CREDIBLE EVIDENCE RULE REVISIONS: RESPONSE TO COMMENTS

Office of Enforcement and Compliance Assurance
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INTRODUCTION

The conforming amendments to parts 51, 52, 60 and 61 to clarify that any credible evidence may be used to establish compliance or noncompliance with applicable requirements of the Act (referred to as the "CE revisions" or "CE" throughout this document) are being promulgated under the authority of applicable provisions in section 113(a) of the Clean Air Act (the "Act"). Additional authority is provided by section 113(e). These CE revisions were originally proposed in conjunction with enhanced monitoring requirements under part 64 designed to fulfill requirements in section 114(a) of the Act. The EPA proposed the part 64 requirements and the CE revisions together on October 22, 1993, at 58 FR 54648. The proposal announced the opportunity for written public comment until December 20, 1993, which date was subsequently extended until January 31, 1994. The proposal also provided notice of a public hearing, which was conducted in Washington, D.C. on November 19, 1993. In the fall of 1994, EPA held a series of informational meetings with interested parties affected by the rule. The public comment period then was reopened from December 28, 1994 until February 3, 1995 to take additional comment on a limited number of specific issues. In addition, the Agency held an additional stakeholder meeting. In response to the reopened public comment period, EPA received over 200 additional comment letters.

In April 1995, EPA announced that it was suspending development of the enhanced monitoring rule while it developed a compliance assurance monitoring (CAM) approach to serve the same statutory goals. In a September 1995 public draft of the CAM approach, EPA stated that it would hold further discussions with stakeholders before it proceeded to finalize the CE revisions. On March 8, 1996, EPA announced that a public meeting on credible evidence issues would be held on April 2, 1996. To focus the meeting's discussion, EPA released a paper on March 21, 1996, entitled "The Use of Information Other Than Reference Test Results for Determining Compliance With the Clean Air Act" (sometimes referred to as the "Credible Evidence White Paper"). EPA distributed this paper by electronic bulletin board to the same stakeholders who were involved in the enhanced monitoring and CAM rulemakings, further distributed it to various other interested parties, and made it generally available to the public.

The public meeting was held on April 2, 1996, at EPA Headquarters in Washington, D.C., where twenty-three organizations and individuals presented oral statements and written comments. At the meeting, EPA announced that, although the rulemaking docket would not formally be re-opened, additional written comments would be accepted for at least another 30 days. Moreover, EPA stated that it would meet with any interested parties to discuss the credible evidence rules. As a result, many additional written comments on the CE revisions have been received, and numerous additional EPA/stakeholder meetings have been held. (See Docket A-91-52, Items IV-D-774 through IV-D-843, IV-F-4, and various items in Section IV-E of the docket.) Further, on August 2, 1996, EPA made available to the public a revised draft CAM approach via electronic bulletin board (for information call 919-541-5384); the draft is also available in the Air Docket.

Complete transcripts of the public hearings and the full text of each comment letter, along with

supporting information used in developing the regulations, are contained in Docket No. A-91-52. This docket is available for public inspection and copying between 8:00 a.m. and 5:30 p.m. Monday through Friday, excluding government holidays, at Room M-1500, Waterside Mall, 401 M Street S.W., Washington, D.C. Note that Section VI of the docket has been reserved for information related to the CAM rulemaking. Comments placed into that portion of the docket have been received on the draft CAM rulemaking and do not constitute part of the record for the CE revisions.

This document summarizes and responds to the written and oral comments submitted at the November 19, 1993 and April 1996 public hearings, as well as the comment letters received during the original public comment period, the reopened comment period, and subsequent to the April 2, 1996 public hearing. The reader should note that many of the most significant comments are responded to in the preamble to the final rule. The preamble discussion is the formal exposition of Agency policy and interpretation. The responses in this document cross-reference the appropriate discussion in the preamble where appropriate. Finally, wherever a commenter may have incorporated the comments of others by reference, those commenters are incorporated by reference into the list of commenters under any particular issue in which the primary commenter is listed in this document.

This document includes many citations to other authorities outside of the CE revisions. These citations are generally not followed by their origin, such as "of the Clean Air Act." Rather, the reader can recognize the origins of the sections by their nature: sections of existing EPA regulations are preceded by 40 CFR, except in the case of 40 CFR part 70, which is frequently cited only as "part 70," and sections therein cited as, e.g., "§ 70.2." Sections of the Act are referenced by a three digit number, such as "114" or "504." This document also often refers to "State" or "permitting authority." The reader should assume that where the document refers to a "State," the reference also includes local air pollution agencies, Indian tribes, and territories of the United States to the extent they are or will be the permitting authority for their area, or have been or will be delegated permitting responsibilities under the Act. In addition, the term "permitting authority" would also include EPA to the extent EPA is the permitting authority of record.

SECTION 1: Statutory Authority for the CE Revisions

1.1 Comments in Response to Original EM Proposal

SUMMARY: A number of commenters objected to using CE to determine compliance, arguing that section 113(e) allows such evidence to be used to assess penalties only, and not to determine whether a violation has occurred.

Numerous commenters cited the language and context of section 113(e) to support their argument. Many argued that section 113(e)(1) merely provides that credible evidence other than test methods may be considered to determine the duration of a violation that has already been proven by use of a test method. One commenter suggested that the statutory reference to CE had to be read in pari materia with the other items listed in that paragraph; all of which are relevant solely to penalty assessment. Another commenter stated that although some penalty factors and elements of liability may potentially overlap, the same evidence is not admissible for either purpose. One commenter also stated that section 113(e)(2), which creates a presumption of noncompliance after proof of a violation, is consistent with the use of the evidence for penalty assessment only. Other commenters cited sections 113(a) and 113(d)(1) to show that where Congress wanted to allow EPA to proceed on the basis of "any available information," it clearly stated that intention -- unlike section 113(e)(1).

Commenters argued that EPA's reliance on legislative history to interpret "any credible evidence" was improper under the ruling in Chevron, U.S.A. v. Natural Resources Defense Council, Inc., 467 U.S. 837 (1984) [cited as Chevron v. NRDC in remainder of this document], which directs the Agency to not rely on legislative history where statutory language is clear on its face as it allegedly is in section 113(e). If legislative history is to be considered, several commenters stated that the legislative history of section 113(e) actually supports the limited interpretation of section 113(e) as merely applying to penalty assessments. Some commenters also argued that the legislative history used by EPA was insufficient to support EPA's position that section 113(e)(1) may be used to prove a violation. Finally, commenters criticized EPA's reliance on the ruling in United States v. Kaiser Steel Corp., No. 82-2623-IH (C.D. Cal. Jan. 17, 1984) [cited as Kaiser Steel in remainder of this document] to support its interpretation because that ruling was an unpublished opinion cited once in a congressional report; a much clearer statement of intent than this sole reference would be required to overturn decades of EPA practice and case law.

Commenters also looked to EPA's past practice as to what evidence may be used to determine compliance. Some industry commenters noted that EPA has always viewed the test method as an integral part of an emission standard and proof of a violation. One commenter noted that reference methods are important because they provide a clear, consistent gauge of compliance that have been scientifically verified and developed through formal notice and comment rulemaking. The same commenter added that to reverse this practice, a much clearer

congressional directive was required. The commenter argued that since regulatory practice and case law have required the use of test methods to determine compliance for the past twenty years, there is no basis for the statements in the preamble to the proposed rule that the amended section 113(e) revises this well-established practice.

RESPONSE: The EPA believes that the commenters have misunderstood the Agency's authority for revising existing regulations and calling for revisions to State Implementation Plans (SIPs). These rule revisions and SIP calls are based on EPA's existing authority prior to the 1990 Amendments, which alone would authorize these rules, as well as its amplified authority following the 1990 Amendments. Congress, in several places in the 1990 Amendments, expanded the obligation for sources to demonstrate compliance and the authority of EPA and citizens to take enforcement action against violations of requirements under the Act. One significant provision of the 1990 Amendments in this regard is the revised section 113(e), but EPA is not relying solely on this revised section as the basis for changing its past practices. Section 113(a) is also a primary source of authority for these revisions. See below, and Section III.C. of the preamble to the final rule, for further discussion of EPA's basis for asserting that section 113(e)(1) authorizes the use of credible evidence for both establishing liability and assessing penalties.

It should also be emphasized that EPA is continuing to rely on the reference test method as the lodestar for determining what evidence is credible, and thus such tests continue to be an integral part of the emission standard.

EPA explains its understanding of the legislative history in Section III.C.5. of the preamble. In further response, EPA notes that it is not relying solely on Congress' reference to the Kaiser Steel decision to justify this rulemaking. Nonetheless, EPA believes that the Senate Report's reference to Kaiser Steel is a clear signal of Congress' displeasure with judicial decisions that limited EPA's ability to use credible evidence other than data from reference tests. Additionally, contrary to assertions by the commenters, EPA does not believe that either case law or past EPA practice limit EPA from adopting these credible evidence revisions absent a major change in the Act. As explained in the preamble in Section III.C.3. and elsewhere in this Response to Comments (See Section 4.2), the case law does not hold that the statute mandates the use of exclusive reference tests. Further, EPA practice has not been based on the theory that the statute demands such an exclusive reference method approach. EPA's practice has been based on its regulations, and today's rulemaking amends those regulations in a manner consistent with the longstanding authority in section 113(a) that permits EPA to prosecute a violation on "any information."

Specifically as to section 113(e), EPA disagrees with those commenters who argued that the Agency has taken a statutory provision intended by Congress to apply only to penalty determinations and "bootstrapped" it inappropriately to apply to the issue of what evidence EPA can use to prove the existence and duration of a violation. As an initial matter, as discussed above, EPA believes that it has plenary statutory authority even without section 113(e) to remove

any regulatory restrictions on the appropriate evidence for proving violations. Section 113(e), along with its legislative history, provides a clear example in the 1990 Amendments of congressional intent to broaden the ability of EPA to take enforcement action under the Act by any appropriate means, consistent with the general enforcement authority in section 113(a). EPA is responding to the 1990 Amendments by removing regulatory restrictions on its ability to prove violations.

Moreover, EPA takes a different view of the meaning of section 113(e). Section 113(e) states that the Administrator or the court, "in determining the amount of any penalty to be assessed," shall take into consideration (among other things) "the duration of a violation as established by any credible evidence (including evidence other than the applicable test method)". This statutory provision is clear on its face that any credible evidence, including evidence other than from the applicable test method, may now be used for such purpose. Moreover, under the Act (for example, sections 113(b) and 113(e)(2)), penalties are assessed for each day of each violation. Consequently, the Agency cannot collect a penalty on any particular day which falls during the "duration of a violation" unless it also proves that a violation occurred on that day. Proof of the violation is thus inextricably linked to proof of the duration of the violation. EPA, therefore, believes that section 113(e) allows EPA to use any credible evidence, not only for penalty purposes, but also to establish the existence of violations.

The argument of some commenters that subsection 113(e)(1) applies only to penalty determinations because it is contained in a section entitled "Penalty Assessment Criteria," is particularly unpersuasive in light of section 113(e)(2). Section 113(e)(2), while authorizing EPA to assess daily penalties, primarily concerns the purely evidentiary matters of the plaintiffs' prima facie case for proving a continuing or recurring violation and the burden of proof. Both sections 113(e)(1) and (2) provide instruction to courts and EPA as to how EPA or a citizen may prove violations, consistent with general enforcement authority under section 113(a).

EPA notes that some commenters criticized statements in the preamble to the proposed rule that applied section 113(e) both to the establishment of an initial violation, as well as the determination of its duration. These arguments fail to take full account of other interpretations. For example, one possible reading of section 113(e)(1) is that the reference to "other credible evidence" is tied to the "duration" of the violation. Another possible reading is that "other credible evidence" modifies the word "violation" rather than the word "duration," reflecting a choice by Congress in the context of amending section 113(e)(1) to clarify what evidence may be used to establish the existence of a violation. Further, even if "other credible evidence" were viewed as modifying "duration" rather than "violation," the common meaning of the word "duration" is "the time during which something exists or lasts." Webster's Collegiate Dictionary (10th ed., 1993) (emphasis added). A violation exists and lasts from its beginning to its end, so the duration of a violation includes each and every day that the violation occurs including the initial day of violation.

Other provisions of the 1990 Amendments also demonstrate congressional intent that EPA and sources may rely on any credible evidence in establishing compliance or violations under the Act. Section 114(a)(3), requiring enhanced monitoring and compliance certifications, was added as part of the 1990 Amendments and it, too, supports EPA's position that compliance and violations may be determined on the basis of any credible evidence. Much of the monitoring, reporting and recordkeeping performed under NSPS or NESHAP has previously been relied on only as an indicator of compliance, and EPA typically has determined the compliance status of sources by conducting on-site inspections, or by issuing source-specific investigatory letters requiring the collection and submission of emission data. The Senate committee report on S. 1630 stated explicitly that section 114(a)(3) would change this approach to enforcement, stating that "compliance certifications and emission data submitted pursuant to this [section 114(a)(3)] authority will facilitate enforcement, due in part to the fact that such data and certifications can be used as evidence." S. Rep. 228, 101st Cong., 1st Sess., at 368 (1989).

Similarly, section 504(b), which was added as part of the 1990 Amendments and is part of the title V operating permits program, authorizes the Administrator to prescribe the "procedure and methods for determining compliance ... but continuous emissions monitoring need not be required if alternative methods are available that provide sufficiently reliable and timely information for determining compliance." This provision contemplates establishment of additional means of determining compliance and provides further indication that Congress intended for EPA to expand the types of evidence upon which it can determine compliance and pursue appropriate enforcement.

COMMENTERS:
American Automobile Manufacturers Association (IV-D-538); Chemical Manufacturers Association (IV-D-301); Clean Air Implementation Project (IV-D-242); Coalition for Clean Air Implementation (IV-D-304); Eastman Chemical Company (IV-D-347); Fertilizer Institute, The (IV-D-251); Monsanto Company (IV-D-273); National Environmental Development Association (IV-D-334); Ohio Edison (IV-D-266); Ohio Electric Utilities Institute (IV-D-323); Pharmaceutical Manufacturers Association (IV-D-367); Shell Oil Company (IV-D-280); Texaco Inc. (IV-D-357); Total Petroleum, Inc (IV-D-354); U.S. Steel Group, The (IV-D-340); Union Carbide Corporation (IV-D-293)

1.2 Comments in Response to March 21, 1996 Policy Paper

SUMMARY: Industry commenters, in general, questioned EPA's authority to use CE to establish a violation under the Act. Some commenters argued that any attempt by EPA to authorize the use of non-reference test data as credible evidence for documenting underlying noncompliance with an emission standard violates the express language of section 113(e) of the Act. Citing the Congressional Record, many commenters point out that section 113(e)(1) refers expressly to

penalty assessment and only allows the use of credible evidence to establish the duration of a violation. This interpretation of section 113(e) is confirmed, argues one commenter, by the statement of Senator Chafee on this portion of the 1990 Clean Air Act Amendments:

> Subsection 113(e)...clarifies and confirms that once EPA establishes evidence of a violation using a formal test method, EPA can use other credible evidence to prove additional violations, or that violation has continued. An addition, subsection 113(e) clarifies and confirms that once EPA has made a *prima facia* case that establishes a period of violation, the burden of proving any intervening days of compliance rests with the source. [135 Cong. Rec. S9665 (1989)]

In short, these commenters argued that the legislative history of section 113(e) ratified the holdings in the body of case law which require that to establish a violation, EPA must use applicable reference test methods.

On the other hand, at least one environmental group and a State agency association argued that the Act specifically permits the use of CE for compliance determinations -- sections 113(a) and (d) provide for enforcement "on the basis of any information available." These commenters stated that, on the one occasion a court misinterpreted these provisions (Kaiser Steel), Congress acted to reenforce its intention given that section 113(e) specifically overturned the Kaiser Steel decision.

In response, some industry commenters argue that section 113(a) is not new; it was not amended in 1990 to alter the standard of proof of a violation. (In fact, some commenters argued, Congress implicitly acknowledged the more limited interpretation of section 113 by not modifying section 113(a).) EPA's new interpretation of section 113(a) renders 113(e)(1) superfluous, according to these commenters. Another commenter pointed out that section 113(e) did override the Kaiser Steel decision but only to allow EPA to use credible evidence to determine the duration of a violation, not to prove a violation in the first instance. Taking a slightly different approach, yet another industry commenter claimed that section 113(a)(1) does say EPA can use any information available to allege a violation, but that EPA's rules do not allow the use of evidence other than that specified in the emission standard as a compliance method.

RESPONSE: See the response provided above in Section 1.1. The Agency acknowledges that, in some cases which narrowly construed EPA's regulations, those regulations have been interpreted to not allow use of evidence other than the established compliance methods even though the statute does not limit EPA's authority in that manner. It is this dichotomy between EPA's statutory authority and some courts' interpretation of EPA's regulatory authority that EPA is correcting by promulgating the CE revisions. Thus, the final comment summarized above is fully consistent with this rulemaking.

EPA rejects the suggestion that section 113(e) codified case law holding that violations can only

be proved with a reference test. First, EPA believes that the case law does not require use of reference tests as a statutory matter. Secondly, this argument is inconsistent with the intent of the 1990 Amendments to the Clean Air Act which were intended to expand, not contract, enforcement authority. It is also inconsistent with other arguments forwarded by industrial commenters that section 113(e) pertains to penalties only, in that penalties can not be assessed for days on which violations have not been established. If credible evidence can be used to establish penalties, it must also be used to establish violations. There is little reason to suggest that credible evidence is sufficiently reliable that it can be used to establish violations and assess penalties on the day after a reference test, but not on the first day.

Commenters' argument that Congress' amendment of section 113(e) impliedly amends section 113(a) is strained. According to the commenters, Congress amended section 113(e) to correct the decision in Kaiser Steel concerning use of credible evidence to show duration of a violation. Because Congress only addressed use of credible evidence to show duration of a violation, the commenters argue, Congress impliedly ratified that under section 113(a) violations can only be established by a reference test. However, Kaiser Steel only involved interpretation of an EPA regulation and not whether that regulation was compelled by section 113(a). Thus, it is quite a leap to argue that Congress' overruling of one application of EPA's compliance testing regulations converts those regulations otherwise into a statutorily-compelled statement concerning EPA's authority. This is particularly the case when erecting the regulations as statutorily compelled directly contradicts EPA's authority as specified in section 113(a).

COMMENTERS:
American Petroleum Institute (IV-D-794; IV-D-822); American Electric Power (IV-D-836); Arizona Mining Association (IV-D-834); Associated Industries of MO(IV-D-793); Chemical Manufacturers Association (IV-D-823); Cinergy (IV-D-820); Class of '85 Regulatory Response Group (IV-D-831); Clean Air Implementation Project (IV-D-787); Clean Air Services Steering Committee (DoD) (IV-D-804); Coalition for Clean Air Implementation (IV-D-819); Corporate Environmental Enforcement Council (IV-D-785); Dupont (IV-D-814); Eastman (IV-D-832); Exxon Company, U.S.A. (IV-D-816); Fertilizer Institute (IV-D-802); Gas Processors Association (IV-D-841); General Electric (IV-D-818); Independence Power & Light (IV-D-798); Los Angeles Department of Water and Power (IV-D-806); Integrated Waste Services Association (IV-D-829); Judy Kosovich (IV-D-840); Mobil Corporation (IV-D-821); Natural Resources Defense Council (IV-D-789); NEDA CARP (IV-D-781; IV-D-826); NESCAUM (IV-D-803); OH Chemical Council & OH Chamber of Commerce (IV-D-813); Public Service Company (IV-D-835); Steel Manufacturers Association & Specialty Steel Industry of North America (IV-D-833); Southwestern Public Service Company (IV-D-810); Texas Title V Planning Committee (IV-D-796); Trial Lawyers for Public Justice (IV-D-780); UARG (IV-D-782; IV-D-824); WV Manufacturers Association (IV-D-842)

SECTION 2: Definition of "Credible Evidence" and Its Use for Determining Compliance

2.1 Comments in Response to Original EM Proposal

2.1.1 General Appropriateness of Using Enhanced Monitoring Data for Compliance Determinations

SUMMARY: Environmental organizations stated that EPA's authority to use monitoring data as a basis for enforcement actions was clear from Congress' intent and the legislative history to the 1990 Amendments, which documents that enhanced monitoring is based on the NPDES "monitoring for enforcement" model. In fact, these environmental organizations noted, many States use monitoring data for enforcement purposes now. An industry commenter said that the proposed rule was an improvement over existing regulations by allowing use of continuous monitoring in place of traditional compliance determination procedures.

However, many industry and some State agency commenters opposed using enhanced monitoring data for compliance determinations for general reasons. Commenters noted generally that data from monitoring other than compliance test monitoring, or its equivalent, cannot be conclusive evidence of a violation of an underlying standard, while one local agency recommended that permitting authorities should be given discretion as to whether to require enhanced monitoring to be used for direct compliance.

Some commenters suggested that enhanced monitoring data be used for indicating, not determining, compliance status, because no monitoring method could be guaranteed to perform properly and because this approach would make the proposed rule easier to implement by eliminating the need for a rulemaking and the need for time-consuming analyses to determine whether enhanced monitoring would change underlying standards. Commenters also noted this approach would be consistent with existing compliance indicator monitoring requirements, would reduce the significant parameter correlation technical issues, and could be used to trigger more extensive monitoring or testing for direct compliance. Another commenter objected to the use of the data for enforcement because existing continuous emission monitoring systems (CEMS) that are not used for compliance purposes would need to be upgraded, with great effort and expense, to meet enhanced monitoring requirements.

A trade association argued that enhanced monitoring should not replace the use of test methods because, unlike standard test methods, enhanced monitoring results will not be scientifically duplicatable. Therefore, neither the source nor EPA will be able to extrapolate stack test/enhanced monitoring correlation results at a reduced percentage of production up to full production to determine, using surrogate parameters, whether limits will be complied with during full utilization of production equipment. This result will lead to sources not being able to operate at full capacity, they allege. A State agency argued that EPA has ignored the possible defenses to

direct enforceability that use of non-test method data would present, while a local agency stated that permitting authorities should be granted discretion as to whether enhanced monitoring data may be used for direct enforcement.

RESPONSE: The EPA notes that this rulemaking does not address the enhanced monitoring requirements proposed October 22, 1993, and therefore these comments are not specifically germane to this rulemaking. The use of monitoring as opposed to the exclusive use of test data to establish violations, however, is germane to this rulemaking and has been responded to in section 1.2 above. The type of monitoring required to satisfy the enhanced monitoring requirement of the statute will be addressed in the CAM rulemaking. See 61 FR 41991 (August 13, 1996). As discussed in the CAM materials referenced in the Federal Register notice cited above, EPA currently intends that the CAM rule generally will provide a reasonable assurance of compliance with emission limits through monitoring of control equipment.

The Agency further notes that this rulemaking does not replace the use of test methods. As explained in detail in section III.A. of the preamble to the final rule, the party seeking to use credible evidence to prove compliance or noncompliance will need to show that the information produces results that are relevant to whether a reference test would have been passed, i.e. that they reflect a reasonable approximation of, or can be related to, the emission values that would be generated from a reference test. The Agency acknowledges that there may be technical issues related to particular information that a party may seek to introduce as credible evidence in any particular case. The proffer of evidence and the defenses or rebuttal of that evidence are proper and traditional roles for the customary rules of evidence and do not present any unique concerns or issues in the context of enforcing air pollution requirements as opposed to other legal requirements. The Agency recognizes that both judicial and administrative tribunals routinely make determinations concerning the admissibility and weight of evidence on a case-by-case basis. Such evidentiary evaluations are standard under the Federal Rules of Evidence (FRE). See, e.g., FRE Rule 104 (regarding general admissibility), Rules 401-403 (regarding relevance), and Rules 701-705 (regarding opinion and expert testimony). This process should resolve the concerns about credible evidence not being capable of confirmation or useful for extrapolation from stack test results. For EPA's position on the reliability and credibility of various forms of possible credible evidence (such as CEMS, COMS and similar data), and on the potential use of such data in enforcement actions, see Section III.A of the final rule preamble.

COMMENTERS:
Alabama Department of Environmental Management (IV-D-453); American Automobile Manufacturers Association (IV-D-538); American Foundrymen's Society, Inc. (IV-D-294); American Portland Cement Alliance (IV-D-284); Chemical Manufacturers Association (IV-D-301); Council of Industrial Boiler Owners (IV-D-319); Eastman Chemical Company (IV-D-347); International Business Machines Corporation (IV-D-238); Koch Industries (IV-D-

332); Monsanto Company (IV-D-273); Natural Resources Defense Council, et al. (IV-D-225); Ohio Manufacturers Association (IV-D-348); Ohio Cast Metals Association (IV-D-324); Regional Air Pollution Control Agency (IV-D-532); Rubber Manufacturers Association (IV-D-331)

2.1.2 Use of Opacity Data to Determine Compliance with Particulate Matter Standards

SUMMARY: Certain commenters objected to the possibility that continuous opacity monitoring system (COMS) or visible emission data could be used as a parameter to show compliance with particulate matter standards. Two commenters stated that in United States v. New Boston Coke Corp., Case No. C-1-84-1427 (S.D. Ohio August 16, 1985) [cited as New Boston Coke Corp. in remainder of this document], the court held that although EPA can use opacity as grounds for an NOV, EPA cannot use opacity as sufficient proof of a violation of mass particulate matter emission limitations. These commenters stated that while opacity can indicate high mass particulate concentrations, it is an inexact indicator that has traditionally been deemed supplemental to particulate standards and limitations. One commenter argued that EPA has not presented any data or scientific evidence supporting the use of COMS as a compliance method for particulate matter, so using it for that purpose would be arbitrary and capricious. Because of these concerns, commenters recommended stating explicitly that COMS will not be used for compliance with particulate matter standards.

RESPONSE: Unlike the proposed enhanced monitoring provisions, this rulemaking does not require an owner or operator to establish any new procedures for determining compliance. The ability of a party to prove compliance or the existence of a violation of a mass particulate matter standard based on opacity monitoring data will require the party that seeks to introduce such evidence to establish the comparability of the opacity data to the information that could be obtained through the conduct of particulate matter compliance tests. The technical issues raised by these commenters will present issues of fact to be established by the party seeking to use the opacity data. The rulemaking does not create any presumptions or inferences pertaining to any particular form of CE or any particular emission standard, including presumptions related to proving a violation of a mass particulate matter standard based on opacity data. See the response to Section 4.2 for a discussion of the New Boston Coke Corp. case.

COMMENTERS:
Armco Steel Company (IV-D-395); Cincinnati Gas & Electric Company (IV-D-259); Ohio Edison Company (IV-D-266)

2.1.3 Use of Other Data to Determine Compliance

SUMMARY: Several commenters argued that EPA had focused too much on the use of

enhanced monitoring data alone to determine compliance. Certain commenters stated that the proposed rule exceeds statutory authority by providing that enhanced monitoring data can be used as the sole basis for determining compliance with underlying emission standards. Although monitoring data can play an important role in determining compliance status, other data must be permitted to demonstrate compliance status.

Certain commenters stated generally that sources should be allowed to supplement enhanced monitoring data with other data to demonstrate compliance, especially for any periods in which enhanced monitoring data are not available. Other commenters, however, argued that only data meeting the stringent quality requirements of an enhanced monitoring protocol should be used to determine compliance, or, in the alternative, the final rule should limit "other data" to assess compliance to only data meeting the requirements of EPA test methods in 40 CFR part 60, appendix A.

RESPONSE: As discussed in response to Section 2.1.1, this rulemaking does not address the proposed enhanced monitoring requirements, and therefore these comments are not specifically germane to this rulemaking. However, EPA generally agrees with the comments concerning the ability to use any relevant and probative data to demonstrate compliance status, and believes that this rulemaking is consistent with that approach to compliance determination. Note, however, if an independent provision in a SIP, permit or other rule requires that a reference test be performed, the credible evidence rule does not change this requirement or allow the use of credible evidence to substitute for that specific requirement for the performance of a reference test.

COMMENTERS:
Alabama Department of Environmental Management (IV-D-453); Bunge Corporation (IV-D-444); Council of Industrial Boiler Owners (IV-D-319); Dow Chemical Company (IV-D-260); Entergy (IV-D-281); Motorola Inc. (IV-D-302); Ohio Manufacturers Association (IV-D-348); Synthetic Organic Chemical Manufacturers Association (IV-D-362)

SUMMARY: Another commenter stated that EPA has erroneously concluded that enhanced monitoring data must constitute court admissible evidence, when any data that is certified by a source (as required by the title V compliance certification procedure) will constitute court admissible evidence without the unnecessarily detailed and superfluous conditions required by the proposed rule.

RESPONSE: As discussed in response to Section 2.1.1, this rulemaking does not address the proposed enhanced monitoring requirements, and therefore these comments are not specifically germane to this rulemaking. In this rulemaking, EPA has specifically declined to make conclusions or presumptions about what constitutes admissible evidence, believing those issues to be the province of the judiciary. However, EPA expects that any data certified by a source should constitute evidence admissible in court and this rulemaking will assure that EPA's regulatory

provisions are consistent with that approach.

COMMENTERS:
E.I. Dupont de Nemours and Company (IV-D-329)

SUMMARY: A State agency supported allowing the use of data gathered by CEMS required by programs other than the enhanced monitoring program to determine compliance with applicable emissions standards. The agency noted that it makes sense to put to good use the data from CEMS that have already been installed, and in appropriate circumstances the data should be used for direct enforcement.

RESPONSE: The EPA agrees that non-reference data that is already quantified in the same units as the underlying standard, e.g., emissions data generated by properly operating and calibrated non-reference CEMS, should generally be comparable to reference test data, with all specified averaging periods still applying.

COMMENTERS:
Ohio EPA (IV-D-283)

2.1.4 Clarifications of "Other Credible Evidence" Provisions

SUMMARY: Some commenters suggested that the rule clarify what constitutes "other credible evidence." An industry commenter said that credible evidence should be limited to what is in the permit for testing and/or enhanced monitoring in order to preserve the permit shield and to avoid conflicting data problems. A State agency suggested that EPA issue guidance that lists examples or lists the type of information that could be considered credible evidence. The agency also recommended clarifying whether any information can be used as credible evidence or if only information required in the permit can be used as credible evidence. The agency did not believe it is necessary or appropriate to attempt to limit what a trier of fact may consider in determining compliance in a permit or otherwise and further believed it is unwise to attempt to speculate as to the evidence that may arise in untold future situations.

RESPONSE: The amendments to existing regulations on this issue (40 CFR 51.212, 52.30, 60.11 and 61.12) provide that a court generally may consider any credible evidence -- including evidence other than that produced by the applicable test method -- in an enforcement action. However, in order to avoid limiting what may be considered "any credible evidence," EPA has decided not to provide a precise definition or description. The conforming amendments do, however, retain the reference test methods as a benchmark for quantifying the emissions at issue. Therefore the rules provide that the evidence must be relevant to the source's emissions as would be determined by a reference test. See the response to Section 2.1.1 for further discussion on this topic. The Agency also notes that "other credible evidence" would not be limited to

information that is required to be obtained in a permit.

COMMENTERS:
American Textile Manufacturers Institute (IV-D-440); Texas Natural Resource Conservation Commission (IV-D-371)

2.1.5 Use of Non-Enhanced Monitoring Data

SUMMARY: A commenter proposed that demonstrating compliance with an enhanced monitoring protocol should shield a source from enforcement using any other data. The commenter added that the proposed ability to use any other information to rebut the enhanced monitoring data is inconsistent with the determination of "best" in selecting an enhanced monitoring protocol and is contrary to the permit shield and other general implementation concepts of title V upon which part 64 is purportedly based.

Other commenters, however, said that use of data generated outside of an approved enhanced monitoring protocol should be reciprocal so that a source could rely on non-enhanced monitoring, credible data to document or certify that it is in compliance. These commenters argued that if EPA is unwilling to restrict itself to using data from federally-enforceable methods to prove violations, EPA should not restrict permittees to using data from federally-enforceable methods to prove and certify compliance.

RESPONSE: As discussed in response to Section 2.1.1, this rulemaking does not address the proposed enhanced monitoring requirements, and therefore these comments are not specifically germane to this rulemaking. However, the Agency does agree generally that the use of data should be reciprocal, i.e., a party should be able to show compliance or noncompliance in an enforcement proceeding (or in a compliance certification) on the basis of any credible evidence. This rulemaking adopts that reciprocal approach to the use of information. Further, while one cannot rule out the possibility that other evidence might undermine the credibility of an approved enhanced monitoring device (should such a protocol ever be established), one would generally expect that such monitoring device would ordinarily produce results that are dispositive of the issue.

EPA's approach to credible evidence is not inconsistent with the permit shield concept in that the shield is designed to define what substantive requirements the source may or may not have. It does not, and may not shield the source from the procedural use of credible evidence to prove noncompliance with the emission limitation requirements the source does have. Further, EPA reiterates that violations can be proven exclusively by CE, just as CE can be used in compliance certifications pursuant to Part 70, without the need to perform a confirming reference test, for the reasons mentioned in the comments above and the final rule preamble in Section III.C. and D. While CE can be used for compliance certifications, this does not remove requirements to perform

reference tests if the source is otherwise required to perform such tests, whether pursuant to a Section 114 demand or a permit or other requirement to perform periodic performance tests.

COMMENTERS:
Can Manufacturers Institute (IV-D-478); Colorado Association of Commerce and Industry (IV-D-243); Dow Chemical Company (IV-D-260); Fort Howard Corporation (IV-D-233)

2.1.6 Necessity for a Rulemaking to Establish Compliance Test Methods

SUMMARY: Numerous industry commenters stated that EPA must follow rulemaking procedures if it intends for enhanced monitoring to be used as a direct compliance test method in order to ensure that the stringency of existing requirements is not altered. Many commenters argued that the proposed approach of establishing directly enforceable enhanced monitoring through permits would in effect modify the compliance obligations and requirements, as well as the level of monitoring, reporting and record keeping, in existing regulations. Many commenters argued generally that emission standards include methods for telling whether a source meets the requirements. When these methods are changed and new monitoring, record keeping, and testing methods are established, the standards themselves are changed. Others noted that the underlying emissions control requirements that are to be monitored limit the types of improved monitoring that can be required. Commenters argued that regulatory agencies must use rulemaking, not operating permits, to alter existing emission standards.

Many commenters also stated that for most underlying standards, EPA must follow rulemaking procedures that take into account various statutory criteria for establishing standards. These commenters stated that, for instance, any enhanced monitoring for NSPS standards must be established so that the standards remain achievable using the controls determined to be the best demonstrated technology at the time the standards were established, must take into account costs, and energy and environmental impacts, and must apply prospectively to sources for which construction is commenced after the initial proposal of the revision to the individual NSPS subpart. The commenters argued that similar types of requirements will exist for other standards such as RACT, LAER and NESHAP requirements.

Another reason provided by commenters as to why individual rulemakings are required to establish new compliance test methods are the legal cases on point. Commenters stated that under the decision in Donner Hanna Coke Corp.v. Costle, 464 F. Supp. 1295 (W.D.N.Y. 1979)[cited as Donner Hanna in the remainder of this document] , EPA can change the means for determining compliance with a standard (i.e., the test method) only through formal notice and comment rulemaking. One trade group argued that, in the past, EPA has unsuccessfully attempted to revise test method and monitoring provisions without following proper rulemaking procedures (citing PPG Industries v. Costle, 630 F.2d 462 (6th Cir. 1980) and U.S. v. Zimmer Paper Products, Inc., No. IP-88-194-C (S.D. Ind. 1989)). Similarly, the commenters argued that

the decision in Portland Cement Association v. Ruckelshaus, 486 F.2d 375 (D.C.Cir. 1973), cert. denied, 417 U.S. 921 (1974) [cited as Portland Cement in the remainder of this document], states specifically that the validity of an NSPS standard is questionable if there is a significant difference between the techniques used to arrive at the standard and the techniques used to determine compliance with the standard. According to the commenters, all of these cases require that EPA establish compliance test methods through rulemaking in a manner that considers the effect of the test method on the standard itself. Commenters also noted that supporting documentation provided in the RIA indicates that even EPA itself believed that modifying NSPS requirements through the proposed part 64 approach might not be permissible.

Certain commenters also stated that EPA could not attempt to force States to establish test methods through permits. In Train v. NRDC, 421 U.S. 60 (1975), the Supreme Court established that while EPA must set ambient standards, it is up to the States to determine -- through SIPs, not permits -- how to meet them. In addition, certain commenters also argued that EPA cannot use the title V process to change SIP compliance methods because that amounts to increasing the stringency of a rule which can only be effectuated through section 110 SIP revision procedures, and that changing SIP compliance methods through permits would create conflicts with the underlying SIP provisions. Commenters stated that substituting a new averaging time as contemplated under the proposed rule would dramatically affect the stringency of existing limits and the overall effect of certain SIPs, but the current rulemaking would offer no opportunity to prepare or present comments on that effect in the context of revising the SIP.

One commenter discussed Indiana & Michigan Electric Co. v. EPA, 733 F.2d 489 (7th Cir. 1984), in which the court held that when reviewing a revised SIP, EPA must consider limitations (such as averaging periods) that may be essential to the plan. Another commenter discussed the Ohio SIP as an example. According to this commenter, this SIP does not specify a federally-approved averaging time, because EPA wished to avoid this issue when the SIP was established. Commenters argue that EPA cannot now resolve this issue under the guise of enhanced monitoring rulemaking without considering any of the data, information, or record specific to Ohio's SIP. Therefore, they suggest that if EPA is to establish an averaging time for Ohio's SIP, it must be established through the section 110 process. The commenters argued that these examples point out the need for a formal SIP rulemaking to establish compliance test method procedures.

Another example of why rulemakings are required, according to certain commenters, is their perception of EPA's efforts to use CEMS in Subpart D under the NSPS. Commenters suggested that the different approaches to developing the initial NSPS Subpart D, the subsequent Subpart Da, and then the proposed revisions to Subpart D are good examples of the different approach that is taken in establishing continuous compliance standards. Different data and analyses are used, and, commenters argue, deliberate choices are made in the standard-setting process which create an interrelationship between averaging time, compliance test frequency, control system characteristics, and the emission limit. The commenters contend that the initial Subpart D was

developed on the basis of limited data without a continuous compliance test requirement or associated averaging time, while in Subpart Da, EPA relied on extensive data and statistical analyses to develop an integrated continuous compliance test approach with an associated averaging time to account for statistical variability. The commenters then noted that in the proposed revisions to Subpart D, EPA proposed to establish a long-term averaging time to account for statistical variability of emissions. The commenters stated that these rulemaking examples demonstrate that developing compliance method specifications for a particular emission limitation or standard involves substantial and unique issues of fact and law that can only be resolved through rulemaking.

An industry coalition group commenter noted that EPA just recently reiterated its position that test methods must be specified in a SIP because the test method and associated error can affect the implementation and stringency of any SIP regulation. This statement is in direct opposition to the non-replicable, case-by-case methods that will be imposed through the proposed enhanced monitoring program.

RESPONSE: The CE rulemaking does not amend applicable emission standards or reference tests. Thus, the majority of these comments are irrelevant to this rulemaking. See final rule preamble, particularly Section III.C. and III.D., especially III.D.5. See also the responses in section 4 of this document. EPA notes that some commenters have referenced prior EPA statements about the importance of the compliance method in establishing the stringency of an emission limit or standard. See, e.g., 58 FR 61640, 61644 (November 22, 1993) (in which EPA stated that the specification of test methods in a SIP are important because the test method and associated error can affect the stringency of the SIP-specified regulation). As discussed in Section III.A. of the final rule preamble, the CE revisions continue to rely on the established compliance method as the benchmark for measuring compliance with the standard. The use of other evidence to document a violation must take into account the averaging requirements related to the data collected by such method, the pollutant constituents measured by such method (e.g., the definition of particulate matter included in Method 5), and any limitations as to the conditions under which such tests may be conducted. The CE revisions are not intended to undermine the importance of a reproducible test method as part of an applicable rule.

EPA does not believe this rulemaking runs afoul of the Act's division of authority between EPA and the States. EPA does not believe that this rulemaking forces States to establish test methods through permits. This rulemaking does not involve amendment of existing methods in SIPs; rather, it specifies that SIPs must not preclude the use of credible evidence or information for the purpose of submitting compliance certifications or establishing whether or not a person has violated or is in violation of any emission standard. Moreover, the regulatory language specifically retains the existing test methods as the reference point for determining the credibility of the evidence or information. Modifications of SIPs will be sought by EPA through existing statutory procedures. Further, this rulemaking does not make SIP requirements more stringent or

affect averaging times established by SIPs. The stringency issue and the question of averaging times is addressed in the preamble at Section III.D.1.

EPA does not believe that the cases cited are on point. The Donner Hanna decision, to the extent that it may be construed to hold that test methods may only be changed by formal rulemaking, does not also hold that where the test method is not being changed, credible evidence which is relevant to whether the test method would have shown violations may not be used to show violations. To the extent that some may suggest that this decision can be interpreted to also hold the same, which EPA believes is a strained reading of Donner Hanna, then Donner Hanna is inconsistent with sections 113(a) and 113(e). The same is true of the other cases cited that pertain to test methods, PPG Industries v. Costle, U.S. v. Zimmer Paper Products, Inc., and Portland Cement.

Regarding the claim that the aborted subpart D revisions show that compliance method changes must be accomplished by case-specific rulemaking, EPA believes that CE is not a change in the test or compliance method, but is merely another way to show what the compliance method would have shown. For further discussion of the Subpart D issue, see Section 4.1.1.

COMMENTERS:
ALCOA (IV-D-288); American Automobile Manufacturers Association (IV-D-538); American Electronics Association, Clean Air Task Force (IV-D-437); American Foundrymen's Society, Inc. (IV-D-294); American Gas Association (IV-D-265); American Portland Cement Alliance (IV-D-284); Arkla Energy Resources Company (IV-D-343); Armco Steel Company (IV-D-395); ASARCO (IV-D-327); Ash Grove Cement Company (IV-D-311); Baltimore Gas and Electric Company (IV-D-296); Chemical Manufacturers Association (IV-D-301); Cincinnati Gas & Electric Company (IV-D-259); Clean Air Implementation Project (IV-D-242); Coalition for Clean Air Implementation (IV-D-304); Consolidated Natural Gas Company (IV-D-350); Council of Industrial Boiler Owners (IV-D-319); East Ohio Gas Company, The (IV-D-355); Eastman Chemical Company (IV-D-347); ENRON Operations Corp. (IV-D-390); Exxon Chemical Americas (IV-D-339); Exxon Company, USA (IV-D-310); Fertilizer Institute, The (IV-D-251); Goodyear Tire and Rubber Company, The (IV-D-292); KBN Engineering and Applied Sciences, Inc. (IV-D-475); Kennecott Corporation (IV-D-262); Large Public Power Council (IV-D-336); Lubrizol Corporation, The (IV-D-306); Mississippi River Transmission Corp. (IV-D-344); Mobil Oil Corporation (IV-D-285); Monsanto Company (IV-D-273); National Environmental Development Association (IV-D-334); New United Motor Manufacturing, Inc. (IV-D-467); Occidental Chemical Corporation (IV-D-240); Ohio Cast Metals Association (IV-D-324); Ohio Chamber of Commerce (IV-D-370); Ohio Edison (IV-D-266); Ohio Electric Utilities Institute (IV-D-323); Rubber Manufacturers Association (IV-D-331); Shell Oil Company (IV-D-280); Southwestern Public Service Company (IV-D-272); U.S. Steel Group, The (IV-D-340); Union Carbide Corporation (IV-D-293); United States Sugar Corporation (IV-D-382); Utility Air Regulatory Group (IV-D-489); Whirlpool Corporation (IV-D-493)

2.2 Comments in Response to March 21, 1996 Policy Paper

SUMMARY: A majority of industry commenters expressed concern that the Agency has not clearly defined CE, which in turn raises questions about compliance obligations. The commenters argued that the Agency's position on the use of CE illegally deprives sources of reasonable notice of what constitutes compliance by replacing, in a single rulemaking, specific methods of determining compliance with state and federal emission limit regulations promulgated over the past 25 years with undefined and indeterminable methods. In fact, they argued, the use of CE would be unconstitutionally vague and violate due process. It would render completely unclear what a company can consider to be compliance or non-compliance with a standard. (In this context, several industry commenters cite General Electric Co. v. U.S. EPA, 53 F.3d 1324 (D.C. Cir. 1995), relating to fair warning.) As a result, one commenter claimed companies would be forced to comply without bounds or limits.

Because they perceived the definition of CE to be broad and ambiguous, some industry commenters suggested that compliance determinations would become vague and subjective, and that standards would, as a result, be applied inconsistently from state to state and from source to source. As one commenter explained, it is the complete subjectivity of CE that is most repugnant to environmental professionals -- the phrase implies potential acceptance of "proofs" or "evidence" that are not subject to the rigors of scientific protocols. The courts, another commenter explains, have held that companies need objective, quantitative methods of demonstrating compliance and that any standard whose violations may trigger penalties must be supported by specific, objective compliance methods. In Grayned v City of Rockford, 408 U.S. 104 (1972), for example, the court held that a vague law impermissibly delegates basic policy matters to policemen, judges and juries for resolution on an ad hoc, subjective basis. What amounts to a post hoc determination of the definition of a violation, another commenter argues, would erode reasonable predictability for sources striving to comply. Because the concept is vague and can be interpreted in many ways, the commenters asserted that the use of CE would exponentially increase the number of controversies and questions and may invite distracting, time-consuming disputes and inquiries.

Anticipating the possibility that parametric monitoring data could constitute CE, many industry commenters addressed this issue. In short, the industry comments reflected a general consensus that, in order for compliance evidence to be considered credible, it must be traceable to a reference method. In addition, one commenter asserted that since EPA does not and cannot demonstrate that any evidence is equivalent to reference test methods, the rule is scientifically unsupportable. Elaborating on this concept, another commenter explained that parametric relationships with emissions are only reliable for operating ranges over which they were developed. To establish correlation above the standard would require operation above the standard; extrapolation would not be valid for predicting non-compliant operation. If, on the other hand, emission standard violations were ultimately alleged based on an exceedance of an

upper boundary of a parametric relationship which is below the standard, that would be a clear case of causing increased stringency.

The commenters were concerned that, by removing the restrictions on using CE, EPA will encourage regulatory agencies to use control system operating parameters as an indirect indicator of emissions instead of much more accurate reference method test data. Correlations between a single operating parameter and pollutant emissions, some argued, are often weak and imprecise (e.g in the case of fabric filters), and assumptions that correlations between monitored parameter values and the emission limit extending from normal operating ranges to all operating situations are frequently invalid. Furthermore, commenters asserted that process information alone cannot be relied upon because it represents an indirect and unsubstantiated indication of non-compliance -- there are too many operating factors involved to simply say that when a parameter is off-specification that there is necessarily a compliance problem. The use of process data as a surrogate for compliance with emission standards is not always representative and could lead to "false positives," according to these commenters. (For example, commenters noted that courts have ruled that subjective opacity test results are not admissible as evidence of compliance.) In short, another commenter argued, parameter monitoring can establish compliance, but not noncompliance.

Capturing most of the concerns raised with respect to the definition of credible evidence and the use of parametric data, an industry commenter suggested that the decision in International Paper Co. v. Town of Jay, et al., 655 A.2d 998 (Me. 1995)[cited as Town of Jay in the remainder of this document], demonstrates why the use of credible evidence is unreliable, unfair and results in an impermissible shifting of the burden of proof. This case, the commenter argued, underscores the fact that a single operating parameter cannot be labeled as "credible" and form the sole basis for finding a violation of an air emission limit. According to this commenter, air emissions are the result of a complex interplay of various criteria, none of which can be evaluated in a vacuum to form the basis for concluding a violation exists. This litigation also illustrated that it is fundamentally unfair to the source to create a compliance protocol after commencement of a lawsuit.

Some commenters made suggestions in terms of how the Agency could better define CE. One suggested that uncorrelated data should be precluded from CE. For example, opacity data should not be presumptively credible evidence of a violation of a PM limit, since significant technical questions exist concerning the adequacy of opacity-mass correlations. Another commenter felt that operating data from one emissions unit should not be considered as credible evidence for determining emission problems at another -- only emissions unit-specific data should be used. Yet another suggested that the HON represents a good example of how parameter data can be used for enforcement. Alternatively, commenters suggest, the CE revisions should specify an order of preference with respect to types of data and information used for compliance determinations. Another approach suggested would be to distinguish indicator monitoring from directly

enforceable monitoring, trust state and local agencies to know where and when more monitoring is required and make clear that CAM monitoring will not be used as directly enforceable evidence of emission limit violations. A State and local agency association suggested that agencies should be provided the option of determining whether or not to specify from the outset the types of CE that would be considered in determining compliance and recommended that EPA provide guidance about the definition of credible evidence, particularly relating to use of state and federal rules of evidence for defining it. Finally, one commenter suggested that anonymous tips from disgruntled employees or other adverse parties should be deemed not to be credible evidence.

Based on a follow-up meeting with the Agency to clarify the CE revisions, a utility submitted comments which concluded that EPA recognizes the need for clarity and certainty for regulated entities regarding their compliance obligations. The comments pointed to EPA's intention that well-designed CAM plans (plus any reference test method data) should account for most if not all of the CE that could be used in determining compliance or noncompliance, and that those entities that comply with their CAM plans will be the lowest priority for investigation or enforcement by EPA.

The comments with respect to defining CE were not without inconsistency. While many seemed to endorse a position that the rule should carefully and expressly limit evidentiary burdens on sources and limit the universe of what constitutes CE, at least one commenter countered that neither sections 113(a) or (e)(1) of the Act allow EPA to specify by rule what evidence is CE; data are only credible after they have been subjected to the due process considerations afforded by the judicial system, according to this commenter. Yet another commenter suggested that CE should be defined, and that criteria should provided in the rule to guide a court's review.

RESPONSE: See generally Section III.A. of the preamble to the final rule for a response to these issues. With respect to some specific issues raised in these comments, EPA provides the following additional responses.

(1) **Use of Parametric Data**. All of the technical arguments against the credibility of parametric data to prove a violation of an emission limit are available to the party which attempts to defend against the use of such data. Because the final rule does not attempt to create any presumptions or inferences about particular forms of evidence, the party introducing evidence, including test method data, will retain whatever burden of proof is required by law in establishing that the evidence proves that an emission limit was complied with or violated, as applicable. In certain situations, the Act does create presumptions (see, e.g., section 113(e)(2)), in which case the burden of proof will shift as directed by the Act. As noted in the August 2, 1996 draft CAM rule discussion document (see 61 FR 41991, August 13, 1996), excursions from CAM indicator ranges are not considered by the Agency to be presumptively an emission limit violation. Because of the way CAM triggers may be set, emissions may be below the applicable limit even though

CAM parameters are exceeded. Accordingly, such CAM excursions would have to be evaluated on a case-specific basis before one would know whether there has been a violation. In contrast, since the CAM parameters are supposed to provide that operation within those parameters provides a reasonable assurance of compliance with applicable limits over the reasonably anticipated range of operating conditions, staying within a well designed parameter range provides an owner or operator with a strong argument that compliance has been achieved and thus, under the proposed CAM rule, would allow the owner or operator to certify compliance in such circumstances. The Agency notes, as discussed in Section III.A of the preamble to the final rule, that EPA cannot now guarantee that this assumption will always be valid and that compliance with CAM indicator ranges does not provide a formal "shield" against enforcement.

To the extent that arguments against parametric data suggest that EPA is poorly advised to change from a system of compliance that is narrowly focused on data from a specific test to one that allows consideration of a broad range of data , EPA replies that it is a good policy choice to allow the use of credible evidence especially where reference test method data are difficult to obtain. Often, reference test data are expensive and thus infrequently obtained, or as in the case of opacity readings by a trained observer, time consuming for Agency resources, as well as difficult. Take for example, Sierra Club v. Public Service Company, 894 F. Supp. 1455 (D. Colo. 1995), in which the court held that COMS data documented 19,000 violations of the 20% opacity standard in the SIP over a five year period. EPA had to send an inspector a long distance out to the site of this plant on several occasions to get a visual reading and frequently got no indication of violations even though the arguably-more-accurate COMS data recorded tens of thousands of violations without requiring any travel or time. Thus, using COMS to prove violations gives a more complete and accurate picture of compliance and saves Agency resources.

(2) **The IP vs. Town of Jay Decision**. Although this case was raised in the comments to document why the CE revisions should not be promulgated, the facts and judicial decisions in the Town of Jay case highlight the wisdom of going forward with the credible evidence rulemaking. First, the Maine Supreme Court found that the Town of Jay's ordinance, with compliance provisions similar to the provisions in 40 CFR Parts 51, 52, 60 and 61 that are revised in the credible evidence rulemaking, established exclusive test methods for proving a violation of the town's ordinance. Using a "plain meaning" rationale, the court held that the town was bound by the explicit terms of the ordinance. The court went on to state that: "If these methods are too restrictive in practice, the Town can amend its ordinance . . . The Town cannot respond to the deficiencies of its ordinance by rewriting it in the midst of an enforcement proceeding." See p. 10 of Attachment D to IV-D-827. The court did not hold that it would be impossible to write the ordinance to allow for the introduction of other evidence to prove a violation, but only that the ordinance must be narrowly construed. The desire to avoid piecemeal judicial

interpretation -- which is not mandated by the customary rules of evidence or the enforcement authority in section 113 (a) and (e) of the Clean Air Act -- leads to EPA's decision to revise the comparable federal regulations and so provide a clear and consistent set of rules.

The lower court decision in Town of Jay relied on a different legal interpretation to rule against the violations found by the Town agency on the basis of non-test method data. The lower court found that the Town had improperly created an inference or presumption that the non-test method data were sufficient to prove particular violations. See p. 4-7 of Attachment C to IV-D-827. The court went on to hold that, without the inference, the Town had failed to introduce sufficient evidence to prove the violations. Id. at p. 8. The final CE revisions do not include the presumptions of credibility that were included with the proposed rule, and thus the rulemaking satisfies that aspect of the lower court's objection to the Town of Jay's actions.

The lower court decision in Town of Jay did note that "any party that is going to be judged in an enforcement action is entitled to reasonable, advance notice as to the criteria upon which a violation will be judged." Id. at p. 4. By requiring that evidence must be capable of being compared to test method results (see detailed discussion in Section 2.2.1, above), EPA believes that the CE revisions do provide such notice even though the exact types of potential credible evidence in any particular case are not explicitly stated. The Agency believes that case-by-case determinations as to the specific evidence that may be considered are properly left to the judiciary guided by published rules of evidence. The Agency also notes that the lower court in Town of Jay was most concerned about this issue where an inference or presumption was being applied against the source without any prior notice.

COMMENTERS:

Air Control Techniques (IV-D-800); American Petroleum Institute (IV-D-794; IV-D-822); AMP-OH (IV-D-788; IV-D-837; IV-D-838;IV-D-839); Associated Industries of MO (IV-D-793); BHP Copper (IV-D-776); BP Oil (IV-D-811); Chemical Manufacturers Association (IV-D-823); Clean Air Act Services Steering Committee (DOD) (IV-D-804); Clean Air Implementation Project (IV-D-787); Coalition for Clean Air Implementation (IV-D-819); Cyprus Miami Mining (IV-D-791); Dow (IV-D-825); Dupont (IV-D-814); Eastman (IV-D-832); Exxon Chemical Americas (IV-D-795); Fertilizer Institute (IV-D-802); General Electric (IV-D- 818); IL Municipal Electric Agency (IV-D-808); Independence Power & Light (IV-D-798); IN Mineral Aggregates Association (IV-D-797); Integrated Waste Services Association (IV-D-829); International Paper Company (IV-D-827); Judy Kosovich (IV-D-840); Los Angeles Department of Water and Power (IV-D-806); Mobil Corporation (779); Muscatine Power (IV-D-807); National Stone Association (IV-D-828); NEDA CARP (IV-D-781; IV-D-826); NESCAUM (IV-D-803); Northwest Pulp & Paper Association (IV-D-815); OH Aggregates Association (IV-D-774); OH Chamber of Commerce

(IV-D-813); OH Chemical Council & OH Chamber of Commerce (IV-D-778); Pacific Gas Transmission Company (IV-D-812); Precision Metal Forming (IV-D-817); Public Service Company (IV-D-835); SOCMA (IV-D-805); Southwestern Public Service Company (IV-D-810); STAPPA/ALAPCO (IV-D-786); Steel Manufacturers Association & Specialty Steel Industry of North America (IV-D-833).

SECTION 3: CE Revisions Language (Parts 51, 52, 60 and 61)

3.1 Comments in Response to Original EM Proposal

3.1.1 Enhanced Monitoring Data as Presumptively Credible Evidence

SUMMARY: Several commenters said that it is a violation of the Act to make enhanced monitoring results "presumptively credible evidence." Some commenters said that violations must be proven using applicable compliance test methods for a particular standard and that such methods can only be modified through an appropriate notice and comment rulemaking for that particular standard. Other commenters said that the enhanced monitoring proposal and SIP calls will not provide the reasoned decision making required to create presumptively credible evidence. Some commenters said that in all events, non-test method credible evidence can only be used to show the duration of a violation proven using the test method. Based on these positions, some commenters suggested deleting the references in the conforming amendments to parts 51, 52, 60 and 61 which state that enhanced monitoring is presumptively credible data. Lastly, a commenter suggested that the requirement that enhanced monitoring provide presumptively credible evidence be deleted and that compliance be based on industry installing systems consistent with sound engineering practices used by the chemical and process industries for process measurements, and not CEMS.

Some commenters said that EPA cannot create presumptions of credibility for evidence because it would be an improper attempt to dictate rules of evidence; this would be especially true for SIP limits subject to State rules of evidence. A commenter added that Congress did not (and could not) authorize EPA to expand rules of evidence, and section 113(e) stands on its own without the need for regulatory clarification. One commenter proposed clarifying that "presumptively" in §§ 51.212(c)(1)-(2), 52.12(c)(1)-(2), 60.11(h)(2)-(3), and 61.12(f)(2)-(3) means that the presumption is rebuttable, while another stated that data should pass appropriate legal tests before being considered "presumptively credible."

RESPONSE: As discussed in detail in Section II of the preamble to the final rule, EPA has accepted these comments and has not included the lists of presumptively credible evidence that were included in the proposed rule. This change addresses the comments summarized above. The Agency also notes that EPA's decision not to define the precise types of evidence that constitute "credible evidence" is consistent with the comment that section 113(e) stands on its own without the need for regulatory clarification. The CE revisions do not attempt to clarify section 113(e), but rather are aimed at implementing section 113(e), as well as the remainder of section 113, in a manner consistent with congressional intent by removing perceived barriers in EPA's rules.

COMMENTERS:
ASARCO (IV-D-327); Chemical Manufacturers Association (IV-D-301); Clean Air Implementation Project (IV-D-242); Dow Chemical Company (IV-D-260); E.I. DuPont de Nemours and Company (IV-D-329); Exxon Chemical Americas (IV-D-339); Exxon Company, USA (IV-D-310); Fort Howard Corporation (IV-D-233); Monsanto Company (IV-D-273); National Petroleum Refiners Association (IV-D-276); Shell Oil Company (IV-D-280)

SUMMARY: An air pollution control agency noted that proposed PS 101 in Appendix A states that a VOC CEMS can only provide an indication of a relative concentration of mix of VOC in the process stream. Given this statement by EPA, EPA should recognize that a VOC CEMS may be inappropriate as other credible evidence.

RESPONSE: The CE revisions do not establish any presumptions or inferences about the credibility of particular evidence, including data that may be produced by a VOC CEMS that is operated consistent with proposed PS 101. The Agency notes that PS 101 is not included as part of the credible evidence rulemaking and was not included in EPA's draft CAM rulemaking materials. See 61 FR 41991 (August 13, 1996).

COMMENTERS:
Bay Area Air Quality Management District (IV-D-402)

3.1.2 Miscellaneous Issues

SUMMARY: Commenters recommended substituting "part 63 or 64" for "part 63" in the "credible evidence" provisions in §§ 52.12(c), 60.11(h) and 61.12(f).

RESPONSE: The Agency has decided not to include the applicable language from the proposed rule referenced in this comment and therefore the requested change is no longer applicable.

COMMENTERS:
Chemical Manufacturers Association (IV-D-301); Exxon Chemical Americas (IV-D-339); Monsanto Company (IV-D-273)

SUMMARY: A commenter recommended clarifying § 52.12(c) to ensure that use of data for direct compliance pursuant to proposed § 52.12(c)(1)(i) will not be allowed until the SIP is revised to authorize enhanced monitoring data to be used for such purposes. The commenter objected to allowing federal courts to use enhanced monitoring data for compliance determinations before the relevant SIP is revised for purposes of determining violations.

RESPONSE: As stated elsewhere, this rulemaking is intended to clarify that credible evidence may be used in compliance certifications and to prove or disprove violations of emission

standards. It does so by revising relevant EPA regulations and calling for revisions of SIPs that have been interpreted by some as not presently allowing the use of credible evidence for these purposes. EPA's position is that, even prior to today's change in federal regulations, credible evidence could be appropriately used in compliance certifications and enforcement cases regarding both federal emission standards and SIP emission limits. Hence, while SIPs must be revised as necessary to make it clear that credible evidence may be used for compliance certifications and in enforcement cases, there is no need to wait for SIP revisions before using credible evidence for these purposes.

COMMENTERS:
Monsanto Company (IV-D-273)

SECTION 4: Stringency of Underlying Requirements

4.1 Comments in Response to Original EM Proposal

4.1.1 Stringency of Underlying Requirements - Defining Compliance

SUMMARY: Environmental groups and one State agency stated explicitly that enhanced monitoring does not increase the stringency of emission limits because an underlying premise of Clean Air Act regulations is that sources must remain in compliance at all times unless explicitly excused. However, numerous industry commenters argued that the enhanced monitoring rule would impermissibly increase the stringency of underlying regulations by redefining compliance and establishing new compliance methods and obligations. By overriding existing requirements with respect to compliance test methods, the frequency of testing for compliance, the operating conditions under which testing is performed, and compliance averaging periods, enhanced monitoring would redefine "compliance," according to many commenters. Many commenters stated generally that the compliance method is inextricably linked with the emission limit itself and that it is impossible to consider changing the compliance test method without a full evaluation of the impacts any change might have on the emission limit. Commenters cited the holding in Donner Hanna as support for the notion that the method of determining compliance with an emission standard can affect the level of performance with the standard, and thereby alter the standard itself; another commenter cited Wagner Electric Corp. v. Volpe, 466 F.2d 1013 (3d Cir. 1972), and BASF Wyandotte Corp. v. Costle, 598 F.2d 637 (1st Cir. 1979) as support for this position.

Another commenter noted that the proposed rule could increase, for example, the stringency of existing regulations for volatile organic compounds (VOC) under the surface coating protocol for automobiles and light duty trucks. If a permitting authority requires a different reference method for measuring VOC than the one specified in the protocol, a facility that was in compliance with the method specified in the protocol could be out of compliance under the second method. Where the permitting agency increases the frequency of reporting, excursions that would average out under the previous frequency of reporting would be considered violations. Any attempt to change Method 5 of Appendix B of 40 CFR part 60 as the compliance test method for particulate matter was also cited as an example of the effect that changes to a test protocol can have on the stringency of an emission standard. By varying filter temperature (as in Method 5B) or requiring the inclusion of the impinger catch (as some States using Method 5 have specifically elected), particulate matter becomes defined as that which is caught in a filter at 320 degrees F or in an iced impinger. Depending on the dew point of constituents in the gas stream, this can have a substantial effect on the functional definition of particulate matter at a particular source or source category, according to one commenter.

Many commenters argued that the establishment of only periodic compliance test requirements in

existing standards was part of a rational design of the applicable requirement and that the periodic requirement cannot be changed to a continuous method without affecting the stringency of the standard. Commenters claimed that the 1983 proposed revisions to Subpart D (and the associated supporting docket materials) demonstrate the link between the compliance method, the frequency with which the method is conducted, and the stringency of the emission limit. (See related comments on subpart D averaging time issues in section 4.1.2, below.) Others pointed to the opacity requirements in NSPS subpart BB and NESHAP Subpart O (and EPA's background documentation for those standards) to show this relationship. Certain commenters claimed that existing standards are often developed on too limited a database to be demonstrated as achievable for all short term periods and are developed on the basis of statistical assumptions that are not valid if compliance is continuously measured. One industry coalition group provided examples of the limited information on which certain standards have been developed along with statistical demonstrations and arguments to support its argument that modification of compliance protocols may increase the stringency of such standards. Industry commenters also pointed to the use of longer averaging periods with standards having continuous compliance determination methods as indicating that continuous compliance is only required where such compliance determinations are used.

As an example of how monitoring compliance on a continuous basis for standards developed with only limited data can increase stringency, certain commenters cited regulations promulgated by EPA under section 308 of the Clean Water Act, which gave States discretion to establish pH monitoring requirements for inclusion in NPDES permits. States began to include continuous monitoring requirements in the permits, but at the time the pH standards were originally established, it was intended that compliance would be determined through grab and/or composite sampling procedures. Once the continuous monitoring was required, it became clear that the pH standards could not be met 100% of the time, so EPA revised its requirements to provide that compliance determined through continuous monitoring is achieved when standards are met 99% of the time. These commenters stated that the enhanced monitoring rule must authorize the same type of flexibility that was necessary in this situation.

Numerous commenters stated generally that EPA has incorrectly assumed that current definitions of compliance require that sources achieve emission limitations under all operating conditions and for any averaging period. Commenters argued that although the proposed rule would require compliance over a source's entire operating range, many current emission standards, including many NSPS and NESHAP requirements, were not developed with allowance for variable operating conditions, and were intended to be checked only periodically under "representative" conditions.

For instance, certain commenters argued that some percent efficiency standards are tested at maximum capacity. In some instances where a source operates at less than full capacity (and hence has lower mass of emissions) the percent efficiency cannot be achieved. Commenters

stated that it would be inappropriate in such circumstances to find the source in violation when the actual emissions from the source are less than the amount allowed at full capacity. Commenters pointed to certain NO_x standards as raising similar problems.

To further illustrate this point, other commenters discussed emission standards based on concentrations, percentage reductions, performance-based mass standards, and installing specific technologies. These commenters argued that complying with these standards has always been defined as attaining the relevant limitation under the relevant operating conditions and that these standards were not established requiring compliance under all operating conditions.

Other commenters stated generally that an emission limitation that is achievable under one set of assumptions regarding monitoring frequency and the averaging period often will no longer be achievable if the underlying assumptions are changed. For many standards, these commenters argue, compliance has been defined as attainment of the applicable emission limitation at specified operating conditions. Certain commenters also argued that many current applicable standards have established monitoring and compliance procedures that recognize the potential of many types of control devices to experience reduced efficiency over time, and that enhanced monitoring will make such standards more stringent.

RESPONSE: As discussed in response to Section 2.1.1, this rulemaking does not address the proposed enhanced monitoring requirements, however many of the comments mentioning enhanced monitoring are pertinent to the CE rulemaking. EPA agrees that a change in the compliance test can change the standard. However, EPA does not agree that the CE revisions will redefine compliance in any way. These revisions merely allow EPA to use any information to prove that, if a test had been conducted, it would have documented a violation. For example, if EPA attempts to use CE to show violations of the VOC surface coating requirements, the particulate matter requirements, or the other standards mentioned by the commenters, the CE must prove that a violation would have been shown had the reference method been used in similar circumstances.

1. Compliance Obligation -- Frequency of Testing

EPA rejects the argument put forth by some commenters that where a standard contains a test method that is typically performed, at most, periodicially, the compliance obligation is periodic as well. As discussed in detail in Section III.D. of the final rule preamble, EPA finds the corollary argument that testing sources subject to such standards at increased frequencies makes the standard more stringent also to be without merit and unsupportable under the Act.

EPA also rejects the argument presented by one commenter that EPA must now determine whether a standard was intended to require continuous compliance based on the data used to support the standard. This commenter asserted that when EPA had limited data it established a

periodic compliance test and did not expect continuous compliance. Rather, according to this commenter, "such standards provide for performance tests to be conducted relatively infrequently." The commenter analyzed the data used as the basis for one such standard (Subpart PPP of Part 60) and claimed this statistical analysis showed that the standard could not be met continuously and under all conditions. The statistical arguments raised by this commenter constitute an untimely attack on the standard and are not properly at issue in this rulemaking since it is not intended to change the requirements of any previously promulgated standards. Such comments should have been presented at the time EPA took comment on the standard because EPA made clear at that time that it was establishing a standard that could be met under all conditions:

> Based on the Agency's consideration of factors relevant to the level of controlled emissions (e.g., product type, product density) and the results of the emission test program, the Administrator has determined that the proposed emission limit is achievable in all circumstances that can be reasonably foreseen.

49 FR 4590, 4596 (February 7, 1984); accord 50 FR 7694, 7697 (February 25, 1985) (final rule). Further, consistent with this position, EPA did not specify that performance tests under this standard could only be conducted infrequently. If these statistical arguments had been submitted as a comment on that standard, their merit would have been considered in promulgating the standard. The commenter claims that these type of comments were not submitted because EPA employees routinely assured industry that standards did not have to be continually complied with. Such claims, however, do not square with the formal pronouncements of the Agency in rulemaking document after rulemaking document that continuous compliance is required. Examples of EPA's formal statements are collected below, and the following pertinent example from Subpart S is discussed here.

Following the original promulgation of standards for Primary Aluminum Plants under Subpart S, the aluminum industry filed a petition for review based on their assertion that the standard was too stringent and could not be consistently complied with by modern, well-controlled facilities, even though the original standard required only an initial performance test. In response, EPA and the industry conducted a test program at a new aluminum facility that reflected use of best demonstrated technology. Based on the results, EPA agreed that there was inherent variability in emissions that was not reflected in the database used to establish the standards. Based on a statistical analysis of the test data, EPA determined that there was approximately an 8 percent probability of a stack test exceeding the standard. Using different analytical methods, the industry petitioners estimated the probability would range from 2.5 to 10 percent. See "Primary, Aluminum, Background Information: Proposed Amendments," U.S. Environmental Protection Agency, EPA -450/2- 78-025a. August 1978; docket item OAQPS-78-ID-III-B-1. To address the possibility that a test could show a violation because of inherent variability, the Agency promulgated a revised standard that allowed a test to be above the generally applicable standard

by a specified amount if the source could document that it conducted exemplary O&M during the conduct of the test. See 45 FR 44203 (June 30, 1980).

This example documents that where the industry can show that there is a significant probability of a test showing a violation because of inherent variability, EPA is willing to make the necessary adjustments in the standard. Under the commenter's line of reasoning, EPA could have simply responded that testing was to be conducted only infrequently under the original standard and therefore the probability concern was already adequately addressed. This approach clearly was not taken in this example.

The point that the frequency of performance testing can be altered without affecting the stringency of a standard is also made in two examples where EPA has retroactively modified the frequency of required compliance determinations without addressing stringency concerns. In the revisions to Subpart S discussed above, EPA determined that there was evidence that sources may not be conducting proper operation and maintenance and that the rule therefore should be modified to require monthly performance tests. The Agency further stated that it reserved the authority to require even more tests if it believed additional tests to be necessary. See 45 FR 44203 (June 30, 1980). As originally promulgated, the standards did not require testing at any specified frequency. In the preamble to the revisions, EPA stated that the selected frequency of testing was "a judgmental compromise" between testing costs and the possibility of inadequate maintenance. See id. at 44205. Nowhere did EPA suggest that the frequency would impact the stringency of the standards or that the adjustment to the standard to address inherent variability discussed above was necessitated by the increased frequency of tests.

Another example where EPA has retroactively increased compliance test frequency without considering the stringency of the emission limit involves Subpart F. EPA added a requirement to install a COMS for kilns and clinker coolers at all Portland cement plants subject to Subpart F. See 53 FR 50354 (December 14, 1988). For units equipped with certain types of control equipment involving either multiple stacks or a monovent, the COMS requirement is waived and daily Method 9 testing is required. See id. at 50354-55. Because Method 9 is the required compliance test, such data could be used to determine compliance; although not discussed in this preamble, EPA has discussed this point in other standards with periodic Method 9 monitoring requirements. See, e.g., the 1984 Subpart HH amendments, which allow lime manufacturing plants with positive-pressure fabric filters to use daily Method 9 testing in lieu of a continuous opacity monitoring requirement; in the final rule preamble, EPA states that, because Method 9 is the opacity standard test method, the results of the daily tests "may be used to determine compliance with the control device emission standard." 49 FR 18076, 18076-77 (April 26, 1984). Commenters to the Subpart F amendments argued that the COMS and Method 9 requirements were illegal as applied to existing facilities because NSPS cannot be applied retrospectively. EPA disagreed and stated that the authority for the action was EPA's general authority under section 114 to require monitoring and testing to evaluate compliance. The preamble concluded by stating

that the "requirements do not change the standards of performance themselves." 53 FR at 50360.

Even if the commenters were somehow correct that NSPS and similar numerical emission limits were meant to be complied with less than continuously, their conclusions regarding the reasonableness of infrequent reference tests could not be correct. Suppose hypothetically that EPA intended that a source comply with an emission standard only 95% of the time, and the source was so complying. In these circumstances, **any** reference test that showed a violation -- even one conducted only once a year -- could be deemed unfair, arbitrary and capricious because it might have caught the source during a period of "intended" exceedance.

Further, suppose that the source was meeting the standard less than 95% of the time -- for example, 90% of the time, or 60%. Even in the commenters' view, this source would be in violation. However, because the source would still be meeting the standard more than 50% of the time, EPA, the states or the public would have less than a 50% chance of detecting these violations during any particular yearly reference test. Thus, far from ensuring fairness in emission limit compliance and testing, the commenters' scheme would effectively render even infrequent reference tests potentially unfair and illegal, and would allow widespread, undisputed noncompliance to go potentially undiscovered and unremedied. Moreover, such an approach would loosen numerical emission standards adopted pursuant to previous notice and comment rulemaking. EPA rejects this approach and its results.

As another example of anomalous results, in a pending enforcement action, a source conducted only one Method 5 test run on its emissions whereas the reference test called for the average of three such runs. The results of that one test were so much greater that the applicable emission limit that even if the remaining two tests were zero, the source would still not have been in compliance. The source may maintain that emissions violations can not be proven, since three test runs were not conducted. Thus, the source might be able to escape liability by its own failure to complete the proper test, having seen the damaging results of the first run. Such anomalous results will clearly not be permitted when this rulemaking is finalized.

Finally, EPA also rejects the suggestion that continuous compliance is only required where longer term averaging is used in test methods. Averaging emission rates over time is just one of several different methods of assuring that a standard is set at a level that is achievable. Another method is to set the standard at a level higher than that expected during the short term test.

2. Compliance Obligation -- Compliance Under All Circumstances

As a corollary to commenters' claims that performance tests are intended to demonstrate only that compliance with emissions standards can be achieved, they assert that continuous compliance with those standards increases their stringency, because EPA never intended the standards to be met under conditions other than those under which the performance test was conducted. EPA

disagrees, because it is clear that performance tests are intended to represent the ability of a source to comply over the full range of its normal operations.

As discussed in Section III.D., particularly III.D.1. of the final rule preamble, both the Act and its implementing regulations require continuous compliance with emission limits. EPA has previously made its position clear on this point in publicly available guidance: In the strict legal sense, sources are required to meet, without interruption, all applicable emission limitations and other control requirements, unless such limitations specifically provide otherwise. "Definition of 'Continuous Compliance' and Enforcement of O&M Violations," issued by Kathleen M. Bennett, Assistant Administrator for Air, Noise and Radiation, June 21, 1982 (cited as "O&M Enforcement Memorandum").

The NSPS general provisions require that performance tests be conducted "based on representative performance of the affected facility." 40 CFR 60.8(c). The only operating conditions explicitly excluded from representative conditions generally are startup, shutdown, and malfunction. 40 C.F.R. 60.8(c). All other expected operating conditions are representative. See Stone Container Corp. v. EPA, No. 96-3479 (6th Cir. December 16, 1996) (unpublished decision) (rejecting facility's argument that representative conditions means historical average operating conditions). EPA policy statements have also made clear that the term "representative" generally is meant to cover all conditions other than those specifically excused by the general provisions or the applicable standard:

> Performance tests can only be conducted during periods of representative operation of both the affected facility and the emission control system. All conditions except start-up, shutdown and malfunction are considered representative operation.

Memorandum from Don R. Goodwin, Director, Emission Standards and Engineering Division, August 30, 1976 (emphasis added); this memorandum is included in the docket.

Accordingly, circumstances that regularly arise during the course of normal operations, even if they result in higher emissions than exist during ideal operating conditions, are the responsibility of the owner or operator and do not excuse compliance with specified emissions limits. For example, EPA has opined with respect to the NSPS for electric utility generators that soot-blowing periods, which cause higher particulate emissions, do not constitute an upset condition because they occur at regular intervals. Hence, the need to comply during such periods is not excused. See "Restatement of Guidance on Emissions Associated with Soot-Blowing," issued by Kathleen M. Bennett, Assistant Administrator for Air, Noise, and Radiation, May 7, 1982; this guidance is available in the docket.

To take another example, 40 CFR 60.8(a) in the NSPS general provisions states that

demonstration of compliance with emissions limits is not required during a shakedown period prior to conducting an initial performance test. The purpose of the shakedown period is to enable the source owner or operator to identify and eliminate problems that would prevent it from meeting the initial performance test and continuous compliance thereafter:

> This "shake down" period provides a source with a limited time to work out maintenance and operating problems in an effort to establish a normal course of operation which will result in day-to-day compliance with the emission limitation.

Memorandum from Edward Reich, Director, Division of Stationary Source Enforcement, August 30, 1976; this memorandum is available in the docket.

The requirement of continuous compliance under all operating conditions except those that are specifically excluded is demonstrated by various individual NSPS regulations where EPA has established performance tests that are intended to reflect worst-case conditions, such that it is reasonable to require compliance under all operating conditions. For example, in promulgating standards for Phosphate Rock Plants (40 CFR Part 60, subpart NN), EPA responded to comments that proposed particulate emission limits "were too stringent to be achieved on a continuous basis" by revising the standard, because the Agency's evaluation "indicated that the proposed emission limits could not be achieved continuously under all operating conditions which are likely to occur." 47 FR 16582, 16584 (April 16, 1982). EPA instead promulgated standards based on the performance of best demonstrated technology "on the worst case uncontrolled emission levels." 47 FR at 16585. Cf. 57 FR 57047, 57049 (December 2, 1992) (EPA notes a deficiency in a SIP because it fails to require that "[s]tack test which are to be used to verify compliance with emission limits must be conducted under worst-case conditions. . . .")

Likewise, in promulgating standards for Ferroalloy Production Facilities (Subpart Z), EPA responded to comments that the proposed standards would not be "technically feasible at all times" by noting that most of the cited examples related to malfunction conditions, under which compliance was not required. See 41 FR 18498, 18500 (May 4, 1976). EPA provided a special exception for one non-malfunction event, limits on visible emissions when a blowing tap occurs, on the ground that compliance may not be achievable under such conditions. See 40 CFR 60.262(a)(5); 41 FR at 15800. With this exception, EPA concluded that the "standards are achievable for all normal process operations at facilities with well-designed, well-maintained, and properly operated emission collection systems." 41 FR at 18500.

As discussed above, the general rule is that testing can be performed under the full range of representative conditions at a source and that compliance is required except where specifically excused. However, there are some emissions standards containing specified test methods that dictate performance tests only under certain conditions where it is clear from the rule and supporting documentation that compliance with the stated limits is not expected under other

conditions. These limitations on the applicability of test methods reflect limitations on the ability of even well-controlled sources that are properly operated and maintained to comply with stated limits under certain conditions. Where specified test methods for particular standards plainly evidence an intent that the standard itself does not cover certain operational modes that are still within the normal range (as opposed to those that fall within periods of startup, shutdown, and malfunction where the requirement for compliance with stated limits is excluded by rule), compliance with stated limits is simply not required under such operational modes. For example, in promulgating standards for granular triple superphosphate storage facilities (Subpart X), EPA specified that due to the increased difficulty in meeting the standards with only partially filled buildings, performance tests must be performed when the amount of product exceeds 10 percent of the building's capacity and fresh product (as defined in the regulations) is at least 20 percent of the total or, in some cases, 5 days capacity. See 40 CFR 60.244(a); 40 FR 33152, 33153 (August 8, 1975).

One commenter submitted as part of its comments a chart purporting to show higher NOx emission concentrations, in pounds per MMBTU, at low load conditions in a single coal-fired boiler "with LNCFS Level 3 Controls." The controls referred to by the commenter are low Nox burners incorporating separated overfire air. See 60 FR 18751, 18752 (1995) (defining LNCFS 3). While this chart was submitted ostensibly to show that it is impossible to comply with the relevant emission standard under all conditions, EPA does not believe that it demonstrates this point. First, it is inappropriate to rely on data from a single, unidentified source to support a position regarding the ability of a category of sources to meet emission standards. In addition, the chart indicated that hourly data points were charted whereas if these hourly data points were averaged over the appropriate averaging time many of the higher data points may have been reduced. Likewise, there was no indication that excused periods of operation, such as startup, shutdown and malfunction were eliminated from the charted data points. Therefore, it may be that the unnamed source was in complete compliance during the relevant period. Then, too, another recent study of 53 boilers, prepared by US EPA's Acid Rain Division and the Cadmus Group, suggests that there may not be a strong, if any, NOx-load relationship. See Docket A-95-28, Item IV-A-6.

Regarding the cited example of the Clean Water Act, under which the NPDES allowed for 1% deviations when continuous monitoring was required (see 40 CFR 401.17), this example supports EPA's contention that where the Agency intends to allow less than 100% compliance, an appropriate allowance is put in the standard. EPA knows how to allow for periods of exception and has provided for them in some standards. Thus, where no such allowances are specified, this means that continuous compliance is required.

3. Specific Standards

Also, as discussed in section III.D. of the final rule preamble, EPA has reviewed numerous NSPS

and NESHAP examples to document that the standards are intended to be achieved at all times except as may be provided for in excused periods explicitly included in the standards. The following discussion details the findings of that review. The Agency first discusses NSPS Subparts BB and D and NESHAP Subpart O because of the focused comments received on these particular standards. The Agency then discusses additional standards that clarify the nature of a source's continuous compliance obligations.

Subpart BB. Certain commenters used Subpart BB as an example to document that standards are not intended to apply on a continuous basis. A coalition group used as an example the establishment of an excess emissions allowance for opacity limits for recovery furnaces, such that readings above the stated limit would not be considered violations if they did not exceed six percent of the total operating hours for the facility during a quarter. See 40 CFR 60.284(e)(1)(ii). The commenters are incorrect, however, in asserting that the CE revisions will result in excess emissions below the specified six percent allowance being considered violations of the NSPS opacity limit. As discussed in the final rule preamble, particularly sections III.A. and III.D., the CE revisions are not intended to change the stringency of any underlying emission limitations or standards. Implementation of the CE revisions will not result in deletion of the six percent opacity exceedance allowance. Rather, that excess emissions allowance is an integral part of the NSPS and must be taken into account in determining compliance at sources covered by that standard.

The EPA also clarifies today that any other excess emissions allowances approved or promulgated by EPA as part of any applicable requirement must be taken into account in determining compliance at affected sources. In Subpart BB, for example, EPA also promulgated an excess emissions allowance of one percent for total reduced sulfur (TRS) emissions from recovery furnaces. See 40 CFR 60.285(e)(1)(i). This provision must be accounted for in determining continuous compliance with the TRS emission limit. This provision of Subpart BB further reinforces the Agency's position that allowances for exceedance of stated limits are limited to those specified on the face of emission standards. Indeed, in promulgating the TRS excess emissions allowance for recovery furnaces, EPA expressly acted to address "unavoidable normal variability in the operation of a kraft pulp mill." 43 FR 7568, 7571 (February 23, 1978).

Likewise, in the original promulgation of standards in Subpart BB, EPA withdrew a proposed excess TRS emissions allowance for lime kilns, deciding instead to raise the emission limit from 5 ppm to 8 ppm to account for variability in operations. Id. Additionally, in the final preamble to revisions to Subpart BB, EPA made clear that continuous compliance with the standards is expected. EPA discussed the degradation of ESPs and noted that with respect to a nine-year-old ESP one commenter stated that "the data show that, even with maintenance, the ESP is not capable of achieving NSPS consistently." The EPA responded that "It is the Agency's judgment that this unit could consistently achieve the NSPS if the frequency of maintenance were increased." 51 FR 18538, 18541 (May 20, 1986). Also, in discussing the achievability of the standards for smelt dissolving tanks, the Agency discussed the fact that commenters had claimed

that "the ranges in their TRS monitoring data were indicative that the proposed standard cannot be met on a consistent basis" (even though such monitors were not the compliance test method). In response to this concern, EPA revised the existing TRS standards for smelt dissolving tanks from 0.0084 g TRS per kg of black liquor solids to 0.016 g TRS/kg BLS "in order that all facilities using BDT can meet the TRS standard." Id. at 18542. In contrast, EPA declined to revise the standard for lime kilns even though several commenters argued that the existing TRS standard needed to be revised to reflect the results of continuous monitoring data. Based on these concerns, EPA analyzed additional TRS CEM data to consider if the standard needed to be revised. EPA concluded that the "data from these 3 facilities indicate that the NSPS can be achieved when [best demonstrated technology (BDT)] is implemented." Id. at 18543. The Agency noted further that, although "industry continues to believe it is possible" that periods of excess emissions could occur when employing BDT, "the Agency has not received any data which would indicate that such is the case." Id. These actions rebut industry claims that EPA did not expect compliance with stated emission limits at all times, except as may be provided on the face of the regulations. Furthermore, these actions demonstrate that if EPA accepts that a certain standard cannot be achieved "consistently", it will adjust that standard accordingly.

The Agency notes that the Subpart BB preamble and background documents discuss that excess emissions are not violations because compliance is determined only by performance tests. The CE revisions will modify these prior Agency statements so that excess emissions may be considered violations where those excess emissions can be compared to the results that would be provided if a performance test were conducted during the same relevant time period. As discussed in Section III.D.5. of the final rule preamble, EPA believes that this modification in its prior statements and policies in this regard is warranted and permissible under the Act.

Subpart D.

a. Proposed Amendment of Subpart D

In support of their argument that the CE revisions will increase the stringency of underlying standards, electric utility industry commenters point to a 1983 proposal by EPA, which was never finalized, to revise Subpart D by requiring use of CEMS or fuel sampling and analysis instead of stack tests to determine compliance with SO_2 emission limits, and to establish an averaging time consisting of a 30-day rolling average. See 48 FR 48960 (October 21, 1983). These commenters claim that this proposal would have changed the nature of the compliance obligation from an obligation to comply only when infrequent stack tests were performed to a continuous compliance obligation. (The utility commenters also point to the NO_x and particulate matter standards in Subpart D as not requiring continuous compliance.) They argue that the proposal supports this notion, citing a statement in the EPA proposal that a 30-day averaging time would not make the existing Subpart D more stringent. See 48 FR at 48961. Hence, they argue, the CE revisions will render Subpart D more stringent by allowing continuous determinations of compliance in a

manner consistent with the performance test specified in Subpart D, which provides for the averaging of 3 one-hour test runs, or a 3-hour average.

The principal stated reason for EPA's proposal to adopt a 30-day rolling average was to respond to concerns that short-term variability in fuel sulfur content and control device performance -- and hence, in emissions -- had not been well understood in 1971 when the standard was adopted and was not appropriately addressed by a 3-hour compliance test. The proposed 30-day average would enable a larger percentage of the nation's coal supply to be used as "compliance coal" to meet the standards, and also would reduce the effects of coal sulfur variability on those sources utilizing flue gas desulfurization (FGD) control technology to meet the standards. See Id. The EPA also stated that the proposed revisions would make Subpart D consistent with what it characterized as the intent and anticipated effect at the time of original promulgation regarding available coal supplies, and "does not make it a more stringent regulation with which to comply." Id.

The EPA disagrees that the CE revisions will render Subpart D more stringent. Rather, the utility industry commenters have misconstrued the meaning and impact of Subpart D and EPA's 1983 proposed revisions in several respects. First, Subpart D has always required continuous compliance and the 1983 proposal did not imply anything to the contrary. Second, while the commenters are correct that EPA noted that adopting a 30-day averaging time would affect the stringency of the standard, that effect on stringency was related to the change in averaging time, itself, and not to any change in the continuous nature of the compliance obligation. In fact, most of the discussion of stringency in the 1983 proposal related to concerns with the stringency of Subpart D as written and supports EPA's position that continuous compliance is required under Subpart D. These points are addressed below.

Utility industry commenters wrongly assert that continuous compliance with Subpart D is not already required. Consistent with the balance of the NSPS program and with emission limitations under the Clean Air Act generally, EPA acknowledged as to Subpart D that continuous compliance was necessary in the 1983 Subpart D proposal. The EPA proposed to require continuous monitoring for compliance determination purposes as part of the 1983 proposal because "it will better ensure that sources continuously comply with the standard." 48 FR at 48961 (emphasis added). The Agency's attorneys recommended that the quoted preamble language be used in place of earlier draft language, because the earlier draft "incorrectly implies that sources subject to NSPS's that do not require continuous compliance testing are not required to comply continuously." See Memorandum from Earl Salo, Attorney, Office of General Counsel, to Bob Ajax, Chief, Standards Development Branch (March 23, 1983) ("Salo Memorandum") attached to Memorandum from William F. Pedersen, Jr., Acting Associate General Counsel, to Courtney M. Price, Acting Associate Administrator and General Counsel

(March 31, 1983) ("Pedersen Memorandum"); these memoranda are included in the docket.[1]

EPA's discussion of the stringency of its proposal is in no way inconsistent with this continuous compliance regime. In fact, the opposite is true. EPA's recognition that the proposed change in averaging time would make Subpart D less stringent is necessarily based on the premise that continuous compliance was required under the existing standard. If subpart D, as promulgated, did not require continuous compliance, then changing to a continuous compliance regime might very well have had the effect of making the standard more stringent. However, EPA was careful to make clear that the proposed changes to Subpart D did not make it more stringent, rather, EPA believed that the original standard was too stringent because EPA, in establishing that standard, had failed to consider emission variability. Thus, the proposed changes to subpart D, while they arguably may have conformed the standard to the original intent of the existing standard, actually made the standard, itself, more lenient. The reason the proposed standard was more lenient was because the averaging time was being extended while the mass emission rate was being held constant. Over longer averaging periods it is more likely that a test will monitor the full range of emission variability rather than possibly capture only peak emissions.

Again, EPA's attorneys were clear in describing the intent and effect of the proposed change:

> The effect of the change from a 3-hour averaging time to a 30-day averaging time is to make the standard more lenient, since it reduces the need to preserve a margin of safety against short-term peaks in SO_2 emissions caused by variations in the sulfur content of coal. The preamble states that this change is justified because in 1971 EPA did not understand sulfur variability in coal and set a standard that was more restrictive than intended. EPA meant to set a standard that about a quarter of the coal in the country would be clean enough to meet without scrubbing, but, in fact, set a standard that only five to ten percent of the coal can meet without scrubbing. The amendment, then, is needed to bring us back to the original intent.

Pedersen Memorandum. Thus, although it may have been EPA's underlying intent in 1971 to provide for a higher percentage of compliance coal, that intent obviously was not reflected in the

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[1]Additionally, in promulgating requirements pertaining to continuous monitoring of Part 60 sources, EPA discussed the usefulness of continuous monitoring for achieving the nitrogen oxides standards under Subpart D. In deciding that monitoring was not needed for units that demonstrate a large margin of compliance, EPA stated, "The low emission level is achieved through the design of the furnace and does not require specific operating procedures or maintenance on a continuous basis to keep the nitrogen oxides emissions below the applicable standard." (40 FR 46250, 46253 (October 6, 1975) (emphasis added) This discussion further supports EPA's position that EPA intended for the standard of performance to be met on a continuous basis.

promulgated standards. Industry commenters are mistaken, therefore, in criticizing the CE revisions as increasing the stringency of Subpart D. Their complaint is properly addressed to the terms and provisions of that NSPS as originally promulgated, or to the never-completed 1983 proposed changes, that would have relaxed Subpart D, and is not at issue in this rulemaking.

b. Comparison of Subparts D and Da

Utility industry commenters also assert that a comparison of Subpart D and the 1979 Subpart Da NSPS applicable to new utility units constructed after 1978 demonstrates, through consideration of anthracite-burning units, that interpreting Subpart D as requiring short-term compliance makes it more stringent. The essence of this argument is that in the case of units burning anthracite coal, Subpart Da did not alter the 1.2 lb/mmBtu SO_2 emission standard applicable to all coals under Subpart D, but did add a 30-day averaging time and required continuous monitoring. Hence, they argue, interpreting Subpart D as requiring continuous, short-term compliance renders Subpart Da less stringent than Subpart D due to coal sulfur variability, when EPA must have intended Subpart Da to be more stringent, or at least as stringent, as the earlier Subpart D standard.

Once again, EPA disagrees. The percent reduction requirement in Subpart Da was the primary emphasis in the Subpart Da rulemaking and, as explained below, that is the regulatory requirement that has the most impact on the stringency of the 1979 Subpart Da standards, taken as a whole. The Agency recognized that the exemption provided for anthracite-fired units would mean that such units would be subject to less stringent regulation than other Subpart Da units, but that the approach was justified because of the potential environmental benefits associated with encouraging the use of anthracite (particularly mine reclamation). See 44 FR 33580, 33590 (June 11, 1979). Therefore, it would be inappropriate to analyze anthracite-fired units as part of a comparison of the relative overall stringency of Subpart D versus Subpart Da. Further, the fact that anthracite-fired units are exempt from the percent reduction requirement is of little or no practical significance. Few, if any, utility units subject to any NSPS burn anthracite coal, which is little used today. Based on a review of the 1994 edition of the "Environmental Directory of US Powerplants," a publication prepared by the Edison Electric Institute, it appears that only six utility units in the U.S. (all located in Pennsylvania) use anthracite fuel (the units are Holtwood 17, Sunbury 1-4, and Hunlock 3) and none of the six are NSPS units. (See the docket for a copy of the relevant portions of this publication.) Therefore, the emission standard for Subpart Da units burning anthracite coal does not support the assertion that continuous, short-term compliance with emission limits is generally not required.

Regarding the percentage reduction requirement in Subpart Da, it is clear that the impact of that provision on SO2 emissions from bituminous coal is by far the most important difference in the effective stringency of the SO2 emission limits as between Subparts D and Da. Under Subpart Da, covered sources must reduce sulfur dioxide emissions by 70 to 90 percent, depending on the sulfur content of the coal being fired, in addition to complying with a 1.2 lb/mmbtu nominal

emission rate. In practice, given the sulfur content of coals actually fired, the percentage reduction requirement, which necessitates the use of flue gas desulfurization equipment ("FGD"), or "scrubbers," greatly outweighs any impact of a longer averaging time in assessing the overall stringency of Subpart Da as compared to Subpart D.

The effect of the percentage reduction requirement in Subpart Da on coals of various sulfur contents is described in an article by Walter H. Stevenson, EPA/OAQPS, in Power (May 1980), p. 130 (a copy of this article is included in the docket). As explained in that article, the actual or final emission rate of a Subpart Da source is a function of the sulfur content of the coal being fired and the applicable percentage reduction requirement. Due to the percentage reduction requirement, any coal with a sulfur content of 12 lb/mmbtu or less results in a final emissions rate that is below the Subpart Da limit of 1.2 lb/mmbtu. For example, when firing coal with a potential emission rate of 8 lb/mmbtu, the required 90% reduction would result in an actual emission rate of 0.8 lb/mmbtu, while coal with a potential emission rate of 6 lb/mmbtu would result in controlled SO2 emissions to the atmosphere of 0.6 lb/mmbtu. See Power (May 1980), p. 130.

Most of the coal that is actually fired by utility boilers, including the coal fired by boilers subject to Supbart Da and therefore equipped with scrubbers, has a sulfur content that is sufficiently low that the actual rate of SO2 emissions to the atmosphere is well below the nominal Subpart Da maximum emission rate of 1.2 lb/mmbtu. For example, the average sulfur content of bituminous coal ranges from a low of 0.3 percent for lower-sulfur western coal to a high of 4.5 percent for the higher-sulfur eastern coal. See Cost and Quality of Fuels for Electric Utility Plants 1990 (U.S. Department of Energy, Energy Information Administration) (August 1991), p. 213 (excerpts from this publication are included in the docket). Sulfur content expressed on a lb/mmbtu basis is roughly twice the percentage of sulfur in coal. See the potential SO2 emissions conversion equation included in the docket. Thus, the low average of western coal is roughly 0.6 lb/mmbtu before scrubbing and the high average of eastern coal is roughly 9 lb/mmbtu before scrubbing.

Of all coal-fired boilers equipped with FGD, very few are even designed to burn the highest-sulfur coals. Thus, as of December 1989, according to the DOE data, the vast majority of FGD-equipped units had a maximum Design Coal Sulfur below 4.5 percent. See Cost and Quality of Fuels for Electric Utility Plants 1990, p. 214-218. (Among the reasons for this is that the cost of FGD increases significantly for higher-sulfur coals due to the higher costs attributable to the need for greater amounts of lime to meet emissions reduction goals and associated higher operation and maintenance costs.) Moreover, in actual practice, most scrubbed units use coals with a sulfur content much lower than the maximum Design Coal Sulfur. For example, according to the DOE data for 1990, the Colorado-Ute Electric Assn. Craig units with a maximum Design Coal Sulfur as high as 9.0 percent actually fired coal with an average sulfur content of 0.37 percent. See Cost and Quality of Fuels for Electric Utility Plants 1990, p. 78. Likewise, the

Columbus Southern Power Co. Conesville units with a maximum Design Coal Sulfur of 7.9 percent actually fired coal with an average sulfur content of 3.13 percent. See Id., p. 214. Consequently, actual emissions to the atmosphere following removal of 70 to 90 percent of the sulfur from these coals through use of FGD are well below the Subpart Da nominal emission rate of 1.2 lb/mmbtu. Using a conservative assumption of 10,000 BTU per pound of coal, the final emission rates for 1990 would be roughly 0.22 lb/mmbtu for Craig assuming the 70 percent removal required under Supbart Da, while the final emission rate would be roughly 0.64 lb/mmbtu for Conesville assuming the stated 89.7 percent reduction reflected in the DOE data, see id. (Note that while actual applicability of Subpart Da to these example units is not relevant to the points illustrated, based on the Initial Start Up Date of FGD System data from DOE, it appears that Conesville is not subject to Subpart Da, and thus is not required to meet the 90 percent reduction requirement that would be applicable to its higher-sulfur coal. See id. The DOE start-up data suggests that Craig is subject to Subpart Da, and thus is required to meet the 70 percent reduction requirement applicable under Subpart Da to its low-sulfur coal. Note also that the DOE data regarding Designed SO2 Removal (Percent Efficiency) reflects that Craig's designed removal efficiency is 85 percent, which would result in a final emission rate of roughly 0.11 lb/mmbtu for 1990.)

As is apparent from this assessment, given the practical limits on sulfur content of coals actually burned, the percentage reduction requirements of Subpart Da result in final emissions rates that in most cases are well below the nominal maximum emission rate of 1.2 lb/mmbtu in that standard. Since units subject to Subpart D need only meet the 1.2 lb/mmbtu rate, in any comparison of the relative stringency of Subpart D versus Subpart Da it is clear that the effect of the percentage reduction requirement in Subpart Da far outweighs any countervailing effect of the longer averaging time allowed under Subpart Da as compared to Subpart D.

The commenters also point to the NO_x standards for lignite-fired units as an example which shows that interpreting Subpart D as requiring short-term continuous compliance renders Subpart D more stringent than Subpart Da. The NO_x standards for lignite-fired units were proposed on December 22, 1976 (41 FR 55792) and promulgated on March 7, 1978 (43 FR 9276). The Subpart Da standards were proposed shortly thereafter on September 19, 1978 (43 FR 42154). In proposing Subpart Da, EPA noted that no new data had been gathered for lignite-fired units and thus the proposed Da limits incorporated the Subpart D limits "without change" (43 FR at 42156). The Subpart Da proposal used a 24-hour averaging period (see 44 FR at 33587) In the final rule, the averaging period was lengthened to a 30-day rolling average basis. Other than the averaging period associated with the different compliance methods, the NOx limits in Subpart D and Da are identical for lignite-fired units.

This example addresses an arguably anomalous result in comparing the relative stringency of Subparts D and Da as applied to a small subset of the overall affected population. Based on the Environmental Directory of US Powerplants, cited above, 41 lignite-fired utility units use lignite-

based coal (with another five units planned). The Subpart D requirements will apply to any of these units which commenced construction or were modified after December 23, 1976 (the proposal date for the Subpart D lignite NOx limits) and before September 19, 1978 (the date on which the Subpart Da limits became applicable). Although the environmental directory cited above does not provide this information, the directory indicates that 23 units commenced operation beginning in 1977. Of those 23 units, there may be some for which construction began during the relevant period and that are subject to subpart D, but it is not clear whether any units fall in this window and the commenter identified none.

Based on the preamble discussion under Subpart Da, the NOx standard for lignite-fired units was not a controversial issue in that rulemaking. The averaging-time issue was debated based on data not involving lignite-fired units. See 44 F.R. at 33587 ("no new information on NOx emission rates from lignite combustion has become available); id. at 33601. (EPA extends averaging time based on data from boilers burning subbituminous and bituminous coal). Thus, the Da standard, including the averaging time, for NOx for lignite-fired units appears to have been driven by the standards in Da for other fuels. As such, EPA appears to have failed to consider whether the effect of including a longer averaging time under Subpart Da for lignite-fired units rendered the new standard for lignite-fired units less stringent than the Subpart D standard for the same units. The commenter reads great significance into EPA's failure to address this issue concerning a very minor part of the standard, concluding that therefore EPA could not have meant the Subpart D standard for lignite-fired boilers to have been complied with continuously. EPA believes that greater significance should be attached to its preamble discussions promulgating the Subpart D lignite NOx standard where EPA focused expressly on the issue as to whether certain types of boiler units could "consistently meet" the NOx standard. 43 FR 9276 (March 7, 1978); 41 FR 55792, 55793 (December 22, 1976).

Moreover, one cannot compare the effective stringency of Subparts D and Da in the manner suggested by the utilities, because there are other complicating factors that must be considered. For example, while for the most part the SO_2 provisions of Subpart D require determinations of compliance on a 3-hour basis, they are subject to the general exemption from compliance for upset conditions during periods of startup, shutdown, and malfunction. See 40 CFR 60.8(c). Subpart Da also allows exceptions during periods of startup and shutdown. However, Subpart Da does not excuse compliance during malfunction periods and instead excuses compliance during emergencies, but only if certain procedures are followed. See 40 CFR 60.46a(c) & (g). The net effect of the deletion/modification of the upset condition exemption and the addition of the 30 day averaging provision on overall stringency is uncertain, and in any event, seems far outweighed by the effect of the percentage reduction requirement. Finally, it is not clear that EPA intended Subpart Da to be at least as stringent in all respects as Subpart D. As EPA's 1983 proposal demonstrates, the Agency had ongoing concerns regarding the stringency of Subpart D.

c. Inconsistent Position of the Commenters

EPA notes that certain of the commenters on this issue have previously recognized in the context of the Subpart Da rulemaking that continuous compliance is required even if continuous compliance determinations are not. In a legal challenge to the Subpart Da rulemaking, some members of the utility industry challenged the particulate matter limit under Subpart Da because "the data reflect only short term performance while the standard requires long term continuous compliance." Sierra Club v. Costle, 657 F.2d 298, 377 (D.C. Cir. 1981) The court rejected this challenge because the data showed that certain sources had "consistently complied with the standard." Id. at 382. Unlike the SO_2 standard in subpart Da, however, the particulate standard contains a non-continuous, or "snapshot," stack test method. Having challenged a standard with a non-continuous compliance method on the ground that the standard could not be achieved continuously, such commenters are in a poor position to contend that standards containing such methods do not require continuous compliance .

In comments on the original enhanced monitoring proposal, a utility organization stated that, in the context of the Subpart Da rulemaking, the organization had decided not to challenge the explicit requirement in Subpart Da that the particulate matter standard applies at all times (except startup, shutdown, or malfunction) (see 40 CFR a(c)), even though compliance is determined only through a stack test conducted initially and then when subsequently requested by a regulatory agency. The stated rationale for not challenging the standard was EPA's statement that it had tested under worst-case conditions. In addition, the utility association commented that the obligation to comply at all times meant "i.e., during each averaging period equal to the length of time needed to do a Method 5 test." See docket item IV-D-489, p. 48. The commenter then went on to argue that, if EPA wanted to develop a new continuous compliance method for this standard, EPA would have to document the equivalency of the new method to Method 5 and would have to reassess the achievability of the standard based on the new data from the new method.

In fact, the obligation to comply with the particulate matter standard was challenged by some in the affected industry, as described in the Sierra Club opinion text quoted above. However, EPA acknowledges the utility association's recognition that a standard can apply continuously (i.e., for each reference method averaging period) even if the standard is not tested on a continuous basis. Although the comment suggests that the Subpart Da standard was somehow unusual in that EPA had stated that it had based the standard on worst-case testing, EPA generally attempts to base the standards on this type of information to assure the achievability of standards by well-maintained and operated sources under those operating conditions that can reasonably be expected to occur. In addition, EPA is willing to reconsider the achievability of a particular standard based on new data, even where the new data may not be formal compliance test method data (see, for example, the Subpart BB discussion, above). Finally, the Agency notes that the CE revisions do not attempt to establish a new continuous compliance determination method for any

standard. Rather, the revisions merely allow an enforcing agency or other party to use any available information to document that if the required compliance test had been conducted, it would have shown that a source was in compliance or violation of an applicable standard. The degree of equivalency or comparability between the test method and the other information will depend on the circumstances of the particular event, such as the margin of compliance or the severity of the violation. Thus EPA does not believe that exact "equivalency" is a necessary prerequisite to the use of credible evidence in all cases. See further discussion in the preamble to the final rule, particularly Section III.A.

d. Appendix F

One commenter has argued that EPA, in promulgating Appendix F to Part 60, confirmed that the proposed amendments to Subpart D were intended to convert Subpart D from a standard requiring periodic compliance to one requiring continuous compliance. The commenter quotes the following excerpt from the preamble to the proposed rule: "Potentially, Subpart D (fossil-fuel-fired steam generators for which construction is commenced after August 17, 1971) may be revised to require compliance with emission standards on a continuous basis. If Subpart D is revised to require continuous compliance . . . ." 49 FR 9676, 9677 (March 14, 1984).

When this statement is viewed in context, it becomes apparent that EPA was using the term "continuous compliance" as a shorthand for the phrase "continuous compliance determinations." In full, that paragraph states:

> Potentially, Subpart D (fossil-fuel-fired steam generators for which construction is commenced after August 17, 1971) may be revised to require compliance with emission standards on a continuous basis. If Subpart D is revised to require continuous compliance, it is assumed that the estimated 100 coal-fired steam generators equipped with flue gas desulfurization (FGD) will use CEMS for continuous compliance. It is further estimated that 100 of the 200 coal-fired steam generators burning compliance coal will select CEMS with the other 100 units choosing fuel sampling or Method 6B for continuous compliance.

Id. Clearly, CEMS, fuel sampling, and Method 6B are not "used for continuous compliance." They are not control equipment. Rather, they are tests used for continuous compliance determinations. See 48 FR 48960, 48962 (October 21, 1983) (Subpart D proposal discussing these procedures as "alternative test methods"). Thus, the best reading of this paragraph is that all references to "continuous compliance" were in fact references to "continuous compliance determinations."

Subpart O (Part 61). Commenters also pointed to particular discussions in various materials related to Subpart O of Part 61 to argue that the use of credible evidence would increase the

stringency of the underlying requirements. One of the issues was the use of a site-specific reference opacity level used to indicate whether changes in control performance may result in the source no longer achieving the particulate matter emission limit. EPA does not dispute that in that rulemaking EPA indicated that the reference opacity value would not constitute a separately enforceable standard and that the reference opacity level would not be used directly to determine compliance with the particulate matter limit. As discussed in the final rule preamble, particularly Section III.D.4, the Agency believes that this rulemaking promulgating the CE revisions is an appropriate rulemaking procedure to change prior statements such as these in a limited manner, i.e., that any data which can document that a reference test would show a violation can be used to document that a violation has in fact occurred.

In fact, several other aspects of the Subpart O rulemaking support this limited change in the extent to which non-reference method data may be used to determine compliance. First, the background documents make clear that sources are required to meet the Subpart O particulate matter limit on a continuous basis. For instance, the Agency stated in the Background Information Document (BID) (see Inorganic Arsenic Emissions from Primary Copper Smelters and Arsenic Plants - Background Information for Promulgated Standards, EPA-450/3-83-010b, May 1986; docket item A-80-40-V-B-1) for the final Subpart O standards that:

> In selecting a regulatory emission limit, the Agency must make a judgement concerning the level of emission reduction that control devices can meet continuously at the variety of facilities and under the different operating conditions to be found throughout a particular industry . . . [T]he emission limit is selected so that fluctuations in the direction of increasing emissions will seldom if ever cause the limit to be exceeded. As a result, a state-of-the-art control device operated properly would be expected to operate much of the time at a somewhat better level than the level required in the regulation.
>
> The EPA believes that the selected emission limit is stringent enough so that the best control devices, properly operated and maintained, are needed to achieve the limit on a continuous basis. [BID, I-7-4]

Similarly, the BID documents that, contrary to the assertions of commenters on the CE revisions, the amount of data used to develop a standard does not limit the standard to one that only applies periodically. Certain commenters on the proposed Subpart O standards argued that the limit was "overly stringent and has not been shown by EPA to be achievable on a continuous basis. The proposed emission limit is based on three sample runs on the converter building house at the ASARCO-El Paso smelter." [BID, I-7-1] In response, EPA stated that it did not agree that the proposed limit "is overly stringent as to be unachievable on a continuous basis." Id. The Agency continued by stating that:

> The level at which an emission standard should be set, given a particular body of test data, is a matter of judgement. Some argue that the best observed control level should be selected as a standard to be imposed on all control systems, while others argue for the lowest control level or some intermediate level. The EPA selects an emission limit based on the amount and quality of available data, and on the Agency's judgement concerning the capabilities of similar control technologies across a range of similar applications. In this case, the test run indicating the highest emission was selected to allow a reasonable margin for differences among facilities and control devices, and for variations in sampling procedures and analytical methods.

Other standards. In response to industry comments regarding Subparts BB and D, and Subpart O of Part 61, EPA reviewed a sample of other NSPS. Based on this review, EPA has identified other examples, including illustrations of regulatory adjustments, allowances, and excused periods, which further support EPA's position that, in general, continuous compliance is required. These examples are discussed below to provide guidance concerning where and how particular standards deviate from the general rule that compliance with stated limits is required at all times. The EPA believes that this discussion will be helpful in outlining how the CE revisions may be used in the context of these standards as well as other standards that may contain similar exceptions.

Subpart I. In the preambles to the proposal and promulgation of Subpart I, Standards of Performance for Asphalt Concrete Plants, EPA made clear that sources were expected to comply with standards on a "routine" or "consistent", i.e. continuous, basis. In the preamble to the proposal for this subpart, EPA addressed industry's concern that the allowable emission rate could not be "achieved routinely." In response to this concern, EPA stated that the emission levels could be achieved at reasonable cost. 38 FR 15406 (June 11, 1973). Similarly, in the preamble to the final rule, EPA addressed comments from industry that "the proposed concentration standard of 0.031 gr/dscf cannot be attained either consistently or at all with currently available equipment..." EPA's response to this was to revise the standard to 0.04 gr/dscf, a standard EPA considered to be "achievable using the best system of emission reduction." 39 FR at 9308, 9310 (March 8, 1974).

Subpart J. Subpart J provides an example of how EPA responded to the problems of limited test and performance data and inherent variability in the operation -- and emissions -- of affected sources by promulgating emission limits that were sufficiently high to account for these problems. In this example, EPA provided an adequate margin of safety above the data points in the test runs. In promulgating the NSPS for petroleum refinery Claus sulfur recovery plants (40 CFR part 60, Subpart J), EPA stated:

> the numerical emission limits in the standards contain an adequate safety margin to

> allow for increased emissions due to Claus sulfur recovery plant fluctuations.

43 FR 10866, 10867 (March 15, 1978).

Similarly, in promulgating a revision of the opacity standard in the Subpart J NSPS requirements for petroleum refinery fluid catalytic cracking unit catalyst regenerators, EPA addressed the problem of expected deterioration of the emissions performance of fluid catalytic cracking units by setting standards that accounted for this phenomenon:

> Petroleum refinery fluid catalytic cracking units operate continuously for periods of two years or more; and over such long periods, mass and opacity emissions gradually increase. For this reason, the mass and opacity standards were set on the basis of levels achievable at the end of the run.

42 FR 32426 (June 24, 1977).

Subpart N. In the preamble to the proposal for Subpart N, Iron and Steel Plants, EPA discussed the utility of opacity standards in helping to meet the objectives of section 111. The preamble noted that "Section 111(e) of the Act requires that new sources continue to be in compliance with the standards throughout their operational life," and also stated that the proposed opacity "standards would ensure compliance of new BOPFs with the concentration standard throughout their operational life." 42 FR 12130, 12130-31 (March 2, 1977), Subpart N.

Subpart P. Another example of the manner in which EPA addressed emissions variability is provided by 40 CFR part 60, Subpart P, which includes standards for primary copper smelters. Kennecott Copper Corporation objected to the originally promulgated standards on the basis that the standards failed to provide for startup, shutdown and malfunction conditions, and because the "standards of performance prescribe averaging times too short to accommodate the normal fluctuations in sulfur dioxide emissions inherent in smelting operations." See 42 FR 57125 (November 1, 1977). In addressing revisions to the standards, EPA responded to the first issue by explaining that the provisions of 40 CFR 60.8(c) exempt sources from having to comply with numerical limits during startup, shutdown and malfunction conditions.

With respect to the averaging time issue, EPA stated that the averaging time for the Subpart P SO_2 standard is 18 hours (three 6-hour test runs) and that the data supporting the standard showed only a remote possibility that emission variability could result in failure of a test (a 0.15% possibility). However, the excess emissions reporting requirement under the standard uses a 6-hour period. For this time period, EPA added a 1.5% excess emission allowance per reporting period based on the data collected in support of the standard. Excess emissions in that amount would not indicate a failure to comply with the 40 CFR 60.11(d) general duty to properly operate and maintain, provided the owner or operator could demonstrate proper operation and

maintenance in any such periods. Id.

Subpart S. As discussed in greater detail above, EPA revised 40 CFR part 60, Subpart S, Standards of Performance for Primary Aluminum Reduction Plants, to address industry concerns that results from test data at a well-controlled plant indicated that even with proper operation there is some chance that a performance test would show an exceedance of the standard for fluorides. The Agency responded by providing that excursions above the standard will be considered in compliance if the owner or operator demonstrates the use of exemplary operation and maintenance procedures and proper control equipment, and by providing a new, somewhat higher standard that must be adhered to "at all times." 40 CFR 60.192(a)(2); 45 FR 44202, 44203 (June 30, 1980). As is the case with Subpart BB, the use of CE must take into account this excursion provision.

Subparts V, W and X. In the preamble to the proposed rule for Subpart V, Diammonium Phosphate Plants, Subpart W, Triple Superphosphate Plants, and Subpart X, Granular Triple Superphosphate Plants, the EPA proposed visible emission standards as an indicator of the compliance status of the source with respect to fluoride emissions. The Agency discussed a recommendation by the Department of Commerce that opacity limits only be used as a rebuttable presumption of a violation of the mass emissions standard, and that the source could rebut such a presumption with the use of a performance test conducted after the violation. EPA rejected this approach, stating "a performance test conducted after a source was observed to be in violation of the opacity standard would not in EPA's opinion necessarily resolve the question whether, at the time of the observed violation, the source was meeting the concentration standard." 39 FR 37602, 37603 (October 22, 1974). EPA further explained that a non-complying source could bring itself into compliance before the performance test is conducted Id. This discussion makes clear that a source can be non-complying, or in violation of the standards, when a performance test is not being conducted, and that therefore, the standards, both opacity and mass emissions, must be complied with even when a performance test is not being conducted, i.e., at all times.

Subpart Z. In the preamble to the proposal for Subpart Z, Standards of Performance for Ferroalloy Production Facilities, EPA made clear that a source could be in violation of the applicable concentration standard during a time when a performance test was not being conducted. EPA states, "a performance test conducted after a source was observed to be in violation of the opacity standard would not in EPA's opinion necessarily resolve the question whether, at the time of the observed violation, the source was meeting the concentration standard." 39 FR 37470, 37471 (October 21, 1974). This supports EPA's position that the standards apply at all times, not only during performance tests. Similarly, in the preamble to the final rule, EPA addressed industry concerns that the standards are "not technically feasible at all times." 41 FR 18498, 18500 (May 4, 1976). Industry was concerned that abnormal operations, such as violent reactions due to imbalances in the alloy chemistry, would make it impossible to achieve the standards. EPA responded by stating that these conditions, with one exception, would

be considered malfunctions and therefore would not be violations. Id. For the one exception, visible emission limits during a blowing tap, EPA provided a special exemption from the standard on the basis that it may not be achievable under such conditions. See 40 CFR 60.262(a)(5); 41 FR at 18500. With this exception, EPA concluded that the standards are achievable for all normal process operations at facilities with well-designed, well-maintained and properly operated emission collection systems. 41 FR at 18500.

Subpart AA. In revising this standard for Electric Arc Furnaces in 1984, EPA again demonstrated that it understood that emission standards required continuous compliance. 49 FR 43838 (October 31, 1984). In the preamble to the final rule, EPA responded to a comment asking why the mass emission standard had not been set at a lower number given the test results. EPA acknowledged that all of the facilities tested except one produced lower emissions than the emission standard chosen. However, EPA recognized that to "ensure continuous compliance" with a lower emission level, vendors might increase the cost of fabric filters (the control device) by as much as 25 percent. Id. at 43840. EPA did not believe the lower emissions were justified by the increased cost and accordingly promulgated a slightly higher emission rate that could be complied with continuously without increased costs.

Subpart CC. Subpart CC provides another example of EPA's recognition that continuous compliance is required. On November 12, 1983, EPA proposed amendments to Subpart CC, Glass Manufacturing Plants, to provide for opacity monitoring in order to assure continuous compliance with the standards. The Agency stated that it "is concerned that modified processes do not necessarily provide continuous emission reduction and that once a performance test is completed, neither the operator nor the EPA would have any basis for knowing whether the facility is continuing to maintain the emission reduction observed during the performance test." 48 FR 50670, 50675 (November 2, 1983). As an alternative to opacity monitoring, EPA proposed granting approval for monitoring of process parameters "for those plants that demonstrate that process parameters or other factors can be used to reasonably indicate whether the emission rate observed during the performance test is continually maintained..." Id. EPA promulgated these amendments the following year because "neither the operator of a glass melting furnace using modified processes nor EPA would have any indicator for knowing whether the facility is continuing to maintain the emission reduction observed during the performance test..." 49 FR 41030, 41033 (October 19, 1984). Additionally, EPA promulgated an exemption from the standards in this subpart for six days out of every year. This exemption was provided in order for owners and operators to perform maintenance on ESPs. Id. at 41034. The owners and operators noted that "the numerical emission limits must be achieved on a continuous basis" but that the limits could not be attained during routine maintenance. Id. According to the owners and operators, "if enforced to the letter, the standards would require glass manufacturers to either shut down their furnaces, or be found in violation of the standards, during times when furnace exhaust gases are bypassed around add-on control devices during routine maintenance." Id. This example further supports EPA's position that only exemptions from standards which are

specifically provided for in the language of the rule are allowed.

In yet another example under Subpart CC, EPA addressed concerns about the ability of sources to meet standards on a continuous basis by expressing the standard as a statistical probability in relation to the normal distribution of observed values. The EPA did so by establishing the 97.5 percent upper confidence level of a normal distribution of average opacity values as the excess emissions threshold. See 40 CFR 60.293 (c)(4) and (5).

Subpart GG. In revisions to the standard for stationary gas turbines, EPA, at the request of a commenter, created an exemption from the emission limit for a certain emergency situation. 47 FR 3767, 3769 (January 27, 1982). The commenter stated that gas turbines could meet the proposed NO_x emission limit when burning natural gas but not when using distillate oil. EPA granted an exemption from the emission limit if distillate oil had to be used in an emergency. Clearly, the commenter and EPA understood that the standard applied to all circumstances of operation even emergency fuel shortages.

Subpart HH. In a final rule action, EPA revised an opacity standard upward from 10 to 15 percent to account for 4 out of 1200 readings that were slightly above 10 percent (10.6%). To assure the achievability of the standard, the opacity standard was increased to 15%, well above any six-minute average analyzed by EPA. See 49 FR 18076, 18078 (April 26, 1984).

Subpart NN. EPA addressed concerns regarding the ability of affected sources to comply at all times in the context of establishing the numerical emission limit. The final preamble noted that certain commenters believed that the particulate emission limits "were too stringent to be achieved on a continuous basis." 47 FR 16582, 16584 (April 16, 1982). Upon review of the information, EPA agreed, and promulgated a more lenient final standard. Id. The EPA noted further that "[t]he best control systems have been demonstrated to be continuously effective," and therefore, with this adjustment in the standard, "there should be no problems achieving the standards if the control equipment is properly maintained and operated." Id. at 16585.

Subpart XX. In other instances, EPA responded to claims that variability in emissions precluded compliance with stated emission limits at all times by rejecting the claims as unsupported. For example, in promulgating performance standards for bulk gasoline terminals (40 CFR part 60, Subpart XX), some commenters asserted that compliance could not be achieved under all the variable operating conditions that might affect emissions levels. The EPA responded that pollution control systems could and should be designed to account for the full range of operating conditions, such that the standard could be met on a consistent basis. The EPA identified the gasoline's vapor pressure, vapor concentration, and loading levels as key variables, and noted that test data showed that facilities could comply under worst-case emissions scenarios for each variable (high wintertime gasoline vapor pressure, low inlet vapor concentration, and peak loading levels). Consequently, EPA declined to revise the standards as proposed. See 48 FR 37578,

37585-86 (August 18, 1983).

Subpart WW. In the preamble to the proposed rule for Subpart WW, Beverage Can Surface Coating Industry, EPA makes clear that continuous compliance with the standards of performance is required, even in situations where compliance determinations are not conducted on a continuous basis. In discussing the frequency of performance testing under this standard, EPA states, "The performance test may be done on a one time basis or it can be done on a recurring basis. Requiring only an initial performance test on startup reduces the workload on the owner or operator but is not as effective for ensuring continual compliance as periodic performance testing." 45 FR 78980, 78988 (November 26, 1980) (emphasis added). This example highlights that EPA does not consider the frequency of testing to result in increased stringency, but rather improved assurance of continuing compliance.

Subpart LLL. In proposing standards under Subpart LLL, Onshore Natural Gas Processing Facilities, EPA established two separate percent reduction standards: one that applied during the initial performance test, and one that applied for subsequent tests. The rationale for this approach was that the level of performance achievable by the likely controls to be used would depend on the age of the catalyst used to recover sulfur. For the second standard, which was tested for compliance through manual test procedures at an unspecified frequency, EPA stated that this "second, less stringent emission limit was developed . . . that can be met on a continuous basis." 49 FR 2656 (January 20, 1984). The preamble contains similar references to this limit as a "continuous" emission limit. Id. The final preamble also noted that this standard must be met "on a continuing basis" (50 FR 40158, October 1, 1985), and the final rule clearly states that the reduction efficiency required to meet the second standard is "required on a continuous basis." See 40 CFR 60.641 (definition of the variable "Z").

In sum, EPA disagrees with industry arguments that standards do not generally require compliance with emission standards at all times, or that, even where a performance standard or emission limitation does not contain an excess emissions allowance or other provision for excused noncompliance with stated limits, one should be inferred to exist. Rather, EPA concludes that where the Agency intended to allow exceedances of stated emission limits, the general provisions or the specific rules in question so provided on their face. In the absence of a specific provision for such relief on the face of the standard, the general obligation to comply at all times applies. The promulgation of the CE revisions does not render these underlying standards more stringent, but instead will provide for more effective implementation of them.

COMMENTERS:
Alabama Department of Environmental Management (IV-D-453); ALCOA (IV-D-288); American Electronics Association, Clean Air Task Force (IV-D-437); American Foundrymen's Society, Inc. (IV-D-294); American Gas Association (IV-D-265); American Petroleum Institute (IV-D-289); American Portland Cement Alliance (IV-D-284); ARCO (IV-D-396); Arkla Energy

Resources Company (IV-D-343); Armco Steel Company (IV-D-395); ASARCO (IV-D-327); Ashland Petroleum Company (IV-D-307); Association of International Automobile Manufacturers (IV-D-264); Baltimore Gas and Electric Company (IV-D-296); BP Oil Company (IV-D-315); Carolina Power & Light Company (IV-D-297); Chemical Manufacturers Association (IV-D-301); China Clay Producers Association, Inc. (IV-D-254); Cincinnati Gas & Electric Company (IV-D-259); Clean Air Implementation Project (IV-D-242); Coalition for Clean Air Implementation (IV-D-304); Colorado Department of Health (IV-D-209); Council of Industrial Boiler Owners (IV-D-319); Duquesne Light (IV-D-375); East Ohio Gas Company, The (IV-D-355); Eastman Chemical Company (IV-D-347); ENRON Operations Corp. (IV-D-390); Entergy (IV-D-281); Exxon Chemical Americas (IV-D-339); Exxon Company, USA (IV-D-310); Fertilizer Institute, The (IV-D-251); Gas Research Institute (IV-D-303); Goodyear Tire and Rubber Company, The (IV-D-292); Illinois Power Company (IV-D-274); KBN Engineering and Applied Sciences, Inc. (IV-D-475); Kennecott Corporation (IV-D-262); Kerr-McGee Corporation (IV-D-232); Large Public Power Council (IV-D-336); Lower Colorado River Authority, et al. (IV-D-256); Marathon Oil Company (IV-D-376); Mississippi Department of Environmental Quality, State of (IV-D-472); Mississippi River Transmission Corp. (IV-D-344); Mobil Oil Corporation (IV-D-285); Monsanto Company (IV-D-273); National Association of Manufacturers (IV-D-261); National Environmental Development Association (IV-D-334); National Oilseed Processors Association (IV-D-267); National Petroleum Refiners Association (IV-D-276); Natural Resources Defense Council, et. al. (IV-D-225); Ohio Cast Metals Association (IV-D-324); Ohio Chamber of Commerce (IV-D-370); Ohio Coal Development Office, Ohio Department of Development (IV-D-230); Ohio Edison (IV-D-266); Ohio Electric Utilities Institute (IV-D-323); Ohio Manufacturers Association (IV-D-348); Pennzoil Company (IV-D-373); People's Natural Gas Company (IV-D-27); Pharmaceutical Manufacturers Association (IV-D-367); Phillips Petroleum Company (IV-D-380); Proctor & Gamble Company (IV-D-330); Questar Corporation (IV-D-505); Questar Pipeline Company (IV-D-480); Reynolds Metals Company (IV-D-374); Rubber Manufacturers Association (IV-D-331); Shell Oil Company (IV-D-280); Society of the Plastics Industry, Inc. (IV-D-287); Southwestern Public Service Company (IV-D-272); Sugar Cane Growers Cooperative of Florida, et al. (IV-D-252); Tennessee Valley Authority (IV-D-389); Texaco Inc. (IV-D-357); Total Petroleum, Inc. (IV-D-354); Union Carbide Corporation (IV-D-293); United States Sugar Corporation (IV-D-382); Utility Air Regulatory Group (IV-D-489)

SUMMARY: One commenter cited to standards developed based on general AP-42 emission factors because the averages used to develop such emission limits are not accurate for any individual emission unit. If accurate averages were used, this commenter argued that statistically half of the affected units should be above the limit calculated using AP-42 factors and the other half below the limit. Requiring actual testing of emissions would result in many such emissions units being declared out of compliance. The commenter provided specific examples of how federal facilities could have their federally-enforceable standards, based on AP-42 factors, made more stringent by the application of the enhanced monitoring rule in this manner.

RESPONSE: If an emission limit has been developed and subsequently tested for compliance solely through the use of a generalized emission factor, then the emission factor would constitute the "test method" for that emission limit. The Agency, however, does not promulgate NSPS in this manner and questions whether such a limit could constitute an enforceable numerical limit since the numerical value is preordained by the emission factor. In reality, such a limit could act more as a work practice restriction, such as a requirement to use a particular type and/or amount of fuel, to which the emission factor is then applied to obtain a value in terms of emissions. The Agency believes that the appropriate action in this type of example would be to clarify the standard in the Part 70 permit so that compliance with the work practice (which acts as the true restriction on emissions) is declared to be compliance with the numerical emission limit. For an emission limit that may have been originally established in some manner on the basis of an emission factor, but then subsequently tested for compliance on the basis of a test method, the regulated community may want to reevaluate the original standard setting procedure, but the enforcement of that standard on the basis of evidence that can be compared to the test method does not raise any issues unique to this type of standard versus other standards discussed in the comments.

COMMENTERS:
Phillips Petroleum Company (IV-D-380)

SUMMARY: An industry coalition group stated that under the NSPS requirements, performance standards apply whenever a source is required to conduct performance testing and, at all other times, the general duty under 40 CFR 60.11(d) applies so that sources operate and maintain facilities in a manner to minimize emissions. This commenter cited descriptions of monitoring requirements in prior EPA rulemakings, including the NSPS subpart BB rulemaking, to show that EPA's past interpretation of the meaning of excess emissions confirms that NSPS performance standards are not intended to be achieved at all times.

RESPONSE: The EPA rejects this view of the nature of the obligation to comply with NSPS and other emission limits under the Act. As to NSPS requirements in particular, the obligation for compliance with stated emission limits is not limited to successful completion of an initial performance test and any subsequent tests. To the contrary, as discussed above in this Section 4.1.1, EPA has long held that emission limits must be complied with at all times (except where a particular limit provides otherwise); this is by no means a position developed in conjunction with the credible evidence rulemaking. Section 60.11(d) is an independent requirement that supports these emission limitations or standards by creating a general duty to operate and maintain sources and air pollution control equipment properly, including during excused periods from compliance with emission limitations or standards, such as periods of malfunction, startup or shutdown. EPA agrees that proper operation and maintenance of an emissions unit and any associated pollution controls in accordance with 40 CFR 60.11(d) is vital to complying with emission standards. However, while it is true that sources have a continuing duty to employ good operation and

maintenance practices, this duty does not substitute for the sources' obligation to comply with its emission limits. The two obligations, while related, are separate requirements in the NSPS regulations and in legal effect.

EPA has made these points plain as far back as 1973 in the proposed NSPS startup, shutdown and malfunction rulemaking:

> It is anticipated that the initial performance test and subsequent performance tests will ensure that equipment is installed which will permit the standards to be attained and that such equipment is not allowed to deteriorate to the point where the standards are no longer maintained. **In addition,** the proposed regulation requires that the plant operator use maintenance and operating procedures designed to minimize emissions in excess of the standard.

38 FR 10820 (May 2, 1973) (emphasis added). This preamble text clearly states both that proper equipment maintenance is vital to remaining within an emission standard (otherwise equipment would deteriorate to the point where standards were not met) and that the general operation and maintenance obligation is a separate regulatory requirement. In subsequent policy statements, EPA has stressed that the general operation and maintenance requirement contributes to preventing emission violations:

> [O]f primary concern to the Agency are those violations that could have been prevented, through the installation of proper control equipment and the operation and maintenance of that equipment in accordance with proper procedures.

O&M Enforcement Memorandum, cited above. An emphasis on good operating practices also enables the Agency to determine an appropriate enforcement response to violations of **both** emissions limits and the good practices requirement based on whether the owner or operator took proper steps to avoid exceedances:

> In determining the appropriate enforcement response to a violation, one factor the Regions should consider is whether the source had in place an active program designed to maintain continuous compliance.
>
> * * * Evaluating a violator's O&M program is a necessary step in determining the type and degree of relief that an enforcement action could be expected to achieve.
>
> Documentation of avoidable departures from proper procedures as just discussed may be used not only as supporting evidence in cases involving emission limit violations, but as primary evidence in cases involving violations of O&M requirements specified in permits and regulations.

Id. These statements make it clear that good operating practices requirements are separate and distinct from the need to continuously comply with emissions limits.

In addition, as noted above in discussing the Subpart BB rulemaking, EPA recognizes that the CE revisions may conflict with prior Agency statements concerning how certain monitoring data may be used. However, EPA believes that this rulemaking is a proper forum for modifying those prior statements. See Final Rule Preamble, particularly section III.D.4. and III.D.5., for further discussion.

COMMENTERS:
Coalition for Clean Air Implementation (IV-D-304)

4.1.2 Stringency of Underlying Requirements - Averaging Time Concerns

SUMMARY: Many commenters objected in general that the effect of the proposed rule appeared to be a shortening of existing practices regarding the averaging time of compliance. Some stated that using a continuous monitor as a compliance method will force reduced averaging times of compliance. A few commenters were specifically concerned that the proposed rule could shorten the 30-day averaging period policy used in Ohio, even though in the past EPA had committed to address this issue through formal SIP procedures.

Commenters pointed to other prior Agency statements to show that the averaging time of a standard can affect the stringency of a standard. For instance, in the past EPA has argued that changing the NSPS Subpart J 7-day averaging period for SO_2 emission rates could result in a more or less stringent standard. In addition, EPA has acknowledged in the context of setting national ambient air quality standards (NAAQS) that changing the averaging period directly affects the stringency of a standard. In Bethlehem Steel Corp. v. Gorsuch, 742 F.2d 1028 (7th Cir. 1984), the Seventh Circuit held that EPA acted illegally in approving most of a SIP rule but disapproving the part that allowed the limit to be exceeded for 15 minutes every 24 hours, because by deleting this compliance provision EPA stiffened the preexisting regulation.

RESPONSE: As discussed in response to Section 2.1.1, this rulemaking does not address the proposed enhanced monitoring requirements. However, EPA does not agree that the CE revisions will have the effect of shortening or otherwise changing averaging times. The EPA notes that even without the CE revisions, the issue of what averaging time applies to a particular standard is raised by the ability of EPA to document the duration of a violation under section 113(e)(1) of the Act. The Agency does not believe that the ability to prove the initial existence of a violation, as opposed to the duration of a continuing violation after the initiation of the violation is established raises any different issues with respect to the need to consider appropriate averaging times when using credible evidence. (It should be noted that, as discussed in Section III.C of the

final rule preamble, EPA believes that it is reasonable to interpret section 113(e)(1) as allowing EPA to establish liability as well as assess penalties.) The EPA does note, however, that the operator of a source subject to the title V operating permits program which is concerned about the possibility of the CE revisions resulting in enforcement based on an improper averaging time could include an averaging time as part of its permit application to clarify what averaging time applies in cases where the applicable emission limit does not specify an averaging time. Note, however, that, in the absence of a clearly specified averaging time, the time for conducting the reference test is generally the averaging time for compliance. The appropriate averaging time could then be added to the part 70 permit, subject to public notice and comment, and EPA review.

With respect to those owners or operators in Ohio subject to the 30-day averaging period policy, that averaging period will similarly not be affected by the CE revisions. Ohio, or any other State with similar policies that clarify a SIP ambiguity, may implement the policy through the permitting process. To the extent EPA believes that the policy leads to a SIP deficiency, EPA will seek revision of the SIP through customary SIP revision procedures, and not through vetoes of individual permits. If the SIP is not ambiguous and state policies improperly change the averaging time, permits reflecting the policy would be subject to veto.

COMMENTERS:
Alabama Department of Environmental Management (IV-D-453); ALCOA (IV-D-288); American Electronics Association, Clean Air Task Force (IV-D-437); American Foundrymen's Society, Inc. (IV-D-294); American Gas Association (IV-D-265); American Petroleum Institute (IV-D-289); American Portland Cement Alliance (IV-D-284); ARCO (IV-D-396); Arkla Energy Resources Company (IV-D-343); Armco Steel Company (IV-D-395); ASARCO (IV-D-327); Ashland Petroleum Company (IV-D-307); Baltimore Gas and Electric Company (IV-D-296); BP Oil Company (IV-D-315); Carolina Power & Light Company (IV-D-297); Chemical Manufacturers Association (IV-D-301); Cincinnati Gas & Electric Company (IV-D-259); Clean Air Implementation Project (IV-D-242); Coalition for Clean Air Implementation (IV-D-304); Council of Industrial Boiler Owners (IV-D-319); Duquesne Light (IV-D-375); East Ohio Gas Company, The (IV-D-355); Eastman Chemical Company (IV-D-347); ENRON Operations Corp. (IV-D-390); Entergy (IV-D-281); Exxon Chemical Americas (IV-D-339); Goodyear Tire and Rubber Company, The (IV-D-292); Illinois Power Company (IV-D-274); KBN Engineering and Applied Sciences, Inc. (IV-D-475); Kerr-McGee Corporation (IV-D-232); Large Public Power Council (IV-D-336); Lower Colorado River Authority, et al. (IV-D-256); Marathon Oil Company (IV-D-376); Mississippi Department of Environmental Quality, State of (IV-D-472); Mississippi River Transmission Corp. (IV-D-344); Mobil Oil Corporation (IV-D-285); Monsanto Company (IV-D-273); National Association of Manufacturers (IV-D-261); National Oilseed Processors Association (IV-D-267); National Petroleum Refiners Association (IV-D-276); National Environmental Development Association (IV-D-334); Ohio Cast Metals Association (IV-D-324); Ohio Chamber of Commerce (IV-D-370); Ohio Coal Development Office, Ohio Department of

Development (IV-D-230); Ohio Edison (IV-D-266); Ohio Electric Utilities Institute (IV-D-323); Pennzoil Company (IV-D-373); Pharmaceutical Manufacturers Association (IV-D-367); Proctor & Gamble Company (IV-D-330); Questar Corporation (IV-D-505); Questar Pipeline Company (IV-D-480); Reynolds Metals Company (IV-D-374); Rubber Manufacturers Association (IV-D-331); Shell Oil Company (IV-D-280); Society of the Plastics Industry, Inc. (IV-D-287); Sugar Cane Growers Cooperative of Florida, et al. (IV-D-252); Texaco Inc. (IV-D-357); Total Petroleum, Inc. (IV-D-354); Union Carbide Corporation (IV-D-293); United States Sugar Corporation (IV-D-382); Utility Air Regulatory Group (IV-D-489)

4.1.2.1 Use of Reference Test Method Sampling Times as Averaging Times

SUMMARY: Many commenters objected to EPA's stated intent that reference test method sampling times be used as compliance averaging times unless another period is explicitly stated. Commenters stated that this approach is unreasonable, will significantly increase the stringency of the standards, and is inconsistent with how compliance has historically been enforced by the States and EPA. Some commenters argued that the period of a compliance test is often more closely tied to the amount of time required to conduct the test than to a requirement for protecting public health, while others stated that the sampling time is generally established for technical reasons and not as an appropriate continuous compliance averaging time. One commenter stated as an example that it would be unwarranted to establish a 3-hour NO_x compliance period based on the reference test method sampling time for standards that have been developed for purposes of the annual NO_2 NAAQS.

In addition, several commenters argued that the proposed Subpart D revisions and EPA's own statements in that proposal demonstrate the impropriety of using stack test sampling times as an appropriate continuous compliance averaging period. Certain commenters stated that EPA is required by general principles of administrative law to explain a decision that departs from a prior agency position, but EPA has failed to do so in the enhanced monitoring rule with respect to the findings EPA relied on in developing the 1983 proposed revisions to Subpart D. Some noted that EPA has no basis for now claiming that the 1971 NSPS Subpart D NO_x and SO_2 standards may be enforced using a 3-hour averaging time in conjunction with a continuous compliance method because to do so could make the 1971 Subpart D standards more stringent than the 1979 Subpart Da standards.

As further support for the argument that stack test sampling times should not be used as compliance averaging periods, a utility trade group cited an EPA memorandum in the docket for the Subpart D proposed revisions. This commenter argued that the memorandum is an acknowledgment by EPA that requiring back-to-back stack testing to show compliance is not supportable because the original standards were not set based on data that covered all operating conditions. The commenter also asserted that EPA cannot require such testing under its general

section 114 authority because of the reasonableness requirement embodied in section 114. Thus, this commenter stated that EPA cannot argue that the stack test sampling time reflects a continuous compliance averaging time. For example, EPA has no basis for claiming that the 1971 Subpart D particulate matter standard can now be enforced "at all times" consistent with the minimum time period needed to conduct a Method 5 test.

RESPONSE: The CE revisions do not specify any averaging period for any standard and do not require a part 70 permit to specify a particular averaging period for a standard. Of course, where there is ambiguity concerning the appropriate averaging period, sources and permitting authorities are allowed to clarify the appropriate averaging period in the context of a part 70 permit, subject to public notice and comment and EPA review. If the appropriate averaging period is not clearly established in the part 70 permit, then the party that seeks to introduce credible evidence to document compliance or noncompliance with an emission limitation or standard must be able to compare the credible evidence data with the data that would have been collected by the compliance test method. In making that comparison, the period over which compliance test method data are averaged must be taken into account. The Agency believes based on the position that it has taken in the past, that the period over which data from test method sampling runs are averaged may generally be used as an appropriate period over which to average other data that may serve as credible evidence. (See, e.g., discussion of Subpart D in Section 4.1.1 and below in this response.)

The Agency notes that it will have to take into account the particular circumstances of a standard in making this comparison. For example, 40 CFR part 60, Subpart XX (Bulk Gasoline Terminals) provides that performance testing is to be conducted over a 6-hour period during which at least 300,000 liters of gasoline is loaded, but also provides that the time period may be extended during the same day until 300,000 liters is loaded, or may be resumed the next day with another complete 6-hour period. See 40 CFR 60.503(c)(1). For purposes of comparing CE information to the data that would be generated by a reference test for such facilities, EPA or any other party will have to account for these performance test provisions regarding time and throughput.

Industry commenters cite to various background materials in the Subpart D and Subpart Da rulemakings, as well as various Agency statements and enforcement decisions, to support their argument that the averaging period for Subpart D is not a 3-hour average. The Agency acknowledges that, because Subpart D does not explicitly establish a specific averaging time, there has been an issue over time of how to interpret the standard and other similar standards with respect to averaging time. As a threshold matter, EPA reiterates that the CE revisions do not have any effect on the averaging time that does apply under Subpart D, and thus any issues relevant to what the averaging time is can be addressed in a particular enforcement action. Although that response sufficiently addresses the comments, in the interest of providing EPA's position on what averaging period applies, the following additional discussion is provided.

EPA believes that these commenters are incorrect in assuming that Subpart D does not at present provide for determinations of compliance with SO_2 limits on a short-term basis by averaging the results of 3 one-hour test runs, i.e., "3-hour averaging." It is plain from the face of the regulation that it does by virtue of the NSPS general provisions and the stated compliance method in the Subpart D SO_2 emission standards (see 40 CFR 60.8(f) and). The position that Subpart D requires compliance on a short-term basis is supported by EPA interpretations of Subpart D as far back as 1974. In a letter to a utility representative, an EPA official rejected the possibility that Subpart D compliance could be assessed by evaluating annual average emissions. Instead, the official noted that "a violation of the emission standard is determined by a performance test which calls for 3 consecutive sampling runs of approximately 2 hours duration each. Hence, the regulations provide for an averaging time of approximately 6 hours as opposed to a full year." Letter from Glenn D. Pratt, Acting Director, Enforcement Division [Region V], to John P. Madgett, Dairyland Power Cooperative, dated May 15, 1974; a copy of this document is in the docket. (It should be noted that, subsequent to this letter, the Subpart D sampling time has been adjusted to rely on one-hour runs instead of two-hour runs.) Immediately before this discussion, Mr. Pratt also stated that performance tests could be run under any representative conditions, which could include low, medium or maximum sulfur coal combusted at the facility. He emphasized, however, that EPA would probably require testing while combusting the coal with the maximum sulfur content to assure compliance under worst case conditions. See id. Finally, Mr. Pratt noted that sulfur variability could not constitute a "malfunction" and he described coal blending options used by various other utilities to avoid excess emissions. Id.

The Agency has subsequently reaffirmed this position in various actions. For example, in adding emission monitoring requirements to Subpart D in 1975, the Agency used a 3-hour average for reporting excess emissions and explained "that to be useful to source owners and operators as well as enforcement agencies, the averaging time for the continuous monitoring data should be reasonably consistent with the averaging time for the reference methods used during performance tests." 40 FR 46250 (October 6, 1975). Moreover, EPA plainly understood at the time of its 1983 proposal that Subpart D as promulgated in 1971 required compliance to be determined on a short-term basis. The Agency described the compliance demonstration requirement as a "minimum 3-hour test period" (48 FR 48960, 48961, October 21, 1983) and, as noted, proposed to revise Subpart D to rectify concerns that were "not appropriately addressed by a short-term 3-hour compliance test." Id.

In the Salo Memorandum and Pederson Memorandum discussed above, EPA's lawyers plainly and succinctly discussed the requirements of the standard as promulgated in 1971 and the effect of the prospective changes. These documents made it clear that the Subpart D standard included a 3-hour averaging time; accordingly, they recommended that a draft version of the 1983 proposal be revised because:

> [i]t inaccurately states that there is now a significant ambiguity as to the time

> period during which compliance with Subpart D is to be determined, for boilers complying through the use of low sulfur coal. In fact . . . compliance is determined by a Method 6 stack test, which takes about 3 hours.

Salo Memorandum; see also Pedersen Memorandum ("[t]he effect of the change from a 3-hour averaging time to a 30-day averaging time is to make the standard more lenient"). Thus, Subpart D has always provided for determinations of compliance on a short-term basis, and in any event, the promulgation of the CE revisions does not change the averaging time in Subpart D.

Subsequent to the 1983 proposal, EPA has reaffirmed its position that a 3-hour average is required under Subpart D. In response to a request from an operator of a Subpart D boiler to change the excess emissions reporting period from a 3-hour average to a 24-hour average EPA explained why such a change would be inappropriate:

> Furthermore, the acceptance of an alternative averaging period for the calculation of excess emissions through continuous emissions monitoring that is longer than the averaging period used for compliance determination is inappropriate. The Method 6 stack test, which is a reference method for determining compliance with the SO_2 emissions limit of 1.2 pounds per MMBTU heat input, determines the SO_2 emission rate on a short-term (2-to-3-hour average) basis. The averaging period for calculating excess emissions through continuous monitoring must be commensurate with the averaging time of the standard, i.e., 3 hours.
>
> The fact that EPA proposed revisions to NSPS, Subpart D, on October 21, 1983 that would establish SO_2 emissions monitoring on a 30-day rolling average basis is not germane since these revisions were never finalized. The fact that the SO_2 monitoring requirements for small boilers of no more than 100 MMBTU/hr allow 30-day rolling averaging is also not germane because these small boilers are subject to a different standard than those requiring 3-hour averaging. These small boilers are subject to a 30-day rolling averaging period standard.

Letter from John Seitz, Director, Office of Air Quality Planning and Standards to James Morrin, representing New Energy Company of Indiana Limited Partnership, July 9, 1992. See also, Letter from Samuel Coleman, EPA Region VI, to Gerald G. McGalmery, Entergy Services, Inc., March 20, 1996 (letter denies request to use 30 day rolling average allowed under Subpart Da for boiler subject to Subpart D with respect to NOx emission limit; the letter states that "Under Subpart D, compliance with the emission rate standard is determined over a 3-hour averaging period. . . . Your request, however, proposes an averaging period of 30 successive boiler operating days. This different averaging period is less stringent than the existing 3-hour averaging period under Subpart D.") See docket for a copy of these letters.

The Agency acknowledges that under some circumstances, the averaging period may be slightly longer than 3 hours because of sampling conditions present at a source. For instance, EPA has previously accepted a proposal by a company to use sampling runs of 170 minutes for purposes of testing under Subpart D. See Letter, James O. McDonald, Director, Enforcement Division [Region V], to Mr. Van Ingen, Shell Oil Company, September 27, 1974; a copy of this letter is in the docket. For that source, the appropriate averaging time would be approximately nine hours because each individual run would last for nearly three hours.

Thus, EPA believes that Subpart D has always provided for determinations of compliance on a short-term basis, consistent with the averaging time associated with the test method. In any event, the promulgation of the CE revisions does not change the averaging time in Subpart D.

Regarding the 1978 draft staff EPA memorandum cited in the comments (see Air Docket A-81-IS-II-A-003) EPA first notes that this document was a draft options paper that explored several options for addressing perceived problems with Subpart D. The EPA further notes that, although this document was included in the docket for the 1983 proposed revisions to Subpart D, it was cited in the preamble only with respect to data included in the draft document on the number of units affected by Subpart D and whether they used compliance coals or scrubbers to achieve compliance 48 FR 48960-61 (October 21, 1983).

In response to the comments citing this document, the Agency acknowledges that a footnote in the document states that continuous stack testing would be impractical. The EPA also notes that one of the commenters similarly argues that continuous testing would be unreasonable and thus not justified under section 114. The Agency does not dispute that continuous stack testing generally would not be contemplated by the Agency because of burden and cost concerns. There is no unreasonable expense, however, associated with the use of credible evidence that is already reasonably being gathered, such as through CEMs.

The Agency also notes that the draft document states that continuous testing would likely result in violations caused by inherent sulfur variability whereas the probability of a periodic test being conducted during periods that reflect such short-term peak variability is low. In Section 4.1.1 above, EPA has discussed at length the fact that this concern with the achievability of Subpart D on a continuous, short-term basis was the impetus behind the 1983 proposal to revise Subpart D, which included lengthening the required averaging time. However, as also discussed at length in Section 4.1.1, as a general matter EPA uses its judgment, based on the available information, to establish emission standards at those levels where the standards can be met on a continuous basis by a well operated and maintained source that employs best demonstrated technology. The fact that, subsequent to promulgation of Subpart D or any other standard, information may come to light which leads EPA to reconsider its initial judgment, is not at all inconsistent with EPA's position that the standards generally require continuous short-term compliance, consistent with the relevant averaging period for conducting the performance test.

The Agency notes that at least one commenter also cited to an EPA notice in the Federal Register as being consistent with its position that EPA has recognized that short-term averaging is not required. The commenter referenced a notice entitled "Collection of SO_2 Emissions Data From Certain Coal-fired Electric Utility Steam Generating Units" published on January 8, 1981 (46 FR 2186). The commenter quoted an excerpt which states that "inadequately-defined emission limits are interpreted inconsistently and are usually not applied to short-term periods such as 24 hours or less." Id.; see also p. 62 of Attachment C to Docket Item A-91-52-IV-D-489. This excerpt is best viewed in context. The notice concerned a planned data collection effort designed to obtain improved information on short-term variability of SO_2 emissions from power plants. EPA noted that the effort "could assist the Agency in its planned review of existing policies and procedures for developing, evaluating, and enforcing emission limits for coal-fired power plants . . . " Id. The notice then describes how ambient air models are used to set emission limits without specifying an averaging time, and that "the tendency" has been for such limits to be "interpreted inconsistently" and "not applied to short-term periods." Id.

As a threshold matter, nothing in this notice is inconsistent with the position taken throughout this document that information on sulfur variability may properly be considered in evaluating whether promulgated standards are in fact achievable. In addition, the Agency notes that, in context, EPA was clearly discussing SIP limits for protecting ambient air quality standards. In fact, shortly after the text quoted by the commenter, EPA continued to state that:

> In any event it is clear that meaningful emission limits must specify averaging periods over which the limit will apply. Additionally, the Agency believes that the averaging period should be adequate to demonstrate protection of the ambient standards.

46 FR at 2187.

In addition, the Agency then noted that:

> *Compliance Status of Power Plants*. As the trend for enforcement programs moves away from determining compliance on an infrequent basis and towards continuous determination of compliance, the routine availability of data becomes an important consideration. Routine data collection is especially important when enforcing regulations for sources whose emissions tend to vary even under constant operating loads.

Id. This excerpt emphasizes the need for routine data collection, especially from sources with varying emissions, to ensure continuous compliance.

The notice referred to by the commenter in turn refers to an earlier notice published by EPA on February 14, 1980 (45 FR 9994). In that notice, EPA noted that:

> Effective enforcement of regulations for sources with varying emissions, such as coal-fired boilers, depends strongly on the routine availability of emissions data. . . . In addition, it is apparent that the manual stack test methods usually required in existing regulations generally do not provide adequate data for effective enforcement.

45 FR at 9995. To address this problem, EPA stated its intention that CEMS or periodic fuel sampling should be used for determining compliance with all future SIP rules for large coal-fired boilers. Id.

More importantly for this discussion, this notice addresses concerns about SIP averaging times for sources with variable emissions. The notice emphasizes that EPA has been unwilling to accept long-term averaging for SIP limits that are designed to protect against possible violations of the ambient air standards, but noted that EPA may be willing to accept future rules with combined 24-hour and 30-day averages if appropriate statistical modeling is performed. 45 FR at 9996. Thus, EPA disagrees with the commenter's position that EPA has acknowledged and accepted the use of long term averages for standards with short term test method procedures that do not specify an explicit averaging time. In any event, EPA notes that the reference cited by the commenter was not applicable directly to the Subpart D averaging time issue.

The commenter also points to certain background documents used to analyze the potential impacts of the Subpart Da rulemaking because these documents evaluated the Subpart D standards on an annual average basis. See p. 62, footnote 145, of Attachment C to Docket Item A-91-52-IV-D-489. The commenter argues that EPA would have had to use a short-term average for Subpart D in these reports to calculate appropriately the emission reductions that would be achieved by Subpart Da from the Subpart D "baseline" condition. The commenter cites to various other background documents in the Subpart D and Da rulemakings which generally discuss the ambiguity of the averaging period under Subpart D, and the notion that if a short-term stack test is conducted only rarely, the results are more likely to represent emissions which approximate long-term average emissions as opposed to short term variability.

The Agency does not believe that these documents justify the conclusion reached by the commenters. Subpart D clearly does not apply on an annual or long-term average basis, which would require averaging the results of continuous stack testing. As detailed above, Subpart D applies on a short-term basis consistent with the period over which test method results are averaged, and compliance with Subpart D is required under all representative conditions. As discussed above in Section 4.1.1, the Agency also disagrees with the arguments raised by various commenters that EPA cannot adjust the frequency of compliance testing without rendering a standard more stringent. Thus, absent a clear reason under particular circumstances at an

individual facility, EPA believes that Subpart D should be interpreted as imposing a 3-hour average, consistent with the period over which test results are averaged and consistent with any excused periods of unrepresentative performance.

Finally, the commenter refers to an EPA document entitled "Development Plan for Implementation of Continuous Monitoring of Air Pollution Sources," January 17, 1979 (see EPA Air Docket OAQPS-79-12-II-A-1) (hereafter referred to as "Development Plan"); see also associated Advance Notice of Proposed Rulemaking (ANPR) published on August 8, 1979 (44 FR 46481). The commenter argued that this document, which addresses primarily SIP limits, reflects the general point that EPA cannot require continuous compliance based on short term averages for limits that were developed based on limited data. As noted in the ANPR, however, the entire thrust behind the Development Plan cited by the commenter is that:

> Current programs for source monitoring generally do not determine compliance of sources with emission regulations on anything but an infrequent basis. This proposed action arises from the need for control agencies to be assured that regulated sources are meeting emission limitations on a continual basis.

44 FR at 46481. In the Development Plan itself, EPA noted that "without the capability of continuously assessing the compliance status of sources, development of control strategies to solve intermittent, short-term violations of the standards is difficult, if not impossible." Development Plan, at p. 3. Thus, this EPA effort recognized that continuous compliance was required.

In the Development Plan, EPA noted several issues that could arise from an effort to improve monitoring of continuous compliance. One of the issues recognized by EPA was the possibility of having to reevaluate underlying SIP limits, which may not have relied on adequate information to establish the appropriate limit. The document recognized that sulfur in fuel limits for boilers could be an especially difficult issue in this regard and that the use of continuous monitoring for compliance could lead to states addressing averaging time issues for such limits. Development Plan, at pp. 4 and 8-9. However, the document does not stand for the proposition that EPA believed that sources were not intended to be in compliance on a continuous basis or that the use of the reference method sampling time as an averaging time is improper, as suggested in the comments. Moreover, as discussed above, EPA in the past has rejected explicitly the appropriateness of interpreting SIP standards with short term tests and no explicit averaging times as constituting standards with long term averages. See 45 FR at 9996.

In any event, as noted above, the CE revisions do not change the averaging period under any existing applicable requirement, including SIP requirements. Thus, these comments concerning past EPA statements on the achievability of various SIP standards do not raise concerns for this rulemaking but are best addressed to the individual rules in question.

COMMENTERS:
American Gas Association (IV-D-265); Arkla Energy Resources Company (IV-D-343); Chemical Manufacturers Association (IV-D-301);Cincinnati Gas & Electric Company (IV-D-259); Clean Air Implementation Project (IV-D-242); East Ohio Gas Company, The (IV-D-355); Eli Lilly and Company (IV-D-349); ENRON Operations Corp. (IV-D-390); Illinois Power Company (IV-D-274); Large Public Power Council (IV-D-336); Mississippi River Transmission Corp. (IV-D-344); Tennessee Valley Authority (IV-D-389); United States Sugar Corporation (IV-D-382); Utility Air Regulatory Group (IV-D-489)

4.1.2.2 Gap-filling Authority to Specify Averaging Times

SUMMARY: Several commenters stated that EPA has no authority to set averaging times through the permitting process where EPA has determined that existing SIPs fail to adequately provide averaging times. The commenters argued that the gap-filling authority of part 70 is not broad enough to allow the specification of a new compliance method or an averaging time where one is absent.

RESPONSE: The CE revisions do not attempt to set averaging periods in the context of part 70 permits, and thus these comments are not applicable to the CE revisions. However, EPA notes that permitting authorities are allowed to establish additional requirements on a case-by-case basis as necessary to assure that permit terms or conditions are enforceable. Among other things, these additional requirements may pertain to measurement frequency and averaging period if there is inadequate guidance available to otherwise indicate the applicable averaging period. See the preamble to the proposed part 70 rule (56 FR 21712, 21738, May 10, 1991) and the Technical Support Document for Title V Operating Permits Program, section 6.9.1 (May 1992), EPA Air Docket No. A-90-33. In addition, where ambiguity exists concerning the appropriate averaging period, sources and permitting authorities are allowed to clarify the appropriate averaging period in the context of a part 70 permit, subject to public notice and comment and EPA review.

COMMENTERS:
American Automobile Manufacturers Association (IV-D-538); Ohio Edison (IV-D-266); Ohio Electric Utilities Institute (IV-D-323); Tennessee Valley Authority (IV-D-389); Union Carbide Corporation (IV-D-293); Utility Air Regulatory Group (IV-D-489)

SUMMARY: Certain chemical industry commenters stated that EPA indicated at a public meeting that emission limits established without specified averaging periods should be complied with on an instantaneous basis. If EPA were to require continuous monitoring based on such short averaging periods, sources may be faced with repeated deviations that would result from effectively redefined compliance requirements imposed by the enhanced monitoring rule.

RESPONSE: The CE revisions do not affect underlying averaging periods. If an underlying

requirement does not clearly establish an averaging period, then one option is for a source and permitting authority to clarify the appropriate averaging period in the context of a part 70 permit, subject to public notice and comment and EPA review. If the part 70 permit does not clarify this ambiguity, the party that seeks to introduce credible evidence to document compliance or noncompliance with an emission limitation or standard must be able to compare the credible evidence data with the data that would have been collected by the compliance test method. In making that comparison, the period over which compliance test method data are averaged must be taken into account. Therefore, the concept of an instantaneous average would not apply unless the compliance test method provided for collecting instantaneous results without subsequent averaging of data points.

COMMENTERS:
Chemical Manufacturers Association (IV-D-301); Eastman Chemical Company (IV-D-347)

4.1.2.3 Need for Short Term Averaging Periods

SUMMARY: Certain commenters stated that there is no technical basis for arguing that short-term average emission limits are needed to keep emissions low enough to ensure attainment and maintenance of short-term ambient standards. One commenter argued that guideline models for NAAQS attainment demonstrations are not sufficiently exact to establish a precise correlation between each emissions unit and each critical receptor every hour of every day. The commenter argued that the standard modeling assumptions for NAAQS attainment demonstrations (that every source operates continuously at 100% capacity) are too conservative to be dispositive of the appropriate compliance test method or averaging time. Commenters stated that if EPA insists that States develop and promulgate short-term average SIP emission limits enforced with a continuous compliance method, attainment demonstration modeling techniques used to determine the required level of those short-term average limits must take into account statistically the unlikely simultaneous occurrence of worst-case peak emissions and worst-case meteorology.

RESPONSE: The EPA reiterates that nothing in the CE revisions modifies the averaging period that applies pursuant to an applicable requirement. In those cases where there is some ambiguity as to the appropriate averaging time, sources and permitting authorities are allowed to clarify the appropriate averaging period in the context of a part 70 permit, subject to public notice and comment and EPA review.

COMMENTERS:
Duquesne Light (IV-D-375); Ohio Edison Company (IV-D-266); Utility Air Regulatory Group (IV-D-489)

4.1.3 Means of Addressing Stringency Concerns

SUMMARY: Although generally opposed to the use of enhanced monitoring data for direct compliance, certain commenters suggested means of limiting the alleged harm that would be caused if EPA continues to require direct enforceability in the final rules. Certain commenters proposed specifying in the rule that enhanced monitoring requirements shall not make compliance more stringent than it currently is or that the level of performance required for sources with enhanced monitoring is the same level of performance required for sources that do not have enhanced monitoring.

Other commenters focused on the averaging time issue and offered suggestions for addressing this issue in the final rule. One commenter favored using a 30-day rolling average for units converted from stack tests to CEMS, while another recommended allowing sources to negotiate with EPA a suitable averaging period where the stringency of the underlying limit can be shown to be increased through the implementation of enhanced monitoring. One commenter recommended clarifying in the rule that the presumptive averaging time for all limits and standards is annual, unless the underlying regulation specifies otherwise.

One commenter favored establishing averaging periods that can adjust for variations in conditions that are beyond the permittee's control. The commenter noted that public utilities are legally obligated to serve their consumers, and must operate under a wide variety of conditions, which makes maintaining a steady level of emissions extremely difficult. The commenter suggested that the rule allow sources to propose alternative equivalent emission limitations that would fit with practicable averaging periods specified in the proposed enhanced monitoring protocols. This would make complying with existing permit conditions easier, according to the commenter, and avoid frequent deviations that will be shown for emission standards if averaged on a short-term basis such as hourly. Another commenter recommended setting operating margins on top of the existing emission rates if the averaging period is to be radically reduced.

RESPONSE: As discussed in response to Section 2.1.1, this rulemaking does not address the proposed enhanced monitoring requirements. However, the Agency believes that it is unnecessary to adopt the suggestions made by the commenters, such as adding a 30 day averaging period where standards have been based on a stack test. Such suggestions would change the averaging time and the compliance obligation, which could affect stringency, something EPA does not propose to do as part of this rulemaking. The CE revisions are designed to determine compliance in a manner that is consistent with the compliance obligations in the underlying applicable requirement. As discussed in the final rule preamble, particularly section III.D., the revisions affect the ability of any party to assess compliance, but do not affect the duty of an owner or operator to be in compliance.

COMMENTERS:
Alcan Rolled Products Company (IV-D-519); American Automobile Manufacturers Association (IV-D-538); American Foundrymen's Society, Inc. (IV-D-294); Council of Industrial Boiler

Owners (IV-D-319); Eli Lilly and Company (IV-D-349); Exxon Chemical Americas (IV-D-339); Fort Howard Corporation (IV-D-233); Illinois Power Company (IV-D-274); Marathon Oil Company (IV-D-376); National Association of Manufacturers (IV-D-261); Ohio Cast Metals Association (IV-D-324); People's Natural Gas Company (IV-D-27); Sugar Cane Growers Cooperative of Florida, et al. (IV-D-252)

4.1.4 Excused Excess Emissions

SUMMARY: Certain commenters stated that excess emissions resulting from start-up, shutdown, Acts of God and other similar causes should continue to be recognized, and also allowed for even if not currently addressed in State regulations. One commenter suggested that if a CEMS was used to satisfy part 64, there should be an allowance for short periods of excess emissions or monitor downtime, such as 5% of operating time.

RESPONSE: As discussed in response to Section 2.1.1, this rulemaking does not address the proposed enhanced monitoring requirements. However, EPA acknowledges that any excused periods from compliance that are approved or promulgated by EPA as part of any applicable requirement must be taken into account in using credible evidence to determine whether a violation has occurred. In addition, EPA disagrees with adding excused periods as part of the CE revisions. As discussed earlier in Section 4.1.1 and elsewhere, compliance with all provisions of the Act is required at all times unless specified otherwise.

COMMENTERS:
American Textile Manufacturers Institute (IV-D-440); Association of International Automobile Manufacturers (IV-D-264); Baltimore Gas and Electric Company (IV-D-296); China Clay Producers Association, Inc. (IV-D-254); Texaco Inc. (IV-D-357)

4.2 Comments in Response to March 21, 1996 Policy Paper

SUMMARY: Reiterating comments made in response to the original 1993 proposal, many commenters argued that the proposed CE revisions illegally increase the stringency of many numerical emission standards by circumventing fundamental principles of public participation through back door regulation. One industry commenter maintained that the Agency's position on credible evidence ignores 25 years of emission standard precedent and seeks to rewrite compliance obligations without reexamining the standard itself.

Many commenters asserted that it is not possible to change the manner in which compliance with an emission standard is determined without affecting stringency. The general argument presented in the comments is as follows. When emission standards using periodic reference tests were promulgated, both the nature of the reference test and its frequency were recognized and taken into account. Technology-based standards recognize the inherently variable nature of emissions

and operations from sources and, accordingly, do not reflect the full range of variability in emission performance of a well-controlled source. A change in the method and/or frequency of compliance determinations fundamentally changes the statistical probability that a variable emission source can meet the original emission standard with the original pollution control device. In short, the CE revisions would increase the stringency of emission standards which were based on a single compliance demonstration or infrequent periodic performance tests simply by increasing the frequency of performing such a test or substituting other more frequent monitoring techniques.

The Agency, according to several commenters, has recognized the fact that stringency potentially increases with a change in monitoring frequency when revising NSPS standards to incorporate continuous compliance determination methods. In rulemaking and permitting in general, the achievability of a proposed limit is considered. For example, in converting annual permit limits to hourly limits, the hourly limit is set higher than the equivalent annual limit to account for variable operating rates. When continuous compliance is required, rolling averages are often used to make limits practical and achievable. Insisting that agencies have recognized that the availability of large amounts of continuous data may affect stringency, one commenter cited a policy implemented by Washington State which limits enforcement to situations involving violations greater than 5% of the time.

At the heart of many of the comments with respect to increased stringency is an assumption that compliance with numerical emission standards established with limited data from reference test methods was not expected at all times. No state or federal emission limits, one commenter insisted, have ever been proposed or promulgated with requirements for compliance to be judged "instantaneously, continuously and at all times." Rather, the vast majority of SIP and NSPS limits specify periodic, not continuous, compliance determination methods.

Commenters asserted that EPA has not typically taken emission variability into account when setting the numerical level of standards, and that standards were not set at a numerical level that was intended to be achievable at all times. The commenters argued that there is a fundamental distinction between the periodic compliance test methods specified in these standards and the continuous excess emissions monitoring provisions in most of these standards. Reference test methods are intended only to address whether a source has the capacity to comply under specific conditions -- the Act's general duty provisions ensure proper operation and maintenance. Exceedances based on continuous monitoring were anticipated by EPA in setting standards and do not constitute violations, according to these commenters. In effect, through the CE revisions, EPA would be converting the continuous excess emissions monitoring provisions of these standards into continuous compliance monitoring provisions that could be used to enforce the standard levels.

As an example of the many existing emission limits that do not require continuous compliance one

commenter raised Arizona's particulate matter (PM) requirements for primary copper smelters. These requirements define PM as anything trapped on the filter when a test is conducted in strict compliance with Method 5. In addition, the test prescribes operating levels but does not require a source to stay at those levels. The commenter asserted that, if a source can meet the prescribed PM standard during certain artificial conditions, it is deemed in compliance with the standard. The commenter further argued that the manner of calculating the emission limit for individual sources showed that continuous compliance is not required. Emission limits are calculated on the total weight of material introduced during a cyclical process divided by the hours involved in the cyclical process. According to the commenter, "[t]he calculation method assumes that there will be operational variation and provides for averaging the varying rates at which material is introduced into the process."

Another commenter cited a number of NSPS and NESHAP standards as indicating that continuous compliance was not required at all operating conditions other than startup, shutdown, and malfunction. The commenter argued that these standards were representative of many standards that "do not call for, do not envision, and in most cases specifically forbid these tests being conducted across the full range of source operations." The commenter cited the Subpart GG standards for Stationary Gas Turbines as an example of concentration based limits which support this point. Performance tests for NO_x emissions under Subpart GG require parameters to be determined at 30, 50, 75, and 100 percent of peak load. The commenter argued that compliance was not required at loads below 30 percent of peak load because of changed conditions that made it difficult to meet the emission limitation.

The commenter also cited NESHAP Subpart BB (Benzene Transfer Operations) and NSPS Subparts III (VOC emissions from SOCMI air oxidation unit processes), NNN (VOC emissions from SOCMI distillation operations), and RRR (VOC emissions from SOCMI reactor processes) as examples of percent reduction standards with which were not designed for compliance at all ranges of operation. As to Subpart BB, the commenter cited the 98 percent volume reduction requirement in benzene emissions from loading racks. The commenter also cited the 98 percent TOC reduction standards for Subparts III, NNN, and RRR, and noted that the performance tests for these standards are to be run "at full operating conditions and flow rates." The commenter claimed that at low rates these percent reduction standards might be impossible to meet and compliance was not expected. Another commenter generally stated that percent reduction standards would not be achievable under all operating conditions, such as at low loadings.

Several commenters suggested that changing specified methods can be done legally, but only in standard-specific, programmatic rulemakings which make the showing necessary to amend individual standards and permits. Commenters asserted that EPA acknowledges this much most clearly, in its October, 1983 proposal to change the SO_2 compliance method in 40 CFR Part 60, Subpart D from a periodic test method to a continuous method.

Others who supported this position pointed to various court decisions. These commenters argued that, by essentially rewriting hundreds of emission standards without providing notice and comment on each standard, the Agency ignores court decisions holding that standards must be technologically achievable. The commenters assert that the Agency further ignores indications that, when the method of determining compliance has been changed, the standard itself has been changed -- numerical limits, frequency of testing and compliance determination methods being part and parcel of emission standards. Several commenters pointed specifically to Donner Hanna, in which the court held EPA could not apply a new standard by applying a method other than that specified without going through rulemaking.

Citing Portland Cement, one industry commenter asserted that the courts have declared reference methods directly related to the emission tests used to develop numeric limits. Any significant departure from that data in attempts to define post-promulgation violations through subjective enforcement discretion would call the validity of the limit itself into question. Reference test methods are not merely separate and detached rules of evidence, but rather integral and inseparable part of limits themselves, necessary to define in a consistent, reproducible manner the level of performance that constitutes compliance with the emission limit.

Another commenter supported a contention that courts and agencies have recognized the need to tie compliance to specific test methods by pointing to the decision in Scott Paper Co. v Department of Ecology, PCHB Nos. 81-10 and 81-21 (1981). In this decision, the Washington State Pollution Control Board held that CEM data could not be used directly to enforce an opacity standard where the reference test called for visual observations. In this situation, continuous emission monitoring was an indicator rather than a direct compliance method. In response to the decision, Washington State correctly amended specific regulations to make the opacity CEMS the direct compliance measure. Other cases cited for this position included International Harvester v. Ruckelshaus, 478 F.2d 615 (D.C. Cir. 1973), Amoco Oil Co. v. EPA, 501 F.2d 722 (D.C. Cir. 1974), BASF Wyandotte Corp. v. Costle, 598 F.2d 637 (1st Cir. 1979), and New Boston Coke Corp.

A few commenters pointed out that the consequences to operators of the increased stringency associated with the CE revisions potentially would be severe. Compliance margins would have to be increased to address greater risks. The effect would be especially acute in California where standards are so tight. To remain in compliance under a more stringent emission standard, sources would either have to curtail operations or install additional control equipment.

Other commenters asserted that the CE revisions would not affect the stringency of underlying requirements. A state agency association asserted that states already use evidence other than reference methods to determine compliance with emission standards. Northeast states have used CEM data and parametric monitoring requirements as enforceable permit conditions and in some cases specifically have used CEM and parametric monitoring data to determine compliance. The

association stated that the positive experience thus far suggests that industry concerns about increased stringency, new paperwork and reporting requirements, and picayune enforcement are perhaps overstated. The CE revisions, this commenter argued, will not increase the stringency of emission standards -- continuous obligations exist independent of test procedures. An environmental group agreed, asserting that EPA's proposed revisions would not increase stringency but would merely clarify existing law. The evidence that a court may consider to determine compliance with emission limits has nothing to do with the stringency of those limits; the use of credible evidence simply makes it easier to determine compliance.

RESPONSE: See final rule preamble, particularly sections III.C. and III.D., and the response to Sections 2.1.6 and 4.1.1, above. The following paragraphs provide additional responses to commenters that referenced particular judicial decisions, EPA preambles, or other authorities to support their assertion that the CE revisions would increase the stringency of underlying requirements without proper rulemaking procedures.

1. Alleged Requirements for Exclusive Reference Tests

Many commenters stated that the Portland Cement case stands for the proposition that compliance determination methods are an inherent part of Clean Air Act emission standards and that changing the method for determining compliance with a standard can affect the validity of that standard. Other commenters contended that the Portland Cement decision imposes an obligation on the Agency to develop objective, quantitative methods of demonstrating compliance with each Clean Air Act emission standards. These commenters argue that the potentially broad range of information which would be available for enforcement and compliance determination purposes under the CE revisions runs counter to this obligation. See Section III.C.3. of the preamble to the final rule for the Agency's response to the argument that Portland Cement mandates exclusive reference tests.

A number of commenters also cited International Harvester v. Ruckelshaus for the proposition that an emission standard must be technologically achievable and that the standard must include a "statistical reliable" objective test method. Some of these commenters contend that the EPA, by promulgating the CE revisions, is increasing the stringency of underlying emission standards and thereby is circumventing the requirement to show that standards are technologically achievable.

The Agency does not believe that the CE revisions are inconsistent with this decision. In International Harvester, the Court of Appeals for the District of Columbia remanded an Agency determination not to grant automakers' request for a one-year postponement of automobile emissions standards. 478 F.2d at 650. The right of these manufacturers to petition the Administrator for a one year postponement of the requirement to comply with auto emissions requirements was an "escape hatch" incorporated into the 1970 Clean Air Act. The Administrator's denial of the petition in International Harvester was based on the Agency's

prediction that technology would be available to meet the emission standards by 1975. 478 F.2d at 641-47. The court held that the Agency, operating under short, Congressionally-mandated time constraints, had not sufficiently explained certain assumptions upon which that prediction was based and had not indicated the "statistical reliability of the prediction." Id. at 648. The Agency believes that this case stands for the unremarkable proposition that, where an administrative action is based on certain assumptions and/or predictions, the reason for those assumptions must be explained and those predictions must be based on data which is shown to be statistically reliable. Even if these concepts are applied to the establishment of test methods, such that identified test methods for determining compliance with an emission standard must be shown to be statistically reliable to be valid, EPA does not believe the court's holding can be stretched to support the argument that test methods or other compliance determination methods must be the exclusive means of determining compliance with a standard.

EPA believes the Amoco Oil decision provides substantial support for the Agency's authority to promulgate the CE revisions. Petitioners in that case argued that the validity of a Clean Air Act gasoline lead-content standard could not be determined unless a test method for determining compliance with that standard was promulgated at the same time. 501 F.2d at 743. The court rejected this argument, recognizing that there is no "fixed requirement" that standards must be established with applicable test methods. Id. This holding repudiates the argument that emission standards must include exclusive, compliance determination test methods.

Another commenter stated that the court in BASF Wyandotte Corp. v. Costle supported the argument that changing methods of determining compliance affects the stringency of underlying standards by holding that specification of a statistical compliance method was essential to the process of establishing an effluent limitation under the Clean Water Act. EPA disagrees with the commenters' arguments citing the BASF Wyandotte case. There the First Circuit found that the Agency had demonstrated that plants could achieve compliance with an effluent limitation based on its chosen statistical methodology and certain permissible assumptions. 598 F.2d at 646-56. Nowhere in the opinion does the court suggest that the determination of whether a plant was in compliance with that limit could be made only through that statistical method.

2. Stringency/Vagueness of Standard

EPA also rejects the arguments of those commenters who claim that the CE revisions will increase the stringency of emission standards to the point where they will no longer be "technologically achievable." As discussed above, the CE revisions will not alter the stringency of existing emission standards. Any challenges to the technological achievability of those standards should have been made, and in many cases were made when those standards were initially proposed and promulgated. EPA similarly rejects the claim that the CE revisions will create undefined emission standards. As discussed in the final rule preamble, section III.A., the range of evidence which may be presented for purposes of enforcement or compliance determination is the

same range that can be presented in most other judicial or administrative proceedings, i.e., evidence which has been determined to be admissible and credible under the rules of that forum. Indeed, because the final CE revisions provide for the use only of evidence comparable to information generated by applicable test methods, the Agency does not expect that sources will be faced with an unknown and unlimited array of evidence.

3. Additional Round of Review for Emission Standards

Several commenters cited the D.C. Circuit's discussion of the implications of "a significant difference between techniques used by the agency in arriving at standards, and requirements presently prescribed for determining compliance with standards." Amoco Oil , 501 F.2d at 743, quoting Portland Cement, 486 F.2d at 396. In that case, the D.C. Circuit stated that where such a "significant difference" appears upon final promulgation of test methods, "the court reviewing those methods may have to regard their promulgation as an effective alteration in the [standard], which alteration would itself be subject to review." Id. One commenter suggested that the credible evidence revisions would increase the stringency of standards and, under the Amoco Oil precedent, potentially subject every existing emissions standard to an additional round of judicial review.

EPA disagrees with the argument that the CE revisions will potentially subject every existing emissions standard to an additional round of judicial review as in Amoco Oil Co. v. EPA. First, the D.C. Circuit's statement that a court reviewing test methods promulgated separately from emissions standards "may have to regard their promulgation as an effective alteration in the [standard], which alteration itself is subject to review" is dicta. 501 F.2d at 743 (emphasis added). Such separately promulgated test methods were not before the court in Amoco Oil, and the D.C. Circuit recognized that the appropriate review of such separately promulgated test methods is "clearly a matter for future proceedings." Id. Moreover, the court only suggests that a separately promulgated test method might be considered an alteration of an emission standard where there is a significant disparity between the methods and data used to arrive at the standard and the compliance determination test method. The CE revisions do not alter existing reference methods. Rather, the CE revisions make clear that the ultimate question in determining compliance or noncompliance, even where data from a non-reference test are used, remains whether the reference method would have also shown compliance or noncompliance if it had been performed.

4. Compliance Only Required at Operating Conditions in Performance Test

Several commenters asserted that the CE revisions make existing standards more stringent because they change the compliance obligation from one which requires compliance only when operating at the conditions specified in the performance test to one which requires compliance under all operating conditions other than startup, shutdown, or malfunction, or other conditions

specifically excluded by the standard (e.g., excess emission allowance). EPA has reviewed the standards cited by the comments and concludes they do not support the commenters' contentions. (EPA's general response to this claim is discussed in 4.1.1.).

Subpart GG. A commenter called attention to the fact that the performance test for this standard specifies that testing shall be performed at 30, 50, 75, and 100 percent of peak load or at four points in the normal operating range. From this, the commenter drew the conclusion that compliance was not required when operating below 30 percent of peak load because this was not a normal operating load. EPA disagrees. What the standard actually specifies is that testing should be done at:

> 30, 50, 75, and 100 percent of peak load or at four points in the normal operating range of the gas turbine, including the minimum point in the range and peak load.

40 C.F.R. 335(c)(2) (emphasis added). Thus, the testing regime actually supports EPA's view that compliance is required across the full operating range. This is further demonstrated by the exemption to Subpart GG, discussed above, for facilities that in emergency situations must use distillate oil instead of natural gas. 40 C.F.R. 332(k). If compliance was not required in all circumstances, as contended by the commenter, then EPA would not have needed to establish an exemption to the standard for this unusual circumstance.

Subpart BB (Part 61). A commenter noted that this standard for benzene transfer operations requires a 98 percent volume reduction in benzene emissions as determined by a performance test during which at least 300,000 liters are transferred over a period of not less than 6 hours. The commenter theorizes that at very low transfer rates (a circumstance the commenter notes as "uncommon") a 98 percent reduction may not be possible due to thermodynamic or kinetic effects. Therefore, the commenter concludes compliance could not have been contemplated under all circumstances. The commenter seems to be saying that if the transfer of 300,000 liters of benzene is spread out over a long enough period, then a 98 percent reduction in emissions cannot be achieved. However, the rule specifies that if 300,000 liters are not transferred in the first period, the test must continue until the throughput criterion is met in the same day, or resumed for a second six-hour period on the next day. The Agency has always interpreted this provision as imposing a maximum 12-hour period. Thus, the rule already provides for a maximum test period where less then the expected throughput is obtained. There is no provision in the test procedures exempting low transfer rates over a 12 hour period. In any event, as discussed further below, the Agency considers that percentage reduction standards generally are intended to be standards that are complied with under all circumstances.

Arizona Particulate Standard. In raising this standard, a commenter noted the many specifics (how particulates are to be measured, the operating level, etc.) in the performance test, and claimed the mere presence of these various specifics meant compliance cannot have been required

in other circumstances. As to such specifics, EPA notes that where a performance test defines the pollutant in a precise way, this rulemaking in no way disturbs the importance of that definition for determining whether the standard has been complied with. Where a performance test specifies a performance level, EPA does not believe that fact would define the only circumstances under which compliance is required. As discussed below, performance tests are generally required to be conducted under worst case circumstances on the assumption that therefore there will be compliance at other operating levels. In a few instances, performance test provisions (such as those for Subpart X of Part 60) make it clear that compliance with a numerical emission limit is excused outside of defined operating conditions that would otherwise be considered "representative" of normal operations. However, EPA believes that such an exclusion must be clear. Finally, the commenter mentions the averaging used in determining the emission limit. EPA reiterates that the CE rule does not affect the averaging periods in standards.

5. Percent Reduction Standards

Several commenters stated that the CE revisions would specifically make existing standards with percent reduction limits more stringent because such limits were not designed to be met, and cannot be met, under all operating conditions. After reviewing the standards cited by the commenters and numerous other standards with percent reduction requirements, EPA cannot agree with the argument that the CE revisions will increase the stringency of these standards. As discussed below, in establishing percent reduction limits with associated periodic performance testing requirements, the Agency has acted to either provide alternative concentration limits for low load conditions or long averaging times to address short periods of load operations.

Periodic compliance determinations with long-term averaging periods. Subpart QQ (Graphics Arts Industry; Publication Rotogravure Printing) is an example of a percent reduction standard with initial (and not ongoing) performance testing based on a long-term averaging period. The standard limits VOC emissions to 16 percent of the total mass of VOC solvent and water used at a publication rotogravure press, (40 CFR 60.432), and compliance testing is based on a 30 consecutive calendar day performance averaging period, (40 CFR 60.433(a)(1)).

EPA notes that, although Subpart QQ only requires an initial performance test, continuous compliance with this standard has always been required. In the Subpart QQ proposal, the Agency stated that the reason for proposing the percent reduction limit, which was retained in the final rule, was that the "proposed 16 percent emission limit, or 84 percent overall reduction, is the maximum control level adjudged by the Administrator to be achievable on a continuous basis by the best demonstrated system of emission reduction." 45 FR 71538, 71546 (October 28, 1980). EPA then provided an analysis of the long-term plant data used to develop the standard and concluded that the proposed limit "allows for control efficiency variations resulting from such factors as low solvent usage, solvent retention in the product, and printing products that cause frequent production delays." Id. at 71548. The proposed rule did include a requirement of

continual monthly performance tests which was eliminated in the final rule. The rationale for eliminating that requirement was not that the standards were unattainable on a continuous basis. Rather, EPA stated in the final rule preamble that "the burden of continual performance tests is unnecessary" because the "industry's economic incentive to recover solvent and the possibility that the Administrator could impose a performance test are sufficient to ensure that this industry will operate the best demonstrated control technology effectively." 47 FR 50644, 50648 (November 8, 1982) (emphasis added). Further evidence that EPA intended the standards to be complied with continuously is found in the discussion of the projected impacts of the final rule. The Agency noted that the projected impacts were based on an expectation that 85 percent overall control could generally be achieved by affected facilities, with emissions increasing to the 16 percent level of the standard "during only 1 or 2 months per year." Id. at 50645.

Alternative percentage reduction or concentration standards based on periodic compliance determinations with short-term averaging periods. EPA reviewed a number of standards which required compliance with either a percent reduction standard or a maximum concentration standard, whichever is less stringent. Such standards are included in Subparts Ea (HCL emissions must be limited by 95 percent reduction by weight or volume or 25 ppmv on a dry basis corrected to 7 percent oxygen, whichever is less stringent, 40 CFR 60.54a), DDD (TOC emissions from certain polypropylene and polyethylene affected facilities must be controlled by 98 percent reduction or 20 ppmv, whichever is less stringent, 40 CFR 60.562-1(a)(1)(i)(A) and(b)(1)(iii)), III, NNN, and RRR (all requiring 98 percent reduction of emissions of TOC (minus methane and ethane) or a TOC concentration of 20 ppmv on a dry basis corrected to 3 percent oxygen, whichever is less stringent, 40 CFR 60.612(a), 60.662(a), and 60.702(a)). These standards only require initial or periodic performance testing. As noted by one commenter, Subparts III, NNN, and RRR require that performance tests "be run at full operating conditions and flow rates." See 40 CFR 60.614(a), 60.664(a), and 60.704(a).

EPA cannot agree with the commenter's assertion that these standards are designed only to be met during the conduct of an initial or periodic performance test. Subpart Ea, for example, explicitly states that "[t]he standards under this subpart apply at all times, except during periods of start-up, shutdown, or malfunction." (40 CFR 60.58a(a).) In its discussion of monitoring requirements in the Subpart NNN and RRR proposals, the Agency stated that, "Incinerators used to comply with the proposed emission limit need to be maintained and operated properly if either a 98 weight-percent reduction or reduction to 20 ppmv is to be achieved on a continuing basis." 48 FR 57538, 57550 (December 30, 1983), 55 FR 26953, 26966 (June 29, 1990). Similarly, the discussion of monitoring requirements in the preamble to the Subpart III proposal notes that "control equipment used to comply with the proposed emission limit needs to be properly maintained and operated if 98 percent reduction, or reduction to 20 ppm are to be achieved on a lasting basis." 48 FR 48932, 48945 (October 21, 1983). In the Subpart RRR proposal, EPA stated that the preferred method of monitoring for the proposed standards would be "continuous monitoring of compliance", but determined that such monitoring was not feasible because no

continuous monitor providing data in the format of the standard had been demonstrated for the relevant control technologies. 55 FR at 26966. Furthermore, EPA explicitly discussed the effects of decreasing organic concentrations on the ability of best demonstrated technology to achieve the standard. In the proposals for Subparts III, NNN, and RRR, the Agency noted that at approximately 2000 ppm VOC by volume, the reduction efficiency of a thermal incinerator will begin to decline because of the low volume of organics. See 48 FR at 48938, 48 FR at 57547, and 55 FR 26953 at 26963. The 20 ppmv threshold was established to address this concern. Id. Because these standards provide an alternative standard for circumstances in which the primary standard cannot be met, EPA believes that these standards evidence EPA's intent that the standards must be met continuously.

Other percent reduction standards with periodic compliance determinations. The standards for Magnetic Tape Coating Facilities (Subpart SSS) requires that coating operations meet a control efficiency of 90 percent or 93 percent, depending on technology, based on several initial determinations. 40 CFR 60.712 The preamble to the final rule clearly establishes that the coating operations percent reduction standard is intended to be complied with on an ongoing basis. In the preamble, EPA considered and rejected an argument raised by several commenters to the proposed rule that the percent reduction standards did not take into account normal variability associated with carbon absorbers and could not be achieved continuously over all averaging periods, including short-term periods. 53 FR 38892, 38901-903 (October 3, 1988). "The Agency has found no basis for concluding that the [93 percent overall VOC emission reduction] standard cannot be achieved continuously and, hence, over both short-term and long-term averaging periods." Id. at 38903.

Finally, as discussed in greater detail in the response to Section 4.1.1, EPA established two separate SO_2 emissions percent reduction standards for standards applicable to Onshore National Gas Processing Facilities (Subpart LLL): one to be satisfied during the initial performance test and a less stringent standard that applied for any subsequent compliance determinations. The final rule preamble and the rule itself state that the second standard is to be complied with continuously. In addition, EPA stated in the preamble to the proposed rule that the percent reduction format was chosen for the standard over total mass or concentration limits to account for variability in the mass flow rates and concentrations of H_2S in the acid gas stream at affected facilities. 49 FR 2656, 2663 (January 20, 1984).

6. Donner Hanna/New Boston Coke/Scott Paper

In addition, EPA disagrees that the Donner Hanna and New Boston Coke Corp. decisions document that the CE revisions are somehow improper. Both Donner Hanna and New Boston Coke Corp. involved similar fact patterns. In each case, EPA brought proceedings against the owners and operators of coke oven batteries in connection with opacity standards contained in state implementation plans. The standards in both cases were "aggregate" rules in which the

standard is measured against a source's aggregate opacity levels over a specified period. In each case, the Agency sought to use information obtained from adaptations of 40 CFR Part 60, Appendix A, Reference Method 9 for enforcement purposes. The courts in both cases held that Method 9 was an inappropriate test method for coke oven batteries and for an aggregate rule. The Donner Hanna court found that the EPA had failed to justify the validity of the adaptation of Method 9 proposed in that case for determining compliance with the opacity standard, while the New Boston Coke Corp. court held that the reliability of the adapted Method 9 employed in that case was not a proper question for resolution on a motion for summary judgment.

The Agency believes that the CE revisions are not contrary to the decisions in these cases. These decisions turned on whether EPA had demonstrated that the Method 9 adaptations were reliable methods of showing compliance with the state opacity standards. The CE revisions provide for the use of information shown to be comparable to information generated by those test methods which are already established as reliable methods of determining compliance. The revisions continue to use existing test methods as the benchmark or referee against which the credibility of other evidence will be judged. As such, the CE revisions provide a framework for courts to resolve the very sorts of reliability questions that were at issue in these cases.

EPA disagrees with those comments which rely on these cases to support the argument that the only permissible means of determining compliance with an emissions or opacity standard is an identified test method which has been developed through formal rulemaking procedures. If the decisions in Donner Hanna and New Boston Coke Corp. were so interpreted, they would clearly conflict with the congressional grant of authority to the EPA in section 113(a) of the Act to bring enforcement actions "on the basis of any information available to the Administrator." Those who contend that exclusive test methods must be associated with each standard are confusing an agency practice of developing test methods to be used with each standard (a practice which the Agency is not abandoning with the promulgation of the CE revisions) with a statutory requirement.

Such an interpretation of these decisions would also be contrary to both the Amoco Oil court's holding that test methods need not be promulgated at the same time as emission standards and subsequent federal cases which more directly address the issue of using non-test method data for compliance determination purposes. As discussed in Section III.A of the preamble to the final rule, the courts in both Sierra Club v. Public Service Company, 894 F. Supp. 1455 (D. Colo. 1995), and Unitek Environmental Services v. Hawaiian Cement, Civ. No. 95-00723 (D. Hawaii 1996), allowed citizens to use credible evidence in enforcement actions under the Clean Air Act. These cases directly address the question of what information can be used for compliance determination purposes under the Act as clarified by the 1990 Amendments and hold that compliance determination is not tied to specific test methods. The CE revisions are being promulgated to remove any potential ambiguities in EPA's regulations so that EPA and state agency enforcement authority is consistent with the Act and the authority of citizens to prove

violations under a section 304 action. The Agency believes that it would be inappropriate for it to retain regulations that arguably impose limitations on regulatory agency enforcement that are not imposed on citizens acting under the authority granted by the Act.

Finally, EPA does not believe that the Washington state approach to compliance determination, as reflected in the Pollution Control Hearings Board's decision in Scott Paper, is contrary to the CE revisions. WAC 173-410-040 (7), the Washington state sulfite pulp mill opacity standard at issue in Scott Paper, stated that, "[t]he opacity determination shall be according to procedures contained in 'Source Test Manual - Procedures for Compliance Testing', on file with the department." At the time of the case, the manual described techniques for visual opacity determination by human inspectors but did not describe methods for opacity determination by continuous monitoring. In the Scott Paper decision, the Board notes, without further explanation, that one reason for reversing the opacity violation penalties is that "[t]he evidence presented does not show that the opacity monitor would record a violation in a manner described in the pertinent regulation." It is unclear whether this statement was intended to reflect some problem with the use of the specific opacity monitor at issue in the Scott Paper case or to indicate that opacity monitoring systems in general could not be used to show a violation of WAC 173-410-040 (7) as then written. Nothing in the Board's decision suggests that information comparable to that generated in the "manner described in the pertinent regulation" could not be used to determine compliance with the standard. Indeed, the lack of an explanation of the Board's reasoning makes it difficult to apply the Scott Paper decision beyond the facts of that case. Moreover, the response of the state agency to that case was consistent with EPA's action in the CE revisions, i.e., the agency modified its regulations to clarify that the opacity monitoring data could be used to determine compliance as the agency had intended all along.

In addition, the commenter that used the Scott Paper decision as an example, recognized in its comments that continuous compliance is required and that the Washington state air regulatory policy does generally provide for the use of information other than that generated in exclusive, regulation-specific test methods to determine compliance with emissions standards and limitations. The commenter submitted as an attachment to its comments a Washington State Department of Ecology policy guidance document on the use of continuous monitoring data for enforcement purposes. That document allows for the use of continuous monitoring to demonstrate compliance with all emissions standards, including those standards which do not explicitly make continuous monitoring a direct measure of compliance. EPA believes this approach to compliance determination is wholly consistent with the CE revisions.

In a similar line of argument, certain commenters referenced an EPA discussion in a preamble to the proposed rule providing guidance on EPA approval of state hazardous air pollutant programs under section 112(l) of the Act. In that preamble, EPA noted that it could approve as equivalent to federal standards state standards that were less stringent in some respects but more stringent in others. The Agency stated that: "EPA recognizes that there are more elements to rules that

affect emission limits or reductions than just a level of control. Equally important are the compliance measures that are required for testing, monitoring, recordkeeping, reporting, operation and maintenance, and compliance certification." 58 FR 29295, 29303 (May 19, 1993). The Agency then went on to provide examples of certain situations in which a state standard with different elements could be considered equally stringent as a federal standard. The first example is where the state standard has a reduced emission reduction percentage requirement but averaged over a shorter period of time. The Agency recognizes that by shortening the averaging time of a standard, the stringency is effectively increased, but nothing in the CE revisions would alter the underlying averaging period in a rule. The second example provided in the proposed preamble is where the reporting requirements are less frequent but the emission control required is increased. That example also is not inconsistent with the CE revisions. Most importantly, the CE revisions do not alter the compliance measures that exist in the underlying rule; the use of any other information must continue to use the existing compliance method as the benchmark for purposes of comparison. In this respect the CE revisions do not raise many of the issues involved in the original enhanced monitoring proposal which would have required the development of a continuous compliance monitoring method for an applicable requirement.

COMMENTERS:

Air Control Techniques (IV-D-800); Robert L. Ajax & Associates (IV-D-777); American Electric Power (IV-D-836); American Petroleum Institute (IV-D-822; IV-D-794); AZ Mining Association (IV-D-834); Associated Industries of MO (IV-D-793); Chemical Manufacturers Association(IV-D-823); Class of '85 Regulatory Response Group (IV-D-831); Clean Air Implementation Project (IV-D-787); Coalition for Clean Air Implementation (IV-D-783); Corporate Environmental Enforcement Council (IV-D-785); Dupont (IV-D-814); Eastman (IV-D-832); Exxon Company, U.S.A (IV-D-816).; Exxon Chemical Americas (IV-D-795); Fertilizer Institute (IV-D-802); Gas Processors Association (IV-D-841); General Electric (IV-D-818); Los Angeles Department of Water and Power (IV-D-806); Integrated Waste Services Association (IV-D-829); Mobil Corporation (IV-D-779; IV-D-821); Muscatine Power (IV-D-807); Natural Resources Defense Council (IV-D-789); NEDA CARP (IV-D-826); NESCAUM (IV-D-803); Northwest Pulp & Paper Association (IV-D-815) ; OH Chamber of Commerce (IV-D-778); OH Chemical Council & OH Chamber of Commerce (IV-D-813); Pacific Gas Transmission Company (IV-D-812); Public Service Company (IV-D-835); SOCMA (IV-D-805); Steel Manufacturer's Association & Specialty Steel Industry of North America (IV-D-833); Texas Title V Planning Committee (IV-D-796); UARG (IV-D-782; IV-D-824); WV Manufacturers Association (IV-D-842)

SECTION 5: Enforcement Exposure

5.1 Comments in Response to May 21, 1996 Policy Paper

SUMMARY: Several industry commenters expressed concern that since "credible evidence" is both broad and subject to interpretation, potential exposure to enforcement actions would increase. The result, as one commenter argued, is that the CE revisions would undermine the goals of better compliance, full disclosure, forthright dealing and partnership. Facilities seeking to improve compliance over time would be penalized while recalcitrants would be rewarded through the availability of a range of new defenses. Another characterized CE as an inappropriate expansion of search and seizure authority that would limit the type and amount of operational data voluntarily recorded.

Other commenters argued that the CE revisions would make it essentially impossible to design a compliance program in view of the potential range of information that the Agency might use to bring an enforcement action. Enforcement agencies would be allowed to use any data that might suggest noncompliance, thereby destroying objectivity. In fact, any enforcer could use every conceivable piece of operational data, circumstantial evidence or new and unprecedented measurement technology to pursue enforcement, according to these commenters. One commenter stated that under the CE revisions a source may be in compliance based on the results of a performance test and yet out of compliance should some other test method reveal different results. Arguing that the use of credible evidence could not be administered fairly because the accuracy of data used would be subject to interpretation and debate, another commenter asked whether EPA believed industry should be assumed guilty until proved innocent by the rigorous testing of so-called "accurate" CE.

Conversely, one Ohio municipal power supplier believed that the CE proposal is a reasonable, common-sense approach that should level the playing field for good environmental citizens. Agreeing, an environmental group argued that using credible evidence to determine compliance is good policy. Better information makes better decisions -- CEM and parametric monitoring data are generally more representative of actual emissions than reference test data, which at best shows whether a source is capable of compliance. (Another commenter, making the same point, cited a GAO report which concludes that performance tests indicate whether a source is capable of being in compliance rather than whether it is in compliance in its day to day operations.) Since CEM and parametric monitoring data often provide the only real opportunity for EPA and citizens to enforce the Act, commenters argued that, to exclude credible evidence would send a message that citizens and government must turn a blind eye to clear evidence of violations.

According to a state agency association, the use of CE will lead to fairer, more uniform and more cost effective enforcement. It will ensure that legitimate emission data, such as CEM and parametric monitoring data, will be available to determine enforcement actions and penalties.

Reference methods, on the other hand, are expensive and limited in ability to demonstrate long term or continuous compliance, according to this association. The use of credible evidence will allow more efficient use of limited resources by allowing the use of additional data for enforcement without the intensive investment of resources required for reference method testing or observation.

Another association of State and local agencies commented that CE used to supplement reference test methods will provide increased flexibility to state and local air agencies in ensuring compliance. Reference methods, they pointed out, ensure uniformity but are of limited use. In addition, this association argues that the CE revisions also provide the regulated community advantages; for example, in the enforcement context, credible evidence could be used to rebut allegations of noncompliance as well as to limit the duration of a violation.

In general, industry commenters were not reassured by EPA's proposal of enforcement discretion. These commenters stated that promises not to take civil enforcement for minor violations provide little comfort. In fact, some argued, administrative enforcement mechanisms, including the issuance of Notices of Violation, are just as bad and much more prevalent. In addition, the enforcement policy would do nothing to mitigate the potential for citizen suits. If the rule fails to clarify the difference between significant and insignificant violations and provide safeguards against enforcement of minor violations, the result will be time-consuming, resource-intensive, and costly for sources without environmental benefit, according to some commenters. One commenter cited the Colorado PSC case as an illustrative example, estimating that the 19,000 alleged opacity violations amounted to a 99% compliance rate. In addition, explained another commenter, responsible officials will not tolerate occasional excursions if EPA considers them technically to be violations -- allowing the continuance of occasional violations would raise the prospect of criminal liability. Commenters argued that concerns about criminal liability because of CE have been heightened by recent cases that appear to lower the threshold for establishing a "knowing" violation. As a result, companies will be forced to spend huge sums of money to ensure against environmentally-inconsequential, occasional, short-term exceedances of standards. Unless EPA were to specify a certain defined percentage of exceedances that would not be non-compliance, sources will be forced to avoid needless enforcement exposure by negotiating into their permits complex combinations of operating conditions, process/control variations and overall compliance time (such as 95%) sufficient to reflect the "compliance" contemplated by an underlying standard or limit.

A public interest attorney group, on the other hand, maintained that industry's fear that the use of CE will encourage a flood of citizen suits for minor violations is misplaced. The cost and difficulty of litigation, as well as the lack of any opportunity for personal gain, will generally ensure only significant violators are sued. An environmental group agreed, pointing out that while the authority remains for EPA and citizens to enforce all violations, no matter how small, neither is likely to begin targeting de minimis violations. Both commenters pointed to the

historical record. According to these commenters, analysis of a number of CWA citizen suit decisions reveals that most cases involved a large number of violations and mostly significant penalties. In addition, the attorney group pointed out, CEM data help distinguish between minor and serious violations, and allow substantially greater efficiency in identifying violators and in focusing only on the most serious violators. In fact, this group asserted that is has often found that stack test data are significantly out of date, and that a source had recently achieved compliance as reported in CEM summaries. Thus, the group was dissuaded from pursuing violators that otherwise might have been targeted.

Two industry commenters raised concerns with respect to the implications of CE and state and federal field citation programs. According to one, CE could have the effect of allowing EPA and state inspectors to write up a series of multi-thousand dollar field citations for minor violations based on inspection of operating records not identified in permits or regulations. Another expressed particular concern about field citations, because field inspectors would have nearly unbridled enforcement discretion regarding the use of available data with little, if any, senior management review. Inspectors could issue field citations immediately upon discovery of an apparent violation. As a result, the use of CE for field citations would expand these programs beyond anything intended by Congress, would result in increased recordkeeping so that a source could provide a complete analysis of its compliance situation for every apparent excursion, and, to minimize risk, would force sources to demonstrate instantaneous compliance with applicable regulations.

RESPONSE: See final rule preamble, particularly Section III.A. As noted in that section, the use of CE to prove a violation will be limited to situations in which the data are adequate to document that a test method, if conducted, would show a violation. This limitation addresses the concerns raised by many commenters that the CE revisions will provide EPA or citizens unbridled discretion to prove violations of the Act or to increase the stringency of underlying requirements. The CE revisions promulgated in this action do not affect this longstanding EPA authority under the Act. As a factual matter, the 19,000 violations in the Sierra Club v. PSC case amounted to less than 99% compliance. More importantly, the plaintiffs alleged that during the months of November and December 1992, half of the ESP for one of the units was out of service, yet production continued, resulting in almost continuous violations during this time period. Many of the comments raise the policy question of whether using CE is a good idea. See Section 2.2 above for a discussion of the reasons why EPA believes that this rulemaking is a wise policy choice.

EPA does not agree with the comment that the CE revisions will subject the regulated community to an increased risk of criminal liability because recent cases have lowered the threshold for establishing a "knowing" violation of environmental law. In each of the cases cited by the commenter (United States v. Weitzenhoff, 1 F.3d 1523 (9th Cir. 1993), amended, reh'g en banc denied, 35 F.3d 1275, cert. denied, 115 S.Ct. 939 (1995); United States v. Laughlin, 10 F.3d 961

(2d Cir. 1993), cert. denied, 114 S.Ct. 1649 (1994); United States v. Sellers, 926 F.2d 410 (5th Cir. 1991); and United States v. Dee, 912 F.2d 741 (4th Cir. 1990), cert. denied, 499 U.S. 419 (1991)), defendants argued that they had not "knowingly" committed environmental crimes because they lacked knowledge that their activities were prohibited, that the substances being handled were regulated, or that a permit for handling such substances was required. The courts rejected these arguments, holding that the government must only prove that the defendants had some knowledge of the hazardous nature of the substances involved and that they had knowingly engaged in the proscribed acts. In large part, these cases merely uphold the general rule that "ignorance of the law is no excuse." Nor is the application of this principle to the regulation of hazardous or dangerous substances a recent development. The courts in all the above-cited cases relied on the Supreme Court's 1971 decision in United States v. International Minerals & Chem. Corp. that a criminal conviction for the "knowing" violation of ICC regulations on the shipping of sulfuric acid only required proof that the defendant knowingly committed the prohibited acts and did not require that the defendant had knowledge of the violated regulatory requirements. 402 U.S. 558, 563-65 (1971). The Agency therefore does not believe that the threshold for establishing a "knowing" violation of environmental laws has been lowered. EPA also does not agree with the argument that the CE revisions would cause increased criminal liability. The CE revisions do not change compliance obligations. As such, the scope of potential criminal liability is unaffected by this rulemaking.

Finally, at least one commenter expressed concern that the proposed credible evidence revisions could greatly expand the intended scope of the field citation program, and would greatly increase "defensive" recordkeeping to avoid the immediate issuance of a field citation. As EPA stated in its proposed field citation regulations, the field citation program is intended to address appropriate minor violations, as determined by criteria including the violation's clear recognizability, risk, duration and frequency. See 59 FR 22778, 22792 (May 3, 1994). The credible evidence revisions will not alter any of this -- violations that are not minor, not clearly recognizable, or otherwise not within developing program guidance will not be the subject of field citations. Accordingly, today's final action will have little or no effect on the field citation program.

COMMENTERS:
AMP-OH (IV-D-788; IV-D-837; IV-D-838; IV-D-839); Associated Industries of MO (IV-D-793); BHP Copper (IV-D-776); Chemical Manufacturers Association (IV-D-823); Clean Air Implementation Project (IV-D-787); Clean Air Act Services Steering Committee (DoD) (IV-D-804); Coalition for Clean Air Implementation (IV-D-819); Dupont (IV-D-814); Exxon Chemical Americas (IV-D-795); Fertilizer Institute (IV-D-802); General Electric (IV-D-818); IL Municipal Electric Agency (IV-D-808); Los Angeles Department of Water and Power (IV-D-806); Integrated Waste Services Association (IV-D-829); International Automobile Manufacturers (IV-D-784); Muscatine Power (IV-D-807); National Stone Association (IV-D-828); Natural Resources Defense Council (IV-D-789); NESCAUM (IV-D-803); OH Aggregates Association (IV-D-774); OH Chamber of Commerce (IV-D-778); OH Chemical Council & OH Chamber of

Commerce (IV-D-778); Southwestern Public Service Company (IV-D-810); Trial Lawyers for Public Justice (IV-D-780); UARG (IV-D-824)

SECTION 6: Necessity for the Use of "Any Credible Evidence"

6.1 Comments in Response to May 21, 1996 Policy Paper

SUMMARY: Industry commenters argued that the CE revisions are unnecessary for a variety of reasons. A few suggested that if the Agency's objective is to enable the prosecution of gross violators or "midnight dumpers," sufficient enforcement tools are currently available. Deliberate evasion, one commenter pointed out, is so clear that the Act's general duty provisions simply could not be unenforceable due to vagueness. Furthermore, commenters noted that proper operation of control equipment is a common requirement; virtually all rules require monitoring of control devices and reporting of deviations or by-pass; and finally, any blatant exceedances of an emission limit would likely trip circumvention clauses or potential to emit thresholds. With respect to emissions violations in general, one commenter pointed out that the use of CE is not needed by the states or EPA to more readily and rapidly assess compliance since any suspected non-compliance can be confirmed through a request for performance testing.

Some commenters suggested that CE revisions are likewise unnecessary for the purposes of compliance certifications. According to one industry commenter, nothing in the Act currently requires frequent reference tests. In fact, states have long accepted annual or biannual reference tests along with operating data as an adequate means for demonstrating compliance. Another commenter asserted that the CE revisions are not needed by industry since compliance can be certified if an owner/operator has done what current rules require, including any monitoring, recordkeeping and reporting. Another commenter argued that as a practical matter sources would need to "go through every file drawer" and examine large amounts of information before certifying compliance. Even then, sources would be uncertain whether they had reviewed all potentially credible compliance information.

Finally, the commenters stated that the CE revisions are not necessary to allow sources facing enforcement to use credible evidence. Nothing in the Act or its regulations, argued another industry commenter, currently prohibits sources from using credible evidence to rebut evidence of violations or to establish a return to compliance.

RESPONSE: With respect to the need for the CE revisions for the purpose of certifying compliance, see final rule preamble, particularly Section III.B. With respect to the need for the CE revisions to provide for effective enforcement, EPA believes that the ability to rely on credible evidence to prove a violation in absence of reference method test data will play a limited, but important role, in assuring compliance with the Act. Section II.B. of the final rule preamble discusses the potential benefits of credible evidence to EPA's efforts to assure compliance with the Act. With respect to the need for CE revisions to prove gross violations, EPA believes that while it may be possible to prove that such actions are in violation of the good operation and maintenance provisions, it is a more efficient use of Agency and source resources to establish

violations of a clear numerical emission standard than to prove what constitutes good operation and maintenance and violations thereof. The comments disputing the need for the CE revisions to allow sources to use credible evidence to rebut an alleged violation or to document a return to compliance do not establish a reason to not proceed with the CE revisions. In fact, to the extent these comments are accurate, the comments point out the need to promulgate the revisions so that all parties to an enforcement action (not just the party being enforced against) have an opportunity to use credible evidence to document the facts of a particular case.

COMMENTERS:
Associated Industries of MO (IV-D-793); Chemical Manufacturers Association (IV-D-823); Clean Air Implementation Project (IV-D-787); Clean Air Act Services Steering Committee (DoD) (IV-D-804); Exxon Company, U.S.A. (IV-D-816); Exxon Chemical Americas (IV-D-795); Fertilizer Institute (IV-D-802); Texas Title V Planning Committee (IV-D-796)

SECTION 7: Increased Burden Associated with the Use of "Any Credible Evidence"

7.1 Comments in Response to March 21, 1996 Policy Paper

SUMMARY: According to some industry commenters, the claimed benefits associated with the CE revisions are illusory. These commenters argued that the CE revisions will increase the burden for all parties by extending emission reduction requirements to operating conditions where they cannot be met, by making the basis for certifying compliance unclear, and by greatly expanding the amount of information that must be considered and defended.

Several commenters highlighted an increased burden to keep and review records. Because of the threat of enforcement and the uncertainty about what information must be kept, sources would keep everything, just in case. One commenter believed industry will be forced, in the context of compliance certifications, to review exhaustively all of the emission monitoring data they generate and explain in detail any discrepancies. Others suggested that the CE revisions will increase the burden on EPA and the states, who will have to decide on a case-by-case basis what the appropriate compliance determination method is for each standard, and on state permit writers, who will be forced to write into each permit every potential compliance method that could be used to demonstrate compliance.

On the other hand, an association of state and local agencies maintained that the use of CE will save state and local agencies time and money as an alternative to resource-intensive source testing and analysis. In its comments, another association of state agencies pointed out that the CE revisions will not increase recordkeeping burdens since nothing beyond what is required by a title V permit and the CAM rule is likely to be requested by EPA and states. An environmental group agreed, explaining that the use of credible evidence simply allows everyone to use data already being kept.

RESPONSE: See final rule preamble, particularly Section III.B. The Agency disagrees that the CE revisions will impose significant burdens. First, the CE revisions impose no new monitoring, reporting or recordkeeping obligations on any party. The revisions merely allow for presenting evidence that -- even though no official compliance test data are available -- a source is in compliance or in violation based on data that are adequate to document what a test would have shown if it had been conducted. The commenters raise several speculative concerns about burdens which are not substantiated by any documentation that such concerns are warranted. For example, there is no requirement in this rulemaking that all potential compliance methods be written into a permit.

COMMENTERS:
Chemical Manufacturers Association (IV-D-823); Class of ‘85 Regulatory Response Group (IV-D-831); Clean Air Implementation Project (IV-D-787); Corporate Environmental Enforcement

Council (IV-D-785); Exxon Chemical Americas (IV-D-795); Fertilizer Institute (IV-D-802); Los Angeles Department of Water and Power (IV-D-806); Muscatine Power (IV-D-807); National Stone Association (IV-D-828); Natural Resources Defense Council (IV-D-789); NESCAUM (IV-D-803); SOCMA (IV-D-805); STAPPA/ALAPCO (IV-D-786)

SECTION 8: Regulatory Process

8.1 Comments in Response to March 21, 1996 Policy Paper

SUMMARY: Issues with respect to the regulatory process and the promulgation of the CE revisions received considerable attention by commenters. A significant number of commenters argued that the Agency should repropose the CE revisions. In short, many suggested that EPA's chosen course of action violates the Administrative Procedures Act (APA) and the Clean Air Act.

One commenter explained that as a matter of administrative law, the 1993 Enhanced Monitoring proposed rule was "dead and buried," and it is improper and misleading for EPA to attempt to resurrect parts of it without providing new notice and comment opportunities. Furthermore, this commenter claimed that the EM proposal and the 3/22/96 draft CE policy document are themselves inadequate. Section 307 of the Act requires EPA to provide a statement of basis and purpose of a proposed regulation in order to adequately apprise parties of a proposed action. A proposed regulation must include a summary of the factual data on which the proposal is based, the methodology used in obtaining and analyzing the data, and major legal interpretations and policy considerations underlying the proposed rule. Section 553 of the APA requires EPA to issue a concise statement of the basis and purpose of a final rule and to respond to comments raised by interested parties. With respect to these requirements, one commenter characterized the Agency's current proposal as an inadequate and unintelligible explanation of the content of the credible evidence that the Agency intends to use to supplement enforcement actions. Another commenter highlighted the lack of analysis regarding the potential impact on existing standards. Others pointed specifically to EPA's failure to address comments concerning lack of authority, its failure to justify its claim that the stringency of underlying standards is not increased, and its failure to provide an adequate opportunity for notice and comment to revise compliance methods established with individual standards. Any change to compliance test methods, one commenter notes, should be initiated through formal rulemakings to change existing standards, not through arbitrary changes in enforcement policy.

One commenter argued that EPA, in promulgating the CE revisions had failed to meet its duty under section 553 of the Administrative Procedures Act and section 307 of the Clean Air Act to respond to all significant comments raised under a proposed rule. This commenter cited a passage from the Portland Cement case describing this duty (EPA "has a continuing duty to take a 'hard look' at the problems involved in its regulatory task, and that includes an obligation to comment on matters identified as potentially significant . . . ."). 486 F.2d at 394. The commenter maintains that the EPA has failed to address significant issues raised by many commenters about the statutory interpretation of the "any credible evidence" language in the penalty assessment provisions of the 1990 Clean Air Act Amendments.

In addition, the suggestion was made by many that the CE revisions must be coordinated with

promulgation of the CAM rule. One commenter suggested that it is inappropriate for EPA to push through piecemeal revisions to regulations instead of following the path initially chosen to implement revisions relating to section 113 at the same time changes to section 114 are promulgated. Insisting that the Agency must reconsider the CE revisions in the context of CAM, another commenter argued that EPA failed to recognize that the use of credible evidence under an enhanced monitoring regime is fundamentally different from use of credible evidence under a compliance assurance monitoring regime.

In short, commenters asserted that the Agency has failed to adequately explain the linkage between credible evidence and compliance assurance monitoring. One commenter elaborated on this point, explaining that industry support for CAM is based on an understanding that CAM data would not change the compliance obligation of emission standards because CAM data would not be evidence of a violation of an emission standard; with the CE revisions, CAM data would presumably become credible evidence of a violation of an emission standard.

RESPONSE: See final rule preamble, particularly Section III.C.6.

The comments that CE must be reproposed because EPA has reevaluated its approach on enhanced monitoring are not well-taken. These comments are addressed at length in the preamble to the final rule. In this document EPA addresses several specific points raised by commenters. First, one comment claimed that CE must be reproposed because EPA had decided to reevaluate the October 1993 enhanced monitoring proposal. EPA disagrees. EPA's reevaluation of the approach contained in its October 1993 proposed enhanced monitoring rule did not, as the commenter claims, render that proposal "dead and buried" as a matter of administrative law. EPA never formally terminated the rulemaking. The case relied upon by the commenter, Action on Smoking and Health v. CAB, 713 F.2d 795, 800 (D.C. Cir. 1983), is not on point. There, the CAB attempted to re-promulgate a rule, which had been overturned by the D.C. Circuit, without undertaking notice and comment procedures following remand from the court. Finding that the initial rulemaking had culminated with the promulgation of a final rule, the court held CAB could not rely on its initial proposal as providing notice and a comment opportunity for the repromulgation after remand. EPA's announcement that it would reexamine one aspect of a proposal does not amount to the culmination of a rulemaking such as in the above case. Moreover, EPA's announced reexamination pertained directly only to an aspect of the October 1993 rulemaking, the enhanced monitoring requirements, not addressed by today's rulemaking. In any event, as noted in the preamble, affected parties have been offered an extended opportunity to comment on this rulemaking subsequent to the announced reexamination of the enhanced monitoring requirements.

Second, several comments claimed that CE may change the draft CAM approach and therefore reproposal of the two rulemakings in one proposal is necessary. These comments state that CE will change CAM such that CAM data can be used in an enforcement proceeding. EPA agrees

that CE clarifies that monitoring data, gathered under the draft CAM approach (if that approach is adopted) or any other monitoring requirements, may be used in an enforcement proceeding. EPA does not believe this is a reason that EPA must repropose CE and CAM as a single rule. To the extent the commenters are concerned with evidence gathered under the draft CAM approach, they have had the opportunity to comment on the degree to which any monitoring data, including CAM data, can be used in enforcement actions both in the context of this rulemaking and in the CAM rulemaking. In addition, it is worth noting that the CAM rule does not present unique issues with respect to the CE revisions. Many existing standards already create monitoring obligations that will interact with the CE revisions. The concerns of commenters on these interrelationships have been exhaustively aired in response to the original proposed CE revisions and in subsequent fora. Thus, there is no procedural reason to repropose the CE revisions or to withhold promulgation pending the CAM rule.

The Agency has responded at length to all comments, including those related to stringency, the statutory authority for the CE revisions, and the interpretation of the "any credible evidence" language in section 113(e) of the Act. See final rule preamble, particularly Sections III.C.5. and III.D. and the other responses in this document. EPA believes that it is appropriate to respond to comments at the time of promulgation of the final rule. Finally, EPA reiterates that the CE revisions do not change the reference methods specified for particular standards, unlike the EM proposal; rather, under CE, those methods remain the benchmark by which compliance is measured. See Section III.A of the final rule preamble.

COMMENTERS:
Air Control Techniques (IV-D-800); American Petroleum Institute (IV-D-794, IV-D-822); AZ Mining Association (IV-D-834); Associated Industries of MO (IV-D-793); BP Oil (IV-D-811); Clean Air Implementation Project (IV-D-819); Clean Air Act Services Steering Committee (DoD) (IV-D-804); Corporate Environmental Enforcement Council (IV-D-785); Cinergy (IV-D-820); Exxon Company, U.S.A. (IV-D-816).; Exxon Chemical Americas (IV-D-795); Fertilizer Institute (IV-D-802); Gas Processors Association (IV-D-841); General Electric (IV-D-818); IL Municipal Electric Agency (IV-D-808); Integrated Waste Services Association (IV-D-829); Judy Kosovich (IV-D-840); Mobil Corporation (IV-D-779; IV-D-821); Muscatine Power (IV-D-807); NEDA CARP (IV-D-826); OH Chemical Council & OH Chamber of Commerce (IV-D-813); Precision Metal Forming (IV-D-817); Steel Manufacturers Association & Specialty Steel Industry of North America(IV-D-833); Texas Natural Resource Conservation Commission (IV-D-843); UARG (IV-D-782; IV-D-824)

SUMMARY: One commenter stated that neither Section 113 nor any other provision of the Clean Air Act grants the Administrator the authority to promulgate rules concerning the use of credible evidence. The commenter cites American Petroleum Institute v. EPA, 52 F.3d 1113 (D.C. Cir. 1995), which holds that the EPA may not rely on its general authority to make rules under Section 301 of the Act when a specific statutory directive defines the relevant functions of

EPA in a particular area or when exercise of the rulemaking authority exceeds the power delegated to the Agency by Congress.

RESPONSE: See generally final rule preamble, particularly Section III.C.1., for a discussion of the statutory authority for the CE revisions. EPA disagrees with the commenter's reliance on the American Petroleum Institute case. In that case, the District of Columbia Circuit held that EPA could not promulgate a rule requiring the use of renewable oxygenates in reformulated gasoline where a federal statute directed the Agency to adopt reformulated gasoline rules to achieve the greatest achievable reductions in emissions of volatile organic compounds and toxic air pollutants and where the renewable oxygenate rule, which was designed to promote the use of renewable fuels, achieved no reductions of VOC or toxics and potentially could have increased such emissions. 52 F.3d 1113. That decision rested on the Court's finding that EPA was attempting to use its general authority under section 301 of the Act to accomplish an objective that the Court found to be in conflict with another section of the Act. The CE revisions do not conflict with the goals of any specific statutory directive. On the contrary, EPA believes the rule furthers the Agency's ability to ensure that sources are complying with emission limitations and standards and to initiate administrative, civil, or criminal enforcement actions "on the basis of any information available to the Administrator" as authorized by Section 113(a) of the Act. In addition, as explained in the final rule preamble, the CE revisions are also consistent with section 113(e), section 114(a)(3) and various provisions of title V.

COMMENTERS:
American Petroleum Institute (IV-D-794; IV-D-822)

SECTION 9: Voluntary Data Collection

9.1 Comments in Response to March 21, 1996 Policy Paper

SUMMARY: Some commenters expressed concern that the use of credible evidence will penalize good corporate citizens and sound environmental practices. Some commenters argued that the CE revisions threaten to frustrate, rather than advance, compliance by providing a strong incentive to cease any uncompelled diagnostic testing or process monitoring. It would discourage the generation of information that allows regulated parties to evaluate and improve performance and assure compliance; it would disproportionately impact companies doing the most to monitor and maintain equipment; and it would threaten self-auditing programs. In addition, as a result of the CE revisions, sources may be more inclined to push back on any process monitoring due to enforcement concerns.

RESPONSE: The Agency disagrees with these speculative concerns. The Agency has developed policies with respect to audits and due diligence programs See 60 FR 66706 (December 22, 1995). The CE revisions will not change this policy or EPA's approach to enforcement in these situations. The Agency also notes that the CE revisions require that the party seeking to use credible evidence document that the data can be compared to data that would have been generated by a reference test method. For non-emissions related data, such as process monitoring, this burden will require a detailed case-by-case review of the data. Where the source proactively responds to the data to prevent pollution and avoid non-compliance, EPA believes that the source generally would not present a significant enforcement concern.

COMMENTERS:
BP Oil (IV-D-811); Chemical Manufacturers Association (IV-D-823); Eastman (IV-D-832); Fertilizer Institute (IV-D-802); Gas Producers Association (IV-D-841); NEDA CARP (IV-D-781;IV-D-826); Texas Title V Planning Committee (IV-D-796)

SECTION 10: Miscellaneous Comments

10.1 Comments in Response to March 21, 1996 Policy Paper

SUMMARY: Two industry commenters argued that the CE revisions were not about source regulation, but rather amounted to nothing more than an attempt by EPA to supplement its enforcement activities by unilaterally imposing an adversarial disadvantage upon the regulated community.

RESPONSE: The Agency objects to this characterization of the CE revisions. The Agency believes that the narrow interpretation of EPA's regulations in some judicial decisions may frustrate effective enforcement of clear violations of the Act. Rather than providing an adversarial advantage, EPA believes the CE revisions level the playing field and allow all parties to an enforcement action to introduce evidence that is relevant to proving its claims.

COMMENTERS:
Mobil (IV-D-779); OH Chemical Council and OH Chamber of Commerce (IV-D-813)

SUMMARY: Another industry group said that the CE revisions would disrupt the state-federal partnership established under the Clean Air Act. It was claimed that the CE revisions amount to an exceedance of EPA's authority under section 110(i) which allows EPA to approve or disapprove SIPs presented by a state, but not to selectively change a SIP. The commenter also argued that nothing in the Act allows the EPA to establish rules of evidence for state courts or agencies. An attorney group, on the other hand, strongly supported the CE revisions as consistent with the language and intent of the Act. The commenter felt that CE is essential for citizen enforcement of the Act, arguing that CE should provide a level of data accessibility and admissibility equivalent to or greater than that provided under the Clean Water Act. As a corollary, the commenter added that EPA should continue to reject calls for a de minimis exemption and should require 100% compliance. An environmental group went further by declaring that the ability to use credible evidence does not reduce the necessity for an "enhanced monitoring" rule. The CAM rule (in conjunction with the CE revisions), it was argued, will not fulfill the monitoring requirements of section 114.

RESPONSE: The Agency does not believe that the CE revisions are a unilateral attempt to selectively change a SIP or that the revisions attempt to establish rules of evidence. In addition, the final CE revisions do not include the proposed presumptions concerning various types of information. The reason for this change was in part to avoid modifying any particular rules of evidence. The SIP call has been initiated under EPA's authority under section 110 of the Act. In the October 22, 1993, proposal, EPA announced that it planned to call for States to amend their applicable implementation plans to ensure that owners or operators may use enhanced monitoring (or other monitoring approved for the source pursuant to part 70) for compliance certification

purposes, and that data from this monitoring, along with any other credible evidence, may be used as evidence of a violation of an applicable plan. 58 FR 54660. In December 1993 and February 1994, the Office of Air and Radiation's Stationary Source Compliance Division, the division then responsible for writing and implementing the enhanced monitoring rules, issued memoranda to EPA's Regional offices instructing them to conduct the SIP call. As of September 1996, fifteen states and local air pollution control districts, together with the Commonwealth of Puerto Rico, had responded to the call and submitted SIP amendments for EPA approval. Kansas, Iowa, Nebraska, North Dakota, Georgia and Puerto Rico had received approval; the other states and districts' revisions were pending.

For substantially the same reasons that allow EPA to go forward with today's final rule, EPA has the authority to initiate and continue this SIP call. EPA's decision to forego the enhanced monitoring approach in favor of the CAM proposal has no effect on the basic goals of the SIP call, which are to clarify that non-reference test data can be used in enforcement actions, and to remove any potential ambiguity regarding this data's use for Title V compliance certifications.

The Agency acknowledges the support of those commenters that indicated the appropriateness of the CE revisions. The Agency will continue to focus its enforcement resources on those cases in which significant violations occur, as discussed in Section III.A of the final rule preamble. To the extent any formal exception to compliance is warranted, that type of exception is properly considered in the context of potential revisions to underlying applicable requirements. See the discussion above in Section 4.1.1 of this document for examples of situations in which EPA has added such exceptions to assure that requirements are properly adopted. Finally, comments concerning the appropriateness of the CAM rulemaking are beyond the scope of this proceeding and will not be addressed in this document.

COMMENTERS:
Texas Title V Planning Committee (IV-D-796); Trial Lawyers for Public Justice (IV-D-780); NRDC (IV-D-789)

SUMMARY: Some industry commenters were alarmed by the potential effects of CE on existing and future regulations. For example, one industry association felt that CE would alter state RACT requirements. Another industry group said that once the method of compliance is divorced from the emission limit, every rule would have to be examined to determine if limits remain consistent with the data used to support them and with the criteria used for establishing the compliance method. The same commenter wondered how EPA would demonstrate how future standards are achievable if, due to CE, it cannot articulate what the standard requires. Continuing, the commenter argued that, because EPA must demonstrate that every emission limit is achievable, it will be forced to expend huge amounts of resources showing that RACT, BACT, LAER, GACT, MACT and other standards are continuously achievable. Yet another industry association maintained that CE should not apply to standards promulgated after 1990, since those

regulations include detailed periodic testing and emissions process monitoring for demonstrating continuous compliance. The same commenter also said that EPA should confirm that it would be inappropriate to use MACT process monitoring data for determining compliance with state requirements.

RESPONSE: The use of CE does not divorce the method of determining compliance from the emission limit. As discussed in detail in Section III.A. of the final rule preamble, the reference method established as the compliance method for a standard will remain the benchmark against which compliance is measured. Furthermore, because EPA has always maintained that continuous compliance is required unless specifically excused, the CE revisions will not increase the burdens on the Agency to develop a defensible record in support of establishing a standard.

COMMENTERS:
SOCMA (IV-D-805); Texas Title V Planning Committee (IV-D-796); Integrated Waste Services Association (IV-D-829)

SUMMARY: One electric utility asked that electric generating units less than 25 MWe be exempt from the CE revisions. Such an exemption was said to be consistent with the acid rain provisions of the Act. Another utility argued that small generators should not be required to bear additional disproportionate burdens that will tilt the playing field unfairly against them.

RESPONSE: Although existing electric generating units less than 25 MWe are exempt from Acid Rain Program requirements under title IV of the Act, that exemption does not mean that such units are generally exempt from all requirements of the Act. Given that the CE revisions impose no new compliance obligations on these sources, EPA does not believe any exception is warranted.

COMMENTERS:
IL Municipal Electric Agency (IV-D-803); Muscatine Power IV-D-807)

SUMMARY: A local agency argued that the CE revisions would likely cause great harm to compliance and enforcement efforts by causing uncertainty for sources and state and local agencies regarding compliance obligations. The agency expressed concern that the CE revisions might be interpreted to allow variances from specific testing or monitoring requirements and requested that language be added to discourage such an interpretation. It was added that inspections could become worthless unless inspectors were versed in the implications of every conceivable modification of monitoring technique. The result would be an explosion of litigation between agencies and the regulated community with "battles of experts" decided by juries unequipped to handle technical issues efficiently. To avoid this situation, agency rules requiring prior approval for alternative or equivalent testing and monitoring must be maintained, rather than promulgation of the CE revisions. This approach would reduce the compliance burden on

industry, since specific and unambiguous alternative compliance demonstrations would be defined. There would also be a reduction of the burden on EPA and state and local agencies in the resolution of disputes over violations.

The same local agency added that in order to eliminate the EPA's concern that it may be bound by a methodology required by a SIP, EPA's regulations or SIPs could recognize the expertise of EPA and state and local agencies and explicitly deem those agencies' reliance on alternative testing and monitoring methods to satisfy such agency's own approval requirements. As an alternative to this approach, EPA could at least limit the use of CE to compliance certifications and federal enforcement actions. The use of CE should also be limited to establishing violations of numerical emissions limits at Title V sources.

RESPONSE: The Agency believes these comments misinterpret the meaning of the CE revisions. These revisions do not allow a source to modify, on its own initiative without agency approval, required monitoring or testing requirements; to do so would violate the obligation to conduct such monitoring or testing.

COMMENTERS:
County of San Diego (IV-D-790; IV-D-799)

SUMMARY: An industry association argued that the Open Market Trading Rule (OMTR) does not support the proposed CE revisions and, in fact, conflicts with it many significant ways. The OMTR proposal recognized the need for reliable, exclusive compliance methodologies that have been approved by the government and that both government and sources can rely on in making decisions. By contrast, CE removes all certainty and predictability in compliance obligations. In support of this position, the commenter went on to argue that the OMTR will not override reference test methods, but will require their use where available.

RESPONSE: The final rule preamble does not consider the use of CE in the context of trading programs as a potential benefit of the rule. Because trading programs by their nature include procedures to account for emissions and enable trades, any role for CE in such a program is likely to be minor.

COMMENTERS:
Coalition for Clean Air Implementation (IV-D-819)

SUMMARY: One commenter suggested that the rule provide for a period of adjustment with an incentivized, limited and voluntary opportunity for sources to undertake the process of enhanced self-auditing (e.g. systematic evaluation of actual performance over range of normal operating conditions). A private citizen further suggested that (1) the on/off status of production lines and pollution control equipment at sources be transmitted to a central processor so that certain

conditions could trigger enforcement; (2) the use of credible evidence be limited to situations where employee or citizen complaints meet certain criteria; and (3) companies be required to post a hot line telephone number where violations could be reported.

RESPONSE: These suggestions go beyond the limited intent and scope of the CE revisions, which enable the use of data to prove compliance or noncompliance without creating any impact on existing compliance obligations or new compliance obligations. Therefore, EPA does not believe these suggestions are appropriate.

COMMENTERS:
ENERAC (IV-D-830); Judy Kosovich (IV-D-840)

SECTION 11: Comments Made in Recent Letter to Browner and Proposed Responses

SUMMARY: The amendment to Part 51 is unauthorized because there is nothing in section 110, section 113, or any other section of the statute that requires states to incorporate a credible evidence rule into their implementation plans. EPA may only require a revision of a SIP where EPA finds that the SIP is "substantially inadequate" to comply with NAAQS or any other requirement of the Act. [Commenter: UARG]

RESPONSE: EPA disagrees with this comment. EPA is not by this rulemaking revising any SIP; rather, EPA is amending the rules governing SIPs. Such rules are promulgated under EPA's authority to: (1) require SIPs to provide adequate enforcement authority (see sections 110(a)(2)(A), (C), and (E)); (2) call for SIP revisions to correct inadequacies (see section 110(k)(5); and (3) "prescribe such regulations as are necessary to carry out [the Administrator's] functions under this chapter." 42 U.S.C. § 7601. Thus, whether this amendment to Part 51 is authorized turns on whether EPA has the authority to adopt an enforcement approach that allows use of any credible evidence. As described in Section III.C of the final rule preamble, EPA believes the Act provides EPA with ample authority to allow enforcement based on any credible evidence.

SUMMARY: By revising the requirements in Part 60, Subpart A, EPA is revising the NSPSs under Subparts D, Da, Db, and GG that apply to electric utilities. [Commenter: UARG]

RESPONSE: EPA is not revising Subparts D, Da, Db, and GG to require that compliance with those standards be continuous. As EPA makes clear in the final rule preamble, this is an evidentiary rule that does not amend the substantive compliance obligation as to any emission standard. Whatever compliance obligation exists as to emission standards prior to the promulgation of the CE revisions is not affected by today's action. Further, EPA disagrees with the commenter's argument that these Subparts do not presently require continuous compliance with emission standards unless the compliance test prescribed in the Subpart specifies that compliance will be determined using a continuous test method. As EPA made clear in Section III.D of the final rule preamble, continuous compliance with emission standards is the norm under the Act unless the standard explicitly specifies otherwise. The commenter has identified no language in these Subparts that supports its contention that sources can emit pollutants at levels higher than the applicable emission standard and remain in compliance with the standard.