326 IAC 3-5-4](#) Standard operating procedures**

**Authority:** [IC 13-14-8](#); [IC 13-17-3-4](#); [IC 13-17-3-11](#)

**Affected:** [IC 13-14-4-3](#); [IC 13-15](#); [IC 13-17](#)

Sec. 4. (a) ~~The owner or operator of each affected facility specified in section 1(b) of this rule, any facility subject to [326 IAC 12](#), or any other facility required to monitor emissions on a continuous basis shall submit to the department, Within ninety (90) days after monitor installation, a complete, written continuous monitoring standard operating procedures~~ **procedure (SOP) must be submitted to the department by the owner or operator of:**

- (1) each affected source or emissions unit specified in section 1(b) of this rule;**
- (2) any source or emissions unit subject to [326 IAC 12](#); or**
- (3) any other source or emissions unit required to monitor emissions on a continuous basis.**

**(b) If revisions are made to the SOP, the owner or operator must submit updates shall be submitted to the department biennially: within two (2) years of the revisions.**

**(c) At a minimum, the SOP shall describe complete step-by-step procedures and operations as follows:**

- (1) A description of the ~~facility~~ **source or emissions unit** monitored.
- (2) A listing of the following **for each monitor:**
  - ~~(A) Each monitor's brand.~~
  - (A) Manufacturer's name.**
  - (B) Model number.
  - (C) Serial number.
  - (D) Monitoring location.
  - (E) Data handling and acquisition system.
- (3) Examples of all reporting and log forms.
- (4) Record keeping and reporting procedures that include the following:
  - (A) Reporting of instrument precision and accuracy.
  - (B) Reporting of emissions data.
- (5) Methods and procedures for analysis and data acquisition.
- (6) Calibration procedures that include the following:
  - (A) Calibration error limits and linearity.
  - (B) Calibration gas type, gas quality, and traceability to the National Institute of Standards and Technology.
  - (C) Calibration frequency.
  - (D) Criteria for recalibration, and analysis procedures to periodically verify the accuracy of span and calibration standards.
- (7) Operation procedures that include:
  - (A) daily procedures;**
  - (B) quantifying and recording daily zero (0) and high level drift that meet the requirements of:**
    - (i) 40 CFR 60, Appendix B\*, Performance Specification 2, Section 4.2; or**
    - (ii) other applicable regulations; and**
  - (C) other operating parameter checks indicating correct operational status.**
- (8) Quality control and quality assurance procedures that include the following:
  - (A) A statement of quality policy and objectives.
  - (B) Organization and responsibilities description.
  - (C) Calibration and span and zero (0) drift criteria.
  - (D) Excessive drift criteria.
  - (E) Corrective action for excessive drift.
  - (F) Precision and accuracy audits.
  - (G) Corrective action for accuracy audits failure.
  - (H) Data validity criteria.
  - (I) Participation in department audits.
  - (J) Data recording and calculation audits.
- (9) Preventive maintenance procedures and corrective maintenance procedures that include those procedures taken to ensure continuous operation and to minimize malfunctions.
- (10) A listing of the manufacturer's recommended spare parts inventory.

~~(b)~~ **(d) If a facility source or emissions unit owner or operator fails to submit a SOP or submits a SOP that fails to address the factors procedures and operations provided under subsection (a), (c), the department may require a performance evaluation pursuant to section 2 of this rule.**

\*This document is incorporated by reference. Copies may be obtained from the Government Printing Office, 732 North Capitol Street NW, Washington, D.C. 20401 or are available for review and copying at the Indiana Department of Environmental Management, Office of Air Quality, Indiana Government Center North, Tenth Floor, 100 North Senate Avenue, Indianapolis, Indiana 46204.

(Air Pollution Control Board; [326 IAC 3-5-4](#); filed Jan 30, 1998, 4:00 p.m.: 21 IR 2068; errata filed Dec 12, 2002, 3:35 p.m.: 26 IR 1567; filed Aug 26, 2004, 11:30 a.m.: 28 IR 34)

SECTION 8. [326 IAC 3-5-5](#) IS AMENDED TO READ AS FOLLOWS:

**[326 IAC 3-5-5](#) Quality assurance requirements**

**Authority:** [IC 13-14-8](#); [IC 13-17-3-4](#); [IC 13-17-3-11](#)

**Affected:** [IC 13-14-4-3](#); [IC 13-15](#); [IC 13-17](#)

Sec. 5. (a) Except where 40 CFR 75\* is applicable for affected facilities **sources or emissions units** under the acid rain program, quality assurance requirements specified in this section and 40 CFR 60\*, Appendix F, apply to continuous emission monitors that monitor the following:

- (1) Carbon dioxide (CO<sub>2</sub>).
- (2) Carbon monoxide (CO).
- (3) Hydrogen sulfide (H<sub>2</sub>S).
- (4) Nitrogen oxide (NO<sub>x</sub>).
- (5) Oxygen (O<sub>2</sub>).
- (6) Sulfur dioxide (SO<sub>2</sub>).
- (7) Total hydrocarbons (THC).
- (8) Total reduced sulfur (TRS).
- (9) Volatile organic compounds (VOC).
- (10) Particulate matter (PM).**

(b) Facilities **Sources or emissions units** that are subject to 40 CFR 75\* shall follow the quality assurance procedures of 40 CFR 75\* and report the results in accordance with subsection (e).

(c) Quality control (QC) requirements for ~~continuous opacity monitoring systems~~ COMS are as follows:

- (1) For calibration drift (CD) assessment, the COMS shall be checked at least once daily. The CD shall be quantified and recorded at zero (0) (or low level) and upscale level opacity. The COMS shall be adjusted whenever the CD exceeds the specification of 40 CFR 60, Appendix B\*, Performance Specification 1 (PS-1), and the COMS shall be declared out of control when the CD exceeds twice the specification of PS-1. Corrective actions, followed by a validating CD assessment, are required when the COMS is out of control.
- (2) For fault indicators assessment, the fault lamp indicators, data acquisition system error messages, and other system self-diagnostic indicators shall be checked at least daily. Appropriate corrective actions shall be taken when the COMS is operating outside the preset limits.
- (3) For performance audits, checks of the individual COMS components and factors affecting the accuracy of the monitoring data, as described in this subdivision, shall be conducted, at a minimum, on a calendar quarter basis. The absolute minimum checks included in the performance audit are as follows:
  - (A) The status of the optical alignment of the monitor components shall be checked and recorded according to the procedure specified by the monitor manufacturer. Monitor components must be realigned as necessary.
  - (B) The apparent effluent opacity shall be compared and recorded before and after cleaning each of the exposed optical surfaces. The total optical surface dust accumulation shall be determined by summing up the apparent reductions in opacity for all of the optical surfaces that are cleaned. ~~Caution should be employed in performing this check since fluctuations in effluent opacity occurring during the cleaning cycle may adversely affect the results.~~
  - (C) The zero (0) and upscale response errors shall be determined and recorded according to the CD procedures. The errors are defined as the difference (in percent opacity) between the correct value and the observed value for the zero (0) and high level calibration checks.
  - (D) The value of the zero (0) compensation applied at the time of the audit shall be calculated as equivalent opacity, corrected to stack exit conditions, according to the procedures specified by the manufacturer. The

compensation applied to the effluent recorded by the monitor system shall be recorded.

(E) The optical pathlength correction ratio (OPLR) shall be computed from the monitor pathlength and stack exit diameter and shall be compared, and the difference recorded, to the monitor setup OPLR value. The stack exit correlation error shall be determined as the absolute value of the difference between the measured value and the correct value, expressed as a percentage of the correct value.

(F) A three-point calibration error test of the COMS shall be conducted. Three (3) neutral density filters meeting the requirements of PS-1 shall be placed in the COMS light beam path. The monitor response shall be independently recorded from the COMS permanent data recorder. ~~Make~~ A total of five (5) nonconsecutive readings for each filter **shall be made**. The low-range, mid-range, and high-range calibration error results shall be computed as the mean difference and ninety-five percent (95%) confidence interval for the difference between the expected and the actual responses of the monitor as corrected to stack exit conditions. These values shall be calculated using the procedure of PS-1, Section 8.0. The following are requirements for these values:

(i) The calibration error test requires the installation of an external calibration audit device (zero-jig). The zero-jig shall be adjusted to provide the same zero (0) response as the monitor's simulated zero (0).

(ii) Use calibration attenuators, that is, neutral density filters or screens, with values that have been determined according to PS-1, Section 7.1.3, "Attenuator Calibration", and produce simulated opacities (as corrected to stack exit conditions) in the ranges listed in Table 1-2 in PS-1.

(iii) The stability of the attenuator values shall be checked at least once per year according to the procedures specified in PS-1. The attenuators shall be recalibrated if the stability checks indicate a change of two percent (2%) opacity or greater.

(4) The following are requirements for monitor acceptance criteria:

(A) The following criteria are to be used ~~for determining~~ **to determine** if the COMS audit results are acceptable:

TABLE 1. PERFORMANCE AUDIT CRITERIA

Stack Exit Correlation Error	≤ 2 percent
Zero and Upscale Responses	≤ 2 percent opacity
Zero Compensation	≤ 4 percent opacity
Optical Alignment	Misalignment error
	≤ 2 percent opacity
Optical Surface Dust Accumulation	≤ 4 percent opacity
Calibration Error	≤ 3 percent opacity

(B) The COMS is out of control whenever the results of a quarterly performance audit indicate noncompliance with any of the performance assessment criteria of Table 1 in clause (A). If the COMS is out of control, the owner or operator ~~must~~ **shall** take the action necessary to eliminate the problem. Following corrective action, the source ~~or emissions unit~~ owner or operator ~~must~~ **shall** reconduct the appropriate failed portion of the audit and other applicable portions to determine whether the COMS is operating properly and within specifications. The COMS owner or operator shall record both audit results showing the COMS to be out of control and the results following corrective action. ~~COMS data obtained during any out of control period may not be used for compliance determination; the data may be used for identifying periods where there has been a failure to meet quality assurance and control criteria.~~

(C) Repeated audit failures, that is, out of control conditions ~~resulting from~~ **revealed in** the quarterly audits, indicate that the QC procedures are inadequate or the COMS is incapable of providing quality data. The source ~~or emissions unit~~ owner or operator shall:

(i) increase the frequency of the ~~above~~ QC procedures **in this subsection** until the performance criteria are maintained; or

(ii) modify or replace the COMS whenever two (2) consecutive quarters of unacceptable performance occur.

(5) The performance audit calculations contained in PS-1, Section 8 shall be followed.

(d) Except where 40 CFR 75\* is applicable for affected facilities ~~sources or emissions units~~ under the acid rain program, **and except for peaking units as defined in 326 IAC 3-4-1(17)**, quality control requirements for flow monitoring systems are as follows:

(1) For CD assessment, the flow monitoring system shall be checked at least once daily. The CD shall be quantified and recorded at zero (0) (or low level) and upscale level. The flow monitoring systems shall be adjusted whenever the CD exceeds the specification of 40 CFR 60, Appendix B, Performance Specification 6 (PS-6)\*, and the flow monitoring systems shall be declared out of control when the CD exceeds twice the specification of PS-6. Corrective actions, followed by a validating CD assessment, are required when the flow monitoring system is out of control.

(2) An annual relative accuracy test.

(e) A peaking unit as defined in [326 IAC 3-4-1\(18\)](#) shall comply with the following quality control requirements:

(1) The owner or operator of a peaking unit, based on information submitted by the designated representative in the monitoring plan, shall comply with one (1) of the following:

(A) Meet the general operating requirements in 40 CFR 75.10\* for a NO<sub>x</sub> CEMS.

(B) Provide information satisfactory to the commissioner using the procedure specified in 40 CFR 75, Appendix E\* for estimating hourly NO<sub>x</sub> emission rate, subject to the following:

(i) If, in the years after certification of an excepted monitoring system under 40 CFR 75, Appendix E\*, an emissions unit's operations exceed a capacity factor of twenty percent (20%) in any calendar year or exceed a capacity factor of ten and zero-tenths percent (10.0%) averaged over three (3) years, the owner or operator shall install, certify, and operate a NO<sub>x</sub>-diluent CEMS no later than December 31 of the following calendar year.

(ii) If the required CEMS has not been installed and certified by the date in item (i), the owner or operator shall report the maximum potential NO<sub>x</sub> emission rate, as defined in 40 CFR 72.2\*, for each unit operating hour, starting with the first unit operating hour after the deadline and continuing until the CEMS has been provisionally certified.

(2) The owner or operator of a peaking unit shall conduct a relative accuracy test audit (RATA) on any required CEMS as follows:

(A) Except for mercury monitoring systems and as otherwise specified in 40 CFR 75.21(a)(6)\*, 40 CFR 75.21(a)(7)\*, or 40 CFR 75, Appendix B, Section 2.3.1.2\*, RATA shall be performed once every two (2) successive quality assurance (QA) operating quarters for each primary and redundant backup:

(i) SO<sub>2</sub> pollutant concentration monitor;

(ii) flow monitor;

(iii) CO<sub>2</sub> emissions concentration monitor, including O<sub>2</sub> monitors used to determine CO<sub>2</sub> emissions;

(iv) CO<sub>2</sub> or O<sub>2</sub> diluent monitor used to determine heat input;

(v) moisture monitoring system;

(vi) NO<sub>x</sub> concentration monitoring system;

(vii) NO<sub>x</sub>-diluent CEMS; or

(viii) SO<sub>2</sub>-diluent CEMS.

(B) For each primary and redundant backup mercury concentration monitoring system and each sorbent trap monitoring system, RATAs shall be performed once every four (4) successive QA operating quarters.

(C) A calendar quarter that does not qualify as a QA operating quarter shall be excluded in determining the deadline for the next RATA.

(D) Not more than eight (8) successive calendar quarters shall elapse after the quarter in which a RATA was last performed without a subsequent RATA having been conducted.

(E) If a RATA has not been completed by the end of the eighth calendar quarter since the quarter of the last RATA, then the RATA must be completed within a seven hundred twenty (720) unit, or stack, operating hour grace period, as provided in 40 CFR 75, Appendix B, Section 2.3.3,\* following the end of the eighth successive elapsed calendar quarter, or data from the CEMS will become invalid.

(F) The relative accuracy test audit frequency of a CEMS may be reduced, as specified in 40 CFR 75, Appendix B, Section 2.3.1.2\*, for primary or redundant backup monitoring systems that qualify for less frequent testing.

(G) All required RATAs shall be performed in accordance with the applicable procedures and provisions in 40 CFR 75, Appendix A, Sections 6.5 through 6.5.2.2\* and 40 CFR 75, Appendix B, Sections 2.3.1.3\* and 2.3.1.4\*.

(H) For a CO monitor and any other applicable monitor as determined by the commissioner, a RATA shall be performed in accordance with the requirements of this subdivision.

(e) (f) Reporting requirements for performance audits are as follows:

(1) Owners or operators of facilities ~~sources or emissions units~~ required to conduct:

(A) cylinder gas audit;

(B) relative accuracy test audit; or

(C) continuous opacity monitor calibration error audit;

on continuous emission monitors shall prepare a written report of the results of the performance audit for each calendar quarter, or for other periods required by the department. **The owner or operator shall submit quarterly reports shall be submitted** to the department within thirty (30) calendar days after the end of each

quarter.

(2) The performance audit report shall contain the following information:

(A) Plant and monitor information, including the following:

- (i) The plant name and address.
- (ii) The monitor brand **or manufacturer's name**, model, and serial number.
- (iii) The monitor span.
- (iv) The monitor location. ~~for example, duct, boiler, unit, or stack designation.~~

(B) Performance audit information, including the following:

- (i) The auditor's name.
- (ii) A copy of the audit standard's certification. ~~for example, the vendor's Protocol 1 certification, or neutral density filter certification.~~
- (iii) All data used to calculate the audit results.
- (iv) The audit results and an indication if the monitor passed or failed the audit. If the performance audit results show the CEMS or COMS to be out of control, the CEMS or COMS owner or operator **must shall** report both the audit results showing the CEMS or COMS to be out of control and the results of the audit following corrective action showing the COMS to be operating within specification.
- (v) Any corrective actions performed as the result of a failed audit.

~~(f)~~ **(g) Whenever** a relative accuracy test audit of any continuous emission monitor listed in subsection (a) **or (e)** is performed, the department must be notified **in accordance with the protocol requirements of [326 IAC 3-6-2](#)** at least thirty-five (35) days prior to the audit.

\*These documents are incorporated by reference. Copies may be obtained from the Government Printing Office, 732 North Capitol Street NW, Washington, D.C. 20401 or are available for review and copying at the Indiana Department of Environmental Management, Office of Air Quality, Indiana Government Center North, Tenth Floor, 100 North Senate Avenue, Indianapolis, Indiana 46204.

*(Air Pollution Control Board; [326 IAC 3-5-5](#); filed Jan 30, 1998, 4:00 p.m.: 21 IR 2069; errata filed Dec 12, 2002, 3:35 p.m.: 26 IR 1567; filed Aug 26, 2004, 11:30 a.m.: 28 IR 34)*

SECTION 9. [326 IAC 3-5-6](#) IS AMENDED TO READ AS FOLLOWS:

### **[326 IAC 3-5-6](#) Record keeping requirements**

**Authority:** [IC 13-14-8](#); [IC 13-17-3-4](#); [IC 13-17-3-11](#)

**Affected:** [IC 13-14-4-3](#); [IC 13-15](#); [IC 13-17](#)

Sec. 6. (a) On and after the certification of a monitoring system, the owner or operator of a source **or emissions unit** subject to this rule shall maintain records, including raw data, of all monitoring data and supporting information for a minimum of five (5) years from the date of any of the following:

- (1) A monitoring sample.
- (2) A measurement.
- (3) A test.
- (4) A certification.
- (5) A report.
- (6) Any other activity required under this article.

(b) The records described in subsection (a) shall include the following:

- (1) All documentation relating to:
  - (A) design, installation, and testing of all elements of the monitoring system; and
  - (B) required corrective action or compliance plan activities.
- (2) All maintenance logs, calibration checks, and other required quality assurance activities.
- (3) All records of corrective and preventive action.
- (4) A log of plant operations, including **emission unit or monitoring system downtime with the following information:**
  - (A) Date of ~~facility~~ **emissions unit or monitoring system** downtime.
  - (B) Time of commencement and completion of each downtime.
  - (C) Reason for each downtime.

**(D) Nature of system repairs and adjustments.**

(c) The owner or operator of a source **or emissions unit** subject to this rule shall maintain the records required by this section at the source ~~or at such other site, in a manner so that they may be inspected by and make them available to~~ the department or the U.S. EPA ~~if so requested or required.~~ **upon request.**

(Air Pollution Control Board; [326 IAC 3-5-6](#); filed Jan 30, 1998, 4:00 p.m.: 21 IR 2071)

SECTION 10. [326 IAC 3-5-7](#) IS AMENDED TO READ AS FOLLOWS:

**[326 IAC 3-5-7](#) Reporting requirements**

**Authority:** [IC 13-14-8](#); [IC 13-17-3-4](#); [IC 13-17-3-11](#)

**Affected:** [IC 13-14-4-3](#); [IC 13-15](#); [IC 13-17](#)

Sec. 7. **(a)** ~~The following reporting requirements apply to sources~~ **owner or operator of a source or emissions unit** subject to this rule **shall submit a monitoring report to the department in accordance with this section.**

**(b) The owner or operator shall submit the monitoring report in accordance with the following requirements:**

(1) **The owner or operator of sources or emissions units** subject to the requirements of section 1 of this rule shall report excess emissions no less frequently than quarterly. ~~For sources required to report the owner or operator of a source or emissions unit for which~~ **quarterly such reports are required, the** reports shall be:

- (A) submitted by the ~~facility~~ **source or emissions unit** owner or operator to the department; and
- (B) postmarked or delivered by other means no later than thirty (30) calendar days following the last day of the reporting period.

(2) If a permit specifies or a rule requires more frequent reports, ~~such~~ **the** reports shall be:

- (A) submitted by the ~~facility~~ **source or emissions unit** owner or operator to the department; and
- (B) postmarked or delivered by other means no later than fifteen (15) calendar days after the end of each month.

(3) Gaseous excess emissions data reports shall be reported using three (3) hour block periods ending at:

- (A)** 03:00;
- (B)** 06:00;
- (C)** 09:00;
- (D)** 12:00;
- (E)** 15:00;
- (F)** 18:00;
- (G)** 21:00; and
- (H)** 24:00.

For ~~facilities~~ **sources or emissions units** that must demonstrate compliance with hourly (one (1) hour), daily (twenty-four (24) hour) average, or thirty (30) day averages, ~~such~~ **the** information shall be submitted as part of the quarterly report required in this section.

~~(4)~~ **(c)** The monitoring report shall contain the following continuous monitoring information summaries, with all times reported in real time:

~~(A)~~ **(1)** Monitored ~~facility~~ **source or emission unit** operation time during the reporting period.

~~(B)~~ **(2)** Excess emissions or parameters, as applicable, reported in units of the standard, or the applicable parameter unit as follows:

- ~~(i)~~ **(A)** Date of excess emissions, or other applicable dates.
- ~~(ii)~~ **(B)** Time of commencement and completion for each applicable parameter deviation or excess emission data.

~~(C)~~ **(3)** Magnitude of each excess emission as follows:

~~(i)~~ **(A)** For opacity as follows:

~~(AA)~~ **(i)** The actual percent opacity of all six (6) minute (block) averages exceeding the applicable opacity limit shall be reported. If ~~the~~ **an** exceedance occurs continuously beyond one (1) six (6) minute period, the percent opacity for each six (6) minute period or the highest six (6) minute average opacity for the entire period shall be reported.

~~(BB)~~ (ii) For department approved opacity averaging times other than six (6) minutes, the actual percent opacity of each averaging period in excess of the applicable limit shall be reported.

~~(CC)~~ (iii) A summary by cause shall be prepared and submitted as part of this report itemizing exceedances by cause.

(ii) (B) For gaseous emissions, the excess emissions, in units of the applicable standard, must be reported based on the applicable averaging time, ~~for example, one (1) hour block, three (3) hour block, three (3) hour rolling~~; in addition to any other reporting requirements that may be applicable. The averaging time is specified in the applicable federal or state rules, or ~~facility~~ **in the operating permit for the source or emissions unit.**

~~(5)~~ (4) Continuous monitoring system instrument downtime, except for zero (0) and span checks, which shall be reported separately, shall include the following:

- (A) Date of downtime.
- (B) Time of commencement.
- (C) Duration of each downtime.
- (D) Reasons for each downtime.
- (E) Nature of system repairs and adjustments.

**(d) If there are no excess emissions or monitor downtime in a reporting period, the owner or operator of a source or emissions unit subject to this rule shall do the following:**

**(1) Submit a report indicating that no excess emissions or downtime incidents occurred in the reporting period that includes the start and end dates of the time period.**

**(2) Maintain the report at the source and make available to the department or the U.S. EPA upon request.**

*(Air Pollution Control Board; [326 IAC 3-5-7](#); filed Jan 30, 1998, 4:00 p.m.: 21 IR 2071)*

SECTION 11. [326 IAC 3-5-8](#) IS ADDED TO READ AS FOLLOWS:

**[326 IAC 3-5-8](#) Maintenance of continuous emission monitoring and continuous opacity monitoring systems**

**Authority:** [IC 13-14-8](#); [IC 13-17-3-4](#); [IC 13-17-3-11](#)

**Affected:** [IC 13-14-4-3](#); [IC 13-15](#); [IC 13-17](#)

**Sec. 8. (a) This section applies to the maintenance of CEMS and COMS.**

**(b) The owner or operator of a CEMS or COMS shall:**

- (1) install;**
- (2) calibrate;**
- (3) maintain;**
- (4) operate; and**
- (5) certify;**

**all necessary CEMS or COMS, and related equipment in accordance with applicable federal regulations, this rule, and any applicable permits.**

**(c) Except for system breakdowns, repairs, calibration checks, and zero and span adjustments, all CEMS and COMS shall be in continuous operation.**

**(d) Except as otherwise provided by a rule or provided specifically in a permit, if a CEMS or COMS is malfunctioning or will be down for calibration, maintenance, or repairs for a period of twenty-four (24) hours or more, the owner or operator of the CEMS or COMS shall perform supplemental monitoring in accordance with the permit.**

**(e) The owner or operator of the CEMS or COMS shall do the following:**

- (1) Keep records:**
  - (A) in accordance with section 6(b) of this rule; and**
  - (B) that describe the supplemental monitoring implemented during any downtime to assure compliance with applicable emission limitations.**

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**(2) Submit reports, as applicable, in accordance with section 7(d) of this rule.**

(Air Pollution Control Board; [326 IAC 3-5-8](#))

SECTION 12. [326 IAC 3-6-1](#) IS AMENDED TO READ AS FOLLOWS:

**[326 IAC 3-6-1](#) Applicability; test procedures**

**Authority:** [IC 13-14-8](#); [IC 13-17-3-4](#); [IC 13-17-3-11](#)

**Affected:** [IC 13-14-4-3](#); [IC 13-15](#); [IC 13-17](#)

Sec. 1. This rule applies to any facility **source or emissions unit** emissions testing performed to determine compliance with applicable emission limitations contained in this title, or for any other purpose requiring review and approval by the department. ~~(such as an alternate emission factor determination).~~ **The owner or operator of a sources or emissions unit shall conduct** emission tests subject to this rule ~~shall be conducted~~ in accordance with any applicable procedures and analysis methods specified in 40 CFR 51\*, 40 CFR 60\*, 40 CFR 61\*, 40 CFR 63\*, 40 CFR 75\*, or other procedures approved by the department **and U.S. EPA.**

\*These documents are incorporated by reference. Copies may be obtained from the Government Printing Office, 732 North Capitol Street NW, Washington, D.C. 20401 or are available for review and copying at the Indiana Department of Environmental Management, Office of Air Quality, **Legal Counsel**, Indiana Government Center North, ~~Fenth~~ **Thirteenth** Floor, 100 North Senate Avenue, Indianapolis, Indiana 46204.

(Air Pollution Control Board; [326 IAC 3-6-1](#); filed Jan 30, 1998, 4:00 p.m.: 21 IR 2072; errata filed Dec 12, 2002, 3:35 p.m.: 26 IR 1567; filed Aug 26, 2004, 11:30 a.m.: 28 IR 36)

SECTION 13. [326 IAC 3-6-2](#) IS AMENDED TO READ AS FOLLOWS:

**[326 IAC 3-6-2](#) Source sampling protocols**

**Authority:** [IC 13-14-8](#); [IC 13-17-3-4](#); [IC 13-17-3-11](#)

**Affected:** [IC 13-14-4-3](#); [IC 13-15](#); [IC 13-17](#)

Sec. 2. (a) When an emissions test is to be performed by any person other than the department, the source **or emissions unit owner or operator** shall complete a test protocol form and submit the test protocol form to the department not later than thirty-five (35) days prior to the intended test date unless ~~more notice is required under the applicable program.~~ **Such rule requires additional notice. The test protocol shall:**

- (1) be on a form approved by the department; or ~~shall~~
- (2) contain information equivalent to that required on the form approved by the department.

**The department shall evaluate and approve the test protocol prior it to being implemented.**

(b) After evaluating the completed test protocol form, the department may:

- (1) inspect the test site; or
- (2) require additional conditions, including, but not limited to:
  - (A) **requiring** reasonable modifications to the stack or duct to obtain acceptable test conditions;
  - (B) **requiring** additional tests to allow for adverse conditions; ~~such as interferences, nonsteady, or cyclic processes;~~
  - (C) keeping process operating parameter records, operating logs, or charts during the test;
  - (D) **placing** conditions on control equipment operation to make the operation of control equipment representative of normal operation; or
  - (E) recording specified control equipment operating parameters during the test.

(c) If the department requires modification to:

- (1) test methods;
- (2) analytical methods;
- (3) operational parameters; or
- (4) other matters included in the emissions test protocol;

the department shall notify the source **or emissions unit owner or** operator and the testing firm by letter or telephone not later than twenty-one (21) days prior to the test date.

(d) If the source **or emissions unit owner or** operator or test firm desires to **make a minor** change to previously submitted procedures or conditions, the department shall be notified of ~~such~~ **the minor** change as soon as practicable prior to the intended emissions test date. ~~Such~~ **The minor** changes shall not be made unless approved by the department prior to the emission test.

(e) Reasonable changes in the emissions test protocol that result from emergency conditions during the test shall be approved by the department if a department staff person is available at the test site, before the test may proceed.

(f) Post-test approval may be granted based on reasonable changes resulting from emergency or reasonably unforeseeable conditions during the test.

(g) The department reserves the right to conduct any portion of the reference method tests using equipment supplied by the department. Notice of acceptable test procedures shall be given to the **owner or operator of the source or emissions unit** and its testing representative.

(h) The source **or emissions unit owner or** operator shall schedule an actual test date and time period and notify the department not later than fourteen (14) days prior to the actual test date. In the event that a previously scheduled test must be canceled and rescheduled, the **owner or operator of the source or emissions unit** shall notify the department no less than fourteen (14) days in advance of the rescheduled test date. **Tests rescheduled for less than fourteen (14) days after notifying the department of the rescheduled test date must be approved by the department.**

*(Air Pollution Control Board; [326 IAC 3-6-2](#); filed Jan 30, 1998, 4:00 p.m.: 21 IR 2072)*

SECTION 14. [326 IAC 3-6-3](#) IS AMENDED TO READ AS FOLLOWS:

### **[326 IAC 3-6-3](#) Emission testing**

**Authority:** [IC 13-14-8](#); [IC 13-17-3-4](#); [IC 13-17-3-11](#)

**Affected:** [IC 13-14-4-3](#); [IC 13-15](#); [IC 13-17](#)

Sec. 3. (a) Department staff may observe field test procedures and source **or emissions unit** operation during the emission test.

(b) **The owner or operator of a source or emissions unit shall conduct** all emission tests ~~shall be~~ conducted as follows:

(1) ~~While~~ **The facility source or emissions unit being tested is shall be** operating according to clauses (A) and (B), except as allowed under clause (C), as follows:

(A) **At a minimum**, ninety-five percent (95%) ~~to one hundred percent (100%)~~ of its **the** permitted maximum emissions unit operating capacity **description**.

(B) **Under conditions of worst case emissions, and if the worst case emission condition is not known, then the worst case emission condition shall be assumed to be the maximum process or operating rate of the emissions unit as listed in the permit's emissions unit description.**

(C) **Under other capacities or conditions as specified in an applicable requirement or approved by the department. As used in this clause, "capacity" means the design capacity of the emissions unit or other operating capacities agreed to by the owner or operator of the source or emissions unit and the department, including, but not limited to, process conditions when the department believes that changes in the operating capacities have the potential to affect emission levels.**

~~(2) Under conditions representative of normal operations.~~

~~(3) Under other capacities or conditions specified and approved by the department. As used in this subdivision, "capacity" means the design capacity of the facility or other operating capacities agreed to by the source and the department.~~

**(2) All test runs for a given pollutant shall be conducted within twenty-four (24) hours unless process**

**variables or mandatory test lengths of greater than two (2) hours make this impracticable. In these cases, the testing shall be conducted on consecutive days. Other periods or duration may be approved by the commissioner.**

(c) Facilities **Sources or emissions units** subject to [326 IAC 12](#), New Source Performance Standards, [326 IAC 14](#), or [326 IAC 20](#) Hazardous Air Pollutants, shall be tested under conditions as specified in the applicable provision for that facility **source or emissions unit** in 40 CFR 60\*, **40 CFR 61\***, or 40 CFR 63\* and this rule where appropriate.

(d) The **owner or operator of a source or emissions unit** shall make available at the test site calibration results of the various sampling components. The information shall include the following:

- (1) The date or dates the test was performed.
- (2) The methods used.
- (3) The **calibration** data.
- (4) The results.

All components requiring calibration shall be calibrated within sixty (60) days prior to the actual test date. Post-test calibrations shall be performed on the components not later than forty-five (45) days after the actual test date. Components requiring calibration are listed in the federal test methods specified in **section 5** of this rule.

(e) The department may perform or require the performance of audits of equipment or procedures associated with the test series up to the time of the actual performance of the test, between test runs, or following the test series. The department reserves the right to perform or observe all associated analyses.

(f) The original or a photocopy of the raw field data generated during the test series shall be provided to the department observer upon request if ~~such~~ **the** request may be reasonably met under the existing circumstances.

\*These documents are incorporated by reference. Copies may be obtained from the Government Printing Office, 732 North Capitol Street NW, Washington, D.C. 20401 or are available for review and copying at the Indiana Department of Environmental Management, Office of Air Quality, Indiana Government Center North, Tenth Floor, 100 North Senate Avenue, Indianapolis, Indiana 46204.

(Air Pollution Control Board; [326 IAC 3-6-3](#); filed Jan 30, 1998, 4:00 p.m.: 21 IR 2073; errata filed Dec 12, 2002, 3:35 p.m.: 26 IR 1567; filed Aug 26, 2004, 11:30 a.m.: 28 IR 37)

SECTION 15. [326 IAC 3-6-4](#) IS AMENDED TO READ AS FOLLOWS:

### [326 IAC 3-6-4](#) Reporting

**Authority:** [IC 13-14-8](#); [IC 13-17-3-4](#); [IC 13-17-3-11](#)

**Affected:** [IC 13-14-4-3](#); [IC 13-15](#); [IC 13-17](#)

Sec. 4. (a) All emission tests for which a **test protocol form** was submitted pursuant to **the department under** section 2 of this rule shall be reported to the department in the form of an emission test report containing the following information:

- (1) The reported testing methods and results certified as true and accurate and in compliance with this rule by the person responsible for conducting the emissions test.
- (2) Information regarding the test, including the following:
  - (A) Compliance status of the unit or units tested including a complete listing of all applicable compliance limits.**
  - ~~(A)~~ **(B)** A description of the ~~facility or facilities~~ **emissions unit or units** being tested.
  - ~~(B)~~ **(C)** The date or dates on which the test was performed.
  - ~~(C)~~ **(D)** The type of tests conducted.
  - ~~(D)~~ **(E)** The type of process and control equipment utilized.
  - ~~(E)~~ **(F)** The source name and location.
  - ~~(F)~~ **(G)** The purpose of the tests.
  - ~~(G)~~ **(H)** The test participants and their titles.
- (3) Tabulated data and results, including the following:
  - (A)** The process weight rate or heat input rate.

- (B) The referenced or derived conversion factors.
- (C) The stack gas flow rate.
- (D) Measured emissions given in units consistent with the applicable emission limitations.
- (E) The average value of emissions from any continuous gaseous emissions monitoring system in units consistent with the applicable emission limitations if applicable to the pollutant being tested.**
- ~~(E) (F) If applicable, visible emissions observations or six (6) minute average continuous opacity monitor readings.~~
- ~~(F) Average value of emissions from any continuous gaseous emissions monitoring system in units consistent with the applicable emission limitations if applicable to the pollutant being tested.~~
- (4) A description of process and control devices, including the following:
  - (A) A process flow diagram.
  - (B) The maximum design capacities.
  - (C) A fuel analysis and heat value for heat input rate determinations.
  - (D) The process and control equipment operating conditions.
  - (E) A discussion of variations from normal plant operations.
  - (F) The stack height.
  - (G) The exit diameter.
  - (H) The volumetric flow rate (cubic feet per minute).
  - (I) The exit temperature.
  - (J) The exit velocity.
- (5) A description of sampling methods used, including the following:
  - (A) **A** brief discussion of the analytical procedures with justifications for any variance from reference method procedures.
  - (B) Specification of the following:
    - (i) The number of sampling points.
    - (ii) The time per point.
    - (iii) The total sampling time per run.
  - (C) **A** cross-sectional diagram of the sampling site showing sampling points.
  - (D) **A** diagram showing the following:
    - (i) The stack dimensions.
    - (ii) The sampling location.
    - (iii) The distance from the nearest flow disturbance upstream and downstream of the sampling points.
    - (iv) The diagram of the sampling train.
- (6) Sampling and analytical procedures used, including the following:
  - (A) Results and calculations, including the following:
    - (i) Units consistent with the applicable emission limitation.
    - (ii) One (1) complete calculation using actual data for each type of test performed.
    - (iii) Raw production data signed by the source official.
    - (iv) Photocopies of all actual field data.
  - (B) Laboratory report, including the following:
    - (i) The chain of custody.
    - (ii) Copies of all calibration data for equipment used in sampling as described in section 3(d) of this rule.
  - (C) Applicable rules and regulations showing the emission limitations.
  - (D) ~~For particulate matter tests, If applicable,~~ copies of visible emissions evaluations or opacity monitor readings.
  - (E) Copies of any continuous gaseous emissions monitoring system readings for gaseous pollutant tests.

(b) **The owner or operator of a source or emissions unit shall submit** all emission test reports ~~must be received by~~ to the department not later than forty-five (45) days after the completion of the testing. An extension may be granted by the department if the **owner or operator of the source or emissions unit** submits to the department a reasonable written explanation for the requested extension not later than five (5) days prior to the end of the initial forty-five (45) day period.

(Air Pollution Control Board; [326 IAC 3-6-4](#); filed Jan 30, 1998, 4:00 p.m.: 21 IR 2073)

SECTION 16. [326 IAC 3-6-5](#) IS AMENDED TO READ AS FOLLOWS:

**[326 IAC 3-6-5](#) Specific testing procedures; particulate matter; PM<sub>10</sub>; sulfur dioxide; nitrogen oxides; volatile organic compounds**

**Authority:** [IC 13-14-8](#); [IC 13-17-3-4](#); [IC 13-17-3-11](#)

Sec. 5. (a) **Tests for particulate matter tests (PM) and particulate matter ten (10) microns or less in diameter (PM<sub>10</sub>)** shall be conducted in accordance with the following procedures:

(1) **For PM:** 40 CFR 60, Appendix A, Method 5\*, 5A\*, 5B\*, 5C\*, 5D\*, 5E\*, or 5F\*, or Method 17\*, as applicable, or other procedures approved by the department and U.S. EPA.

(2) **For PM<sub>10</sub>:** 40 CFR 51, Appendix M, Method 201\* or 201A\*, and 202\*. The measurement of condensible PM<sub>10</sub> using the procedures described in Method 202\* is not required if the applicable emission limitation is contained at [326 IAC 6.8-2](#), unless otherwise specified by [326 IAC 6.5](#) or [326 IAC 6.8](#). 40 CFR 60, Appendix A, Method 5\*, in conjunction with Method 202\*, may also be used, subject to the approval of the department and U.S. EPA.

~~(2)~~ (3) Visible emissions (VE) evaluations shall be performed in conjunction with a ~~particulate emissions PM~~, **PM<sub>10</sub>, or other mass emission rate test of air pollutants, as required by the department. The VE evaluations shall be conducted** by a qualified observer in accordance with the procedures contained in [326 IAC 5-1-4](#). VE readings shall be continuously recorded for at least thirty (30) minutes per hour of sampling time for each sampling repetition, **unless otherwise mandated by federal regulation.** A waiver from this requirement may be granted by the ~~on-site department staff person~~ if adverse conditions exist that would invalidate the VE readings. Complete waivers **from the requirement to conduct VE readings during a compliance test** may not be granted to ~~facilities for the source or emissions unit~~ required to complete opacity testing pursuant to 40 CFR 60.8\*. **Facilities Emissions units** equipped with continuous opacity monitors may submit the six (6) minute integrated readings of ~~such~~ **the monitors** during the sampling period, instead of performing VE evaluations, provided:

(A) the monitoring system meets the performance specifications as specified in 40 CFR 60, Appendix B\*, and is, or will be, certified by the department; ~~and~~

(B) the monitor readings submitted with the test include a zero (0) and upscale calibration check before the first test run and following the end of the final run; **and**

**(C) if more than one (1) day of testing is required to complete the three (3) runs, the zero (0) and span checks shall be performed at the beginning of each day's testing and at the conclusion of each day's final run.**

~~(3)~~ (4) At least three (3) repetitions of the test shall be performed under consistent ~~facility~~ **source or emissions unit** operating conditions unless otherwise allowed by the department. For boiler emissions testing, at least one (1) of the three (3) repetitions shall be conducted during a normal sootblowing cycle that is consistent with frequency and duration normally experienced.

(4) (5) At Richmond Power and Light's Whitewater Generating Station, when sootblowing occurs during one (1) of the three (3) repetitions, emission test results shall be evaluated using either a time weighted averaging period (TWAP) or a straight averaging technique. When using TWAP, the following equation shall be used to ensure proper weighting of an intermittent cleaning cycle performance test run regardless of the length of the cleaning cycle and regardless of the number and duration of the test runs made on the unit. When using TWAP, the representative pounds per hour of particulate emissions shall be calculated using the following equation:

$$E = E_{cc} \frac{(A + B)}{AR} S + E_{ncc} \frac{(R - S)}{R} - \frac{BS}{AR}$$

Where:

E = Pounds per hour of particulate emissions.

E<sub>cc</sub> = Average E of sample containing cleaning cycle.

E<sub>ncc</sub> = Average E of sample containing no cleaning cycle.

A = Hours of cleaning cycle operation during sample.

B = Hours with no cleaning cycle operation during sample.

R = Average hours of operation per twenty-four (24) hours.

S = Average hours of cleaning cycle operation per twenty-four (24) hours.

~~(5)~~ (6) Only those fuels representative of normal fuel quality used during normal operations shall be combusted.

~~(6)~~ (7) During each repetition, each sampling point shall be sampled for a minimum of two (2) minutes.

~~(7)~~ (8) The total test time per repetition shall be no less than sixty (60) minutes.

~~(8)~~ (9) The total sample volume per repetition shall be no less than thirty (30) dry standard cubic feet (dscf).

~~(9)~~ (10) The total particulate weight collected from the sampling nozzle, probe, cyclone (if used), filter holder

(front half), filter, and connecting glassware, and, if required in subdivision (2), the impinger catch, shall be reported to the department and U.S. EPA. Particulate analysis of the impinger catch is not required, unless specified by the department.

(b) **The owner or operator shall conduct** sulfur dioxide (SO<sub>2</sub>) tests ~~shall be conducted~~ in accordance with the following procedures:

(1) 40 CFR 60, Appendix A, Method 6\*, 6A\*, ~~or 6C\*~~, or 8\*, as applicable, or other procedures approved by the department and U.S. EPA.

(2) At least three (3) repetitions of two (2) samples, each according to 40 CFR 60, Appendix A, Method 6\* or 6A\*, ~~or 6C\*~~, or three (3) repetitions according to 40 CFR 60, Appendix A, Method 6C\* or 8\*, performed under identical facility source or emissions unit operating conditions, shall constitute a test. For boiler emissions testing, only those fuels representative of fuel quality during normal operations shall be combusted.

~~(3) During each of the repetitions for 40 CFR 60, Appendix A, Method 8\*, each sampling point shall be sampled for a minimum of two (2) minutes.~~

~~(4)~~ (3) The total test time per repetition shall be as follows:

(A) For tests using 40 CFR 60, Appendix A, Method 6\* or 6A\*, ~~or 6C\*~~, a minimum of twenty (20) minutes per run with a thirty (30) minute interval between each run.

**(B) For tests using 40 CFR 60, Appendix A, Method 6C\*, a minimum of sixty (60) minutes per run.**

~~(B)~~ (C) For tests using 40 CFR 60, Appendix A, Method 8\*, a minimum of sixty (60) minutes per run, with the following criteria:

**(i) During each of the repetitions, each sampling point shall be sampled for a minimum of two (2) minutes.**

~~(5)~~ (ii) The total sample volume per repetition under 40 CFR 60, Appendix A, Method 8\*, shall be no less than forty (40) dry standard cubic feet (dscf).

**(iii) During each of the repetitions, the sample rate shall not exceed one (1) cubic foot per minute (cfm).**

(c) **The owner or operator shall conduct** nitrogen oxide (NO<sub>x</sub>) tests ~~shall be conducted~~ according to the following procedures:

(1) 40 CFR 60, Appendix A, Method 7\*, 7A\*, 7B\*, 7C\*, or 7E\*, as applicable, or other procedures approved by the department and U.S. EPA.

(2) **For Methods 7\*, 7A\*, 7B\*, or 7C\***, at least three (3) repetitions of four (4) samples each shall constitute a test.

**(3) For Method 7E\*, three (3) test runs, each a minimum of sixty (60) minutes, shall constitute a test.**

(d) **The owner or operator shall conduct** volatile organic compounds (VOC) emissions tests ~~shall be conducted~~ in accordance with the following procedures:

(1) 40 CFR 60, Appendix A, Method 25\*, or other procedures approved by the department and U.S. EPA, shall be used for the total nonmethane organic emissions.

(2) At least three (3) samples shall be collected and analyzed.

(3) The total test time per repetition shall be a minimum of sixty (60) minutes.

**(4) Bulk gasoline terminals subject to 326 IAC 20-10 shall be tested in accordance with 40 CFR 63, Subpart R\*. All other bulk gasoline terminals shall be tested in accordance with the New Source Performance Standards (NSPS) at 40 CFR 60, Subpart XX\*. During all compliance tests, 40 CFR 60, Appendix A, Method 21\* shall be used for determining whether there are any leaks from the hatches or flanges of the gasoline transports. If any leak is detected, the transport shall not be used for the capacity of the compliance test of the bulk gas terminal. The threshold for leaks shall be as follows:**

**(A) Five hundred (500) parts per million methane for all bulk gas terminals subject to 40 CFR 63, Subpart R\*.**

**(B) Ten thousand (10,000) parts per million methane for all bulk gas terminals subject to 40 CFR 60, Subpart XX\* and for all other bulk gasoline terminals.**

\*These documents are incorporated by reference. Copies may be obtained from the Government Printing Office, 732 North Capitol Street NW, Washington, D.C. 20401 or are available for review and copying at the Indiana Department of Environmental Management, Office of Air Quality, Indiana Government Center North, Tenth Floor, 100 North Senate Avenue, Indianapolis, Indiana 46204.

(Air Pollution Control Board; 326 IAC 3-6-5; filed Jan 30, 1998, 4:00 p.m.: 21 IR 2074; errata filed Dec 12, 2002, 3:35 p.m.: 26 IR 1567; filed Aug 26, 2004, 11:30 a.m.: 28 IR 37)

SECTION 17. [326 IAC 3-6-6](#) IS ADDED TO READ AS FOLLOWS:

**[326 IAC 3-6-6](#) Test invalidation**

**Authority:** [IC 13-14-8](#); [IC 13-17-3-4](#); [IC 13-17-3-11](#)

**Affected:** [IC 13-14-4-3](#); [IC 13-15](#); [IC 13-17](#)

**Sec. 6.** Based on the department's evaluation, any test series or test run may be considered invalid or unacceptable for any of the following reasons:

(1) Failure to do any of the following:

(A) Follow the approved protocol and adhere to any procedure or requirement of the approved method or other protocol conditions approved or required by the department.

(B) Meet any conditions required by the department for the purpose of conditionally accepting a test that does not fully meet the testing requirements.

(C) Demonstrate or comply with reference methods' quality assurance and quality control (QA/QC) requirements.

(D) Provide or report the required data in order for the department to complete the review of the test conditions, specifications, and results.

(2) Use of nonrepresentative process or operating conditions or control device operation.

(3) Observation of fugitive emissions from the emissions unit being tested by the department or authorized representative.

(Air Pollution Control Board; [326 IAC 3-6-6](#))

SECTION 18. [326 IAC 3-7-1](#) IS AMENDED TO READ AS FOLLOWS:

**[326 IAC 3-7-1](#) Applicability**

**Authority:** [IC 13-14-8](#); [IC 13-17-3-4](#); [IC 13-17-3-11](#)

**Affected:** [IC 13-14-4-3](#); [IC 13-15](#); [IC 13-17](#)

Sec. 1. This rule applies to fuel sampling and analysis **that is** performed to determine compliance with the emission limitations specified in [326 IAC 7](#).

(Air Pollution Control Board; [326 IAC 3-7-1](#); filed Jan 30, 1998, 4:00 p.m.: 21 IR 2075; readopted filed Jan 10, 2001, 3:20 p.m.: 24 IR 1477)

SECTION 19. [326 IAC 3-7-2](#) IS AMENDED TO READ AS FOLLOWS:

**[326 IAC 3-7-2](#) Coal sampling and analysis methods**

**Authority:** [IC 13-14-8](#); [IC 13-17-3-4](#); [IC 13-17-3-11](#)

**Affected:** [IC 13-14-4-3](#); [IC 13-15](#); [IC 13-17](#)

Sec. 2. (a) Owners or operators of coal sampling systems for sources with total coal-fired capacity greater than or equal to one thousand five hundred (1,500) million British thermal units (~~Btus~~) (**Btu**) per hour actual heat input shall follow procedures specified in ASTM D2234-89\*, "Standard Methods for Collection of a Gross Sample of Coal", unless otherwise provided in section 3 of this rule. Additionally, the coal sampling system shall meet the following requirements:

(1) The coal sample acquisition point shall be at a location where representative samples of the total coal flow to be combusted by the ~~facility or facilities~~ **emissions unit** may be obtained. A single as-bunkered sampling station may be used to represent the coal to be combusted by multiple ~~facilities~~ **emissions units** using the same stockpile feed system.

(2) The increment collection method **to be used** is specified in ASTM D2234-89\*, Table 1, I-A-1, I-B-1, or I-C-1.

(3) The opening of the sampling device shall be at least two and one-half (2.5) times the top-size of the coal and not less than one and one-fourth (1.25) inches.

(4) The sampling device shall have sufficient capacity to completely retain or entirely pass the increment without loss or spillage.

(5) The velocity with which the cross-stream cutting instrument travels through the stream shall not exceed eighteen (18) inches per second. The velocity requirement shall not apply to a swing-arm sampler or to a sampler whose cutter opening is perpendicular to the stream of coal. Owners or operators of all coal sampling systems shall detail the proper operating procedures in the standard operating procedures document required under section 5 of this rule.

(6) Increments obtained during the sampling period shall be protected from changes in composition to maintain the integrity of constituent characteristics required to convert sample sulfur content to units of the applicable emission standard.

(7) A comparison of weight or volume of collected sample with that of the total flow of coal shall be conducted at a minimum of one (1) time every two (2) weeks to assure a constant sampling ratio is maintained for increments composited into a sample representing a single twenty-four (24) hour period.

(8) A routine inspection of the sampling system shall be established to meet requirements and guidelines specified in ASTM D4702-87\*, "Guide for Inspecting Mechanical Coal Sampling Systems that Use Cross-Cut Sample Cutters for Conformance with Current ASTM Methods".

(9) Composite samples shall be collected for analysis at a minimum of one (1) time per twenty-four (24) hour period.

(b) Owners or operators of coal sampling systems for sources with total coal-fired capacity between one hundred (100) and one thousand five hundred (1,500) million ~~Btus~~ **Btu** per hour actual heat input shall comply with requirements: ~~specified as follows:~~

(1) in subsection (a);

(2) in section 3 of this rule; or

(3) shall meet the following minimum requirements:

(A) The coal sample acquisition point shall be at a location where representative samples of the total coal flow to be combusted by the ~~facility or facilities~~ **emissions unit** may be obtained. A single as-bunkered or as-burned sampling station may be used to represent the coal to be combusted by multiple ~~facilities~~ **emissions units** using the same stockpile feed system.

(B) Coal shall be sampled at least three (3) times per day and at least one (1) time per eight (8) hour period unless no coal is bunkered during the preceding eight (8) hour period.

(C) Minimum sample size shall be five hundred (500) grams.

(D) Samples shall be composited and analyzed at the end of each calendar month.

(c) Coal samples shall be prepared for analysis in accordance with procedures specified in ASTM D2013-86\*, "Standard Method of Preparing Coal Samples for Analysis". The preparation of samples shall meet the following requirements:

(1) Samples shall be prepared in accordance with ASTM D2013-86\*, Procedure A or Procedure B.

(2) Sample preparation shall be checked at weekly intervals by performing a split sample of the twenty-four (24) hour composite sample and preparing and analyzing these two (2) identically.

(d) The heat content of coal samples shall be determined in accordance with procedures specified in ASTM D2015-95\*, "Standard Test Method for Gross Calorific Value of Solid Fuel by the Adiabatic Bomb Calorimeter", or ASTM D3286-91A\*, "Standard Test Method for Gross Calorific Value of Coal and Coke by the Isothermal Jacket Bomb Calorimeter". Restandardization requirements in Section 11 of both methods shall be followed. Precision requirements for repeatability shall be verified according to Section 16.1.1 of both methods at a minimum of once per week.

(e) The sulfur content of coal samples shall be determined according to procedures specified in ASTM D3177-89\*, "Standard Test Methods for Total Sulfur in the Analysis Sample of Coal and Coke", or ASTM D4239-94\*, "Standard Test Methods for Sulfur in the Analysis Sample of Coal and Coke Using High Temperature Tube Furnace Combustion Methods". Precision requirements for repeatability shall be verified according to ASTM D3177-89\*, Section 13, or ASTM D4239-94, Section 18\*, at a minimum of one (1) time per week. The laboratory that performs the analysis shall participate in an interlaboratory audit program using coal samples supplied by the department.

(f) ~~Compliance with this section is required unless a source owner or operator demonstrates to The~~ department **that may approve minor** modifications to the coal sampling and analysis procedures at a source **upon demonstration by the source owner or operator that the minor modifications** are necessary to meet

the requirements of this section.

\*These documents are incorporated by reference. Copies are available for review and copying at the Indiana Department of Environmental Management, Office of Air Quality, Indiana Government Center North, Tenth Floor, 100 North Senate Avenue, Indianapolis, Indiana 46204.

(Air Pollution Control Board; [326 IAC 3-7-2](#); filed Jan 30, 1998, 4:00 p.m.: 21 IR 2075; readopted filed Jan 10, 2001, 3:20 p.m.: 24 IR 1477; errata filed Dec 12, 2002, 3:35 p.m.: 26 IR 1567; filed Aug 26, 2004, 11:30 a.m.: 28 IR 38)

SECTION 20. [326 IAC 3-7-3](#) IS AMENDED TO READ AS FOLLOWS:

**[326 IAC 3-7-3](#) Alternative coal sampling and analysis methods**

**Authority:** [IC 13-14-8](#); [IC 13-17-3-4](#); [IC 13-17-3-11](#)

**Affected:** [IC 13-14-4-3](#); [IC 13-15](#); [IC 13-17](#)

Sec. 3. (a) As an alternative to the coal sampling and analysis procedures in section 2 of this rule, a source owner or operator may use manual or other non-ASTM automatic sampling and analysis procedures upon a demonstration **as described in subsection (b)**, submitted to **and approved by** the department ~~for approval, and U.S. EPA~~ that ~~such the~~ procedures provide sulfur dioxide emission estimates representative either of estimates based on coal sampling and analysis procedures specified in section 2 of this rule or of continuous emissions monitoring. ~~The demonstration shall consist of one (1) or more of the following methods:~~

~~(4)~~ **(b) For the demonstration described in this section**, a source owner or operator may submit documentation of procedures and results of a stopped-belt bias test or other comparisons between a sampling system meeting the requirements of section 2 of this rule and those methods and procedures proposed by the source owner or operator. A stopped-belt bias test and a sampling system meeting the requirements of section 2 of this rule shall be considered reference method systems. A comparison shall utilize a series of at least twenty-five (25) reference method system samples paired with nonreference method system samples and analyzed for the percent of sulfur content to determine the presence of significant systemic error. The detection of significant systemic error shall be based on the application of a statistical test (t-test) to determine if there is a difference between the reference and nonreference systems at the ninety-five percent (95%) confidence level, according to the following formula:

$$t = \frac{d\sqrt{n}}{Sd}$$

Where:

- t = Calculated t value.
- d = Average difference between paired data.
- Sd = Standard deviation of the differences.
- N = Number of paired data sets.

The calculated t value is compared to the t value in the standard statistical t tables at the ninety-five percent (95%) probability and the appropriate degrees of freedom (n - 1). If the calculated t value is greater than or equal to the value of t in the t table, then the systems are not comparable. Certain coals with low variability may detect a small bias, which may be acceptable as decided on a case-by-case basis. This method tests for positive and negative bias. Provisions for testing only for a negative bias that would cause a source **owner or operator** to report less than actual values may be acceptable if supported by statistical tests. Upon request, the department shall provide written guidance to a source owner or operator as to the procedures to be followed in conducting this comparison. ~~(2) Other procedures may be acceptable if submitted to the department for approval and the department approves.~~

~~(b)~~ **(c)** The demonstration ~~provided described~~ **described** in ~~subsection (a)~~ **this section** shall be repeated upon any significant change to the coal sampling procedures or upon notification by the department that a new demonstration is necessary. If the department has reason to doubt that the alternative sampling and analysis procedures are comparable to methods and procedures provided in section 2 of this rule, based on:

**(1)** inspections;

- (2) monitoring;
- (3) quality assurance data; or
- (4) other information;

the department may notify the owner or operator that the demonstration shall be repeated. Written notification by the department of the request shall be made to the source owner or operator allowing at least sixty (60) days to schedule the demonstration.

(Air Pollution Control Board; [326 IAC 3-7-3](#); filed Jan 30, 1998, 4:00 p.m.: 21 IR 2077; readopted filed Jan 10, 2001, 3:20 p.m.: 24 IR 1477)

SECTION 21. [326 IAC 3-7-4](#) IS AMENDED TO READ AS FOLLOWS:

**[326 IAC 3-7-4](#) Fuel oil sampling; analysis methods**

**Authority:** [IC 13-14-8](#); [IC 13-17-3-4](#); [IC 13-17-3-11](#)

**Affected:** [IC 13-14-4-3](#); [IC 13-15](#); [IC 13-17](#)

Sec. 4. (a) **The source owner or operator shall perform** sampling and analysis of the sulfur content of fuel oil ~~shall be performed~~ in accordance with the following ASTM procedures:

- (1) Collection of fuel oil samples shall be conducted according to either of the following:
  - (A) ASTM D4057-88\*, "Standard Practice for Manual Sampling of Petroleum and Petroleum Products".
  - (B) ASTM D4177-82\*, "Standard Method for Automatic Sampling of Petroleum and Petroleum Products".
- (2) Determination of sulfur content shall be conducted according to any of the following:
  - (A) ASTM D129-95\*, "Standard Test Method for Sulfur in Petroleum Products (General Bomb Method)".
  - (B) ASTM D1266-91\*, "Standard Test Method for Sulfur in Petroleum Products (Lamp Method)".
  - (C) ASTM D1552-95\*, "Standard Test Method for Sulfur in Petroleum Products (High-Temperature Method)".
  - (D) ASTM D2622-94\*, "Standard Test Method for Sulfur in Petroleum Products (X-Ray Spectrographic Method)".
- (3) Determination of heat content shall be conducted according to ASTM D240-92\*, "Standard Test Method for Heat of Combustion of Liquid Hydrocarbon Fuels by Bomb Calorimeter".

(b) ~~An~~ **A source** owner or operator may, with the prior **written** approval of the department **and U.S. EPA**, modify the procedures specified in subsection (a), use alternate equivalent procedures, or rely upon equivalent sampling and analysis procedures performed by the vendor prior to delivery of the fuel oil to the owner or operator.

\*These documents are incorporated by reference. Copies are available for review and copying at the Indiana Department of Environmental Management, Office of Air Quality, Indiana Government Center North, Tenth Floor, 100 North Senate Avenue, Indianapolis, Indiana 46204.

(Air Pollution Control Board; [326 IAC 3-7-4](#); filed Jan 30, 1998, 4:00 p.m.: 21 IR 2077; readopted filed Jan 10, 2001, 3:20 p.m.: 24 IR 1477; errata filed Dec 12, 2002, 3:35 p.m.: 26 IR 1567; filed Aug 26, 2004, 11:30 a.m.: 28 IR 40)

SECTION 22. [326 IAC 3-7-5](#) IS AMENDED TO READ AS FOLLOWS:

**[326 IAC 3-7-5](#) Record keeping requirements; standard operating procedures**

**Authority:** [IC 13-14-8](#); [IC 13-17-3-4](#); [IC 13-17-3-11](#)

**Affected:** [IC 13-14-4-3](#); [IC 13-15](#); [IC 13-17](#)

Sec. 5. (a) Owners or operators of sources with total coal-fired capacity greater than or equal to one hundred (100) million British thermal units per hour actual heat input shall develop a standard operating procedure (SOP) to be followed for:

- (1) sampling;
- (2) handling;
- (3) analysis;

(4) quality control;

(5) quality assurance; and

(6) data reporting of the information collected pursuant to **under** sections 2 through 4 of this rule.

In addition, any revision to the SOP shall be ~~submitted to the department.~~ **kept at the site.**

(b) The owner or operator **of a source or emissions unit subject to this rule** shall maintain records sufficient to verify compliance with the procedures specified in sections 2 through 4 of this rule. Records shall be:

(1) maintained for a period of five (5) years; and ~~shall be~~

(2) made available upon request by the department.

The department may at any time perform a systems audit to determine compliance with the requirements in sections 2 through 4 of this rule. Audit procedures shall be submitted to the owner or operator of a fuel sampling and analysis system subject to audit prior to conducting ~~such~~ **the** audit.

*(Air Pollution Control Board; [326 IAC 3-7-5](#); filed Jan 30, 1998, 4:00 p.m.: 21 IR 2078; readopted filed Jan 10, 2001, 3:20 p.m.: 24 IR 1477)*

SECTION 23. [326 IAC 7-2-1](#) IS AMENDED TO READ AS FOLLOWS:

**[326 IAC 7-2-1](#) Reporting requirements; methods to determine compliance**

**Authority:** [IC 13-14-8](#); [IC 13-17-3-4](#); [IC 13-17-3-11](#)

**Affected:** [IC 13-14-8](#); [IC 13-15](#); [IC 13-17](#)

Sec. 1. (a) As used in this article, "weighting factor" means the daily quantity of coal bunkered or megawatt generation or other appropriate measure of the output of a combustion source.

(b) As used in this article, "rolling weighted average sulfur dioxide emission rate" means the summation of the average sulfur dioxide emission rate times the daily weighting factor divided by the summation of the weighting factors.

(c) Owners or operators of sources or emissions units subject to [326 IAC 7-1.1](#), [326 IAC 7-4](#), or [326 IAC 7-4.1](#) shall submit to the commissioner the following reports based on fuel sampling and analysis data obtained in accordance with procedures specified under [326 IAC 3-7](#):

(1) Fuel combustion sources with total coal-fired heat input capacity greater than or equal to one thousand five hundred (1,500) million British thermal units (MMBtu) per hour shall submit quarterly reports of the thirty (30) day rolling weighted average sulfur dioxide emission rate in pounds per MMBtu. Records of the daily average coal sulfur content, coal heat content, weighting factor, and daily average sulfur dioxide emission rate in pounds per MMBtu shall be submitted to the department in the quarterly report and maintained by the source owner or operator for a period of at least two (2) years.

(2) Fuel combustion sources with total coal-fired heat input capacity greater than one hundred (100) and less than one thousand five hundred (1,500) MMBtu per hour shall submit quarterly reports of the calendar month average coal sulfur content, coal heat content, and sulfur dioxide emission rate in pounds per MMBtu and the total monthly coal consumption.

(3) All other fuel combustion sources shall submit reports of calendar month average sulfur content, heat content, fuel consumption, and sulfur dioxide emission rate in pounds per MMBtu upon request.

(d) Compliance or noncompliance with the emission limitations contained in [326 IAC 7-1.1](#), [326 IAC 7-4](#), or [326 IAC 7-4.1](#) may be determined by a stack test conducted in accordance with [326 IAC 3-6](#) utilizing procedures outlined in 40 CFR 60, Appendix A, Method 6\*, 6A\*, 6C\*, or 8\*.

~~(e)~~ **(d)** Fuel sampling and analysis data shall be collected pursuant to the procedures specified in [326 IAC 3-7-2](#) or [326 IAC 3-7-3](#) for coal combustion or [326 IAC 3-7-4](#) for oil combustion. ~~and these data may be used to determine compliance or noncompliance with the emission limitations contained in [326 IAC 7-1.1](#), [326 IAC 7-4](#), or [326 IAC 7-4.1](#).~~ Computation of calculated sulfur dioxide emission rates from fuel sampling and analysis data shall be based on the emission factors contained in U.S. EPA publication AP-42\* unless other emission factors based on site-specific sulfur dioxide measurements are approved by the commissioner and the U.S. EPA. Fuel sampling and analysis data shall be collected as follows:

(1) For coal-fired fuel combustion sources with heat input capacity greater than or equal to one thousand five

hundred (1,500) MMBtu per hour, compliance ~~or noncompliance~~ shall be determined using a thirty (30) day rolling weighted average sulfur dioxide emission rate in pounds per MMBtu unless a shorter averaging time or alternate averaging methodology is specified for a source under this article.

(2) For all other combustion sources, compliance ~~or noncompliance~~ shall be determined using a calendar month average sulfur dioxide emission rate in pounds per MMBtu unless a shorter averaging time or alternate averaging methodology is specified for a source under this article.

~~(f) A determination of noncompliance under either the method specified in subsection (d) or (e) shall not be refuted by evidence of compliance under the other method.~~

~~(g) Upon written notification of an emissions unit owner or operator to the department, continuous emission monitoring data collected and reported under [326 IAC 3-5](#) may be used as the means for determining compliance with the emission limitations in this article. Upon such notification, the other requirements of this rule shall not apply.~~

**(e) Compliance or noncompliance with the emission limitations contained in [326 IAC 7-1.1](#) or [326 IAC 7-4](#) may be determined by an appropriate method as follows:**

**(1) A stack test conducted in accordance with [326 IAC 3-6](#) using procedures in 40 CFR 60, Appendix A, Method 6\*, 6A\*, 6C\*, or 8\*. A compliance determination based on stack testing is not sufficient to demonstrate compliance on a continuous basis.**

**(2) A continuous emission monitoring system in accordance with [326 IAC 3-5](#).**

**(3) Source sampling in accordance with [326 IAC 3-6](#).**

**(4) Fuel sampling and analysis data collected in accordance with subsection (d) or [326 IAC 3-7](#).**

**(5) Other methods approved by the commissioner and U.S. EPA.**

\*These documents are incorporated by reference. Copies may be obtained from the Government Printing Office, 732 North Capitol Street NW, Washington, D.C. 20401 or are available for review and copying at the Indiana Department of Environmental Management, Office of Air Quality, Indiana Government Center North, Tenth Floor, 100 North Senate Avenue, Indianapolis, Indiana 46204.

*(Air Pollution Control Board; [326 IAC 7-2-1](#); filed Aug 28, 1990, 4:50 p.m.: 14 IR 52; filed Jan 30, 1998, 4:00 p.m.: 21 IR 2078; errata filed Feb 9, 1999, 4:06 p.m.: 22 IR 2006; readopted filed Jan 10, 2001, 3:20 p.m.: 24 IR 1477; errata filed Nov 7, 2001, 3:00 p.m.: 25 IR 813; errata filed Dec 12, 2002, 3:30 p.m.: 26 IR 1565; filed Aug 26, 2004, 11:30 a.m.: 28 IR 42; filed May 25, 2005, 10:50 a.m.: 28 IR 2953)*

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Posted: 03/31/2010 by Legislative Services Agency  
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