

Compliance Assurance Monitoring Rulemaking (40 CFR Parts 64, 70, and 71)
Responses to Public Comments (Part I)

(Comments Submitted in Response to Enhanced Monitoring Proposal)

October 2, 1997

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Table of Contents

	<u>Page</u>
INTRODUCTION.....	1
Section 1: [Reserved].....	4
Section 2: Statutory Purpose	5
Section 2.1: The Authority of Section 114(a)(3) and Related Sections.....	5
Section 2.2: Section 113(a) and the Use of "Any Credible Evidence" to Determine Compliance	23
Section 3: General Regulatory Approach.....	26
Section 3.1: Use of Enhanced Monitoring for Determining Compliance	26
Section 3.2: Flexible Selection versus Source Category Rulemakings	46
Section 3.3: Relation to Part 70 Periodic Monitoring	59
Section 3.4: SIP Call	62
Section 4: Regulatory Benefits and Costs.....	68
Section 4.1: The Regulatory Impact Analysis - General Issues.....	68
Section 4.2: The Regulatory Impact Analysis - Calculation of Benefits	85
Section 4.3: The Regulatory Impact Analysis - Calculation of Costs	95
Section 4.4: General Cost/Benefit Impacts.....	103
Section 4.5: Regulatory Flexibility Analysis (RFA).....	107
Section 5: General Issues	110
Section 5.1: Means of Simplifying or Streamlining Proposal	110
Section 5.2: Relationship to Title I Programs	115
Section 5.3: Technological Innovation and Development.....	117
Section 5.4: Other Miscellaneous General Comments.....	122
Section 6: Applicability (§ 64.1).....	129
Section 6.1: Applicability to Hazardous Air Pollutant Sources (§ 64.1(a)).....	129
Section 6.2: Use of a Percent Threshold for Determining Applicability (§ 64.1(b)).....	138
Section 6.3: Necessity for an Underlying Standard (§ 64.1 Generally).....	150

Section 6.4:	Alternative Applicability Strategies (§ 64.1 Generally)	152
Section 6.5:	Groups of Emissions Units/Fugitives (§ 64.1(b)(2))	161
Section 6.6:	Exemptions - Acid Rain Requirements	168
Section 6.7:	Other Exemptions to Consider	170
Section 6.8:	Relationship to Other Monitoring (§ 64.1(d))	188
Section 6.9:	Agricultural Irrigation/Small Gas-fired Engines	190
Section 7:	Definitions (§ 64.2)	192
Section 7.1:	Applicable Emission Limitation or Standard	192
Section 7.2:	Continuous Compliance	192
Section 7.3:	Demonstrated Compliance Parameter Level.....	198
Section 7.4:	Deviation	199
Section 7.5:	Emission Limitation or Standard.....	202
Section 7.6:	Emissions Unit.....	207
Section 7.7:	Enhanced Monitoring.....	208
Section 7.8:	Enhanced Monitoring Protocol	210
Section 7.9:	Established Monitoring	211
Section 7.10:	Fugitive Emissions.....	212
Section 7.11:	Intermittent Compliance.....	213
Section 7.12:	Major Source	215
Section 7.13:	Potential to Emit	219
Section 7.14:	Regulated Air Pollutant.....	221
Section 7.15:	Other Definitions to Consider	222
Section 8:	Implementation Requirements (§ 64.3)	226
Section 8.1:	Implementation Through Operating Permits (§ 64.3)	226
Section 8.2:	Permit Modifications (§ 64.3(d))	242
Section 8.3:	Preconstruction Permit Implementation.....	246
Section 9:	General Enhance Monitoring Requirements (§ 64.4)	249
Section 9.1:	General Enhanced Monitoring Protocol Requirements (§ 64.4(a)Generally)	249
Section 9.2:	Criteria for Enhanced Monitoring Protocols (§ 64.4(b))	261
Section 9.3:	Parameter Monitoring (§ 64.4(c))	275
Section 9.4:	Fugitive Emissions Monitoring (§ 64.4(d))	287
Section 9.5:	Selection Process Generally (§ 64.4(e)).....	290
Section 9.6:	Established Monitoring Issues (§ 64.4(e)(1)).....	308
Section 9.7:	Ability to Use Other Monitoring (§ 64.4(e)(2)).....	314
Section 9.8:	Verification Test Requirements (§ 64.4(f)).....	320
Section 9.9:	Monitor Failures (§§ 64.4(g) and 64.5(e)).....	337
Section 9.10:	Specific Monitoring Options (§ 64.4 Generally)	348
Section 10:	Reporting.....	356

Section 10.1: Compliance Certifications (§ 64.5(a))	356
Section 10.2: Timing of Enhanced Monitoring Report (§ 64.4(b))	363
Section 10.3: Content of Enhanced Monitoring Reports (§ 64.5(b))	368
Section 10.4: Signature Requirements (§ 64.5(c))	380
Section 10.5: Confidentiality (§ 64.5(f))	382
Section 10.6: General Reporting Issues.....	383
 Section 11: Recordkeeping (§ 64.6)	 388
Section 11.1: Records to be Maintained (§ 64.6(a))	388
Section 11.2: Availability (§ 64.6(b)).....	393
 Section 12: Permit Application and Content Issues (§§ 64.7-64.8)	 398
Section 12.1: Relationship to Part 70 Permitting, Generally.....	398
Section 12.2: Permit Application Requirements, Generally	398
Section 12.3: Permit Renewal Applications (§ 64.7(c))	402
Section 12.4: Permit Application Content Requirements for Enhanced Monitoring Protocols (§ 64.7(b))	404
 Section 13: Prohibitions (§ 64.9) and Violations.....	 409
Section 13.1: Generally	409
Section 13.2: Ability to Determine Which Violations Warrant Enforcement....	411
Section 13.3: Acts That Should be Exempt	412
Section 13.4: Penalties.....	413
Section 13.5: Miscellaneous Issues	414
 Section 14: Conforming Amendments to Preconstruction Permit Program Requirements (40 CFR 51.165, 51.166 and 52.21).....	 415
 Section 15: Conforming Amendments -- Credible Evidence Revisions (40 CFR Parts 51, 52, 60 and 61).....	 417
 Section 16: Conforming Amendments -- Compliance Certification Revisions (40 CFR Parts 51, 52, 60 and 61).....	 418
 Section 17: Conforming Amendments -- FIP Provisions (40 CFR 52.30).....	 419
 Section 18: Conforming Amendments -- Parts 60 and 61, Generally.....	 420
 Section 19: Performance Specifications (Appendix A)	 421
Section 19.1: Measurement Frequency (App. A, sec. 2)	421
Section 19.2: Relative Accuracy (App. A, sec. 3)	423
Section 19.3: Calibration Error (App. A, sec. 4).....	424
Section 19.4: Instrument Span (App. A, sec. 5)	427
Section 19.5: Response Time (App. A, sec. 6).....	428
Section 19.6: Parametric Relationship Limits (App. A, sec. 7)	429

Section 19.7: Measurement Technique Procedures (App. A, sec. 8).....	430
Section 19.8: Performance Specifications for Volatile Organic Compound CEMS and Gas Chromatographic CEMS (PS 101 and 102)....	430
Section 19.9: Appendix A Performance Specifications--General Issues	431
Section 20: Equipment, Installation and Calibration Gas Specifications	
(Appendix B).....	435
Section 20.1: Equipment Specifications (App. B, sec. 2).....	435
Section 20.2: Installation and Measurement Location Specifications(App. B, sec. 3).....	437
Section 20.3: CEMS Calibration Gases (App. B, sec. 4).....	437
Section 21: Performance Verification Tests (Appendix C)	
Section 21.1: Performance Verification Test Periods (App. C, sec. 3)	438
Section 21.2: Calibration Error Tests (App. C, sec. 4).....	439
Section 21.3: Response Time Tests (App. C, sec. 5).....	440
Section 21.4: Relative Accuracy Tests (App. C, sec. 6)	441
Section 21.5: Parameter Monitor Validation (App. C, sec. 7)	445
Section 21.6: Performance Verification Tests - Other (App. C Generally).....	451
Section 22: Quality Assurance Requirements (Appendix D)	
Section 22.1: QC Checks/Error Assessments.....	453
Section 22.2: Data Quality Assessments	454
Section 22.3: Data Availability Issues.....	454
Section 22.4: Reverification of Parametric Relationships	455
Section 22.5: QA Requirements for CEMS and COMS.....	456
Section 22.6: QA Plan Organization.....	457
Section 22.7: Miscellaneous QA/QC Issues.....	458
Section 23: General Appendix Issues	
Section 23.1: General Stringency of Appendices	460
Section 23.2: Reorganizing the Appendices.....	461
Section 23.3: Adding Specifications for Certain Types of EMPs	462
Section 23.4: References to Existing Requirements	462
Section 23.5: Ability to Revise Specifications.....	463
Section 23.6: Miscellaneous Recommendations.....	464

October 2, 1997

Compliance Assurance Monitoring Rulemaking (40 CFR Parts 64, 70, and 71)
Responses to Public Comments (Part I)

Table of Contents

Page

October 2, 1997

Compliance Assurance Monitoring Rulemaking (40 CFR Parts 64, 70, and 71)
Responses to Public Comments (Part I)

Table of Contents

Page

October 2, 1997

Compliance Assurance Monitoring Rulemaking (40 CFR Parts 64, 70, and 71)
Responses to Public Comments (Part I)

Table of Contents

Page

October 2, 1997

Compliance Assurance Monitoring Rulemaking (40 CFR Parts 64, 70, and 71)
Responses to Public Comments (Part I)

Table of Contents

Page

Appendix I-A: List of Comment Letters for Response (Part I): EPA Air Docket A-91-52

October 2, 1997

INTRODUCTION

This Part I of the three part Compliance Assurance Monitoring Rulemaking Responses to Public Comments Document summarizes the written comments submitted during the original comment period on the Enhanced Monitoring Proposal (see 58 FR 54648, October 22, 1993).

The Compliance Assurance Monitoring Rule contained in part 64 and the conforming amendments to parts 70 and 71 are being promulgated in response to the direct mandate in section 114(a)(3). Part 64 builds on existing regulatory monitoring approaches in order to provide a reasonable assurance that owners and operators are complying with emissions limitations or standards. The amendments to parts 70 and 71 clarify the relationship between part 64 and the compliance certification process under the title V operating permits program.

The EPA proposed these regulations 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. The public comment period was reopened from December 28, 1994 until February 3, 1995 to take additional comment on a limited number of specific issues.

The Agency decided to redesign elements of the part 64 rulemaking in April 1995. On May 31, 1995, the EPA held a public hearing to discuss the potential redesign of part 64 (60 FR 27943). Follow-up meetings were held in June 1995 in Washington, D.C., Cincinnati, Dallas, and Portland, Oregon. An initial draft of the compliance assurance monitoring rule and preamble were made available for public discussion and comment and another public meeting was held in September 1995 (60 FR 48679). Based on the public comment received on that interim draft, EPA released a second draft in August 1996 and once again took comment on the revised approach (61 FR 41991). In addition, a public meeting was held to obtain oral input as well.

A complete transcript of the initial public hearing, summaries of all subsequent public meetings, the full text of each comment letter, and the 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. The public comments on the original enhanced monitoring proposal are found at Section IV-D of the docket and are numbered from IV-D-1 through IV-D-772. When the Agency determined to redesign the original

proposal in April 1995 to reflect the CAM approach, new material relied on for the rulemaking was placed in Section VI of the docket. The public comments are included in section VI-D of the rulemaking docket.

In March 1996, EPA decided to proceed with the credible evidence provisions proposed with the original enhanced monitoring requirements. The Agency took additional public comment on those provisions and those comments are included in the docket as items IV-D-774 through IV-D-843. The Agency has responded to those comments as well as comments submitted in response to the original proposal that related to the credible evidence provisions in finalizing the credible evidence provisions on February 24, 1996 (62 FR 8314). See Docket A-91-52-V-C-2 for a copy of that response to comments document, which is referred to as the "CE Revisions Response to Comment Document" throughout the remainder of this document.

Because of the extended time period over which comments have been submitted on this rulemaking, this document is divided into three parts. First, Part I addresses the comments received during the initial public comment period (docket items IV-D-1 through IV-D-542). Part II then addresses the comments submitted during the December 1994-February 1995 reopened comment period (docket items IV-D-547 through IV-D-762). Finally, Part III addresses the comments submitted in response to the August 1996 Part 64 draft (docket items VI-D-114 through VI-D-243), as well as comments submitted during the reopened comment period in April-May 1997 (VI-D-244 through VI-D-274). Comments submitted early in the development of the CAM approach were considered by the Agency in formulating both the 1995 Part 64 Draft and the 1996 Part 64 Draft and are adequately addressed by the responses in Part C. Comments on major structural issues have remained generally consistent over time (i.e., use of Part 64 data for enforcement, implementation through Part 70 permits, scope of applicability, and the level of justification and testing needed to support proposed monitoring). Thus, the Agency believes that the release of follow-up drafts of the rule and accompanying discussion materials, and the responses to comments included in Parts I-III of this document adequately address these additional comments.

The reader should note that many of the most significant comments from these comment periods are also responded to in the preamble to the final rule, and the responses in this document cross-reference the appropriate discussion in the preamble where appropriate.

This document also includes appendices. Appendices I-A, II-A and III-A are lists of all comment letters received in the rulemaking docket during the initial comment period, the 1994-1995 reopened comment period, the comment period following release of the 1996 part 64 Draft, and the 1997 reopened comment period, as well as all oral

testimony provided at the public hearing. (Comments submitted to the docket use a "IV-D-" or a "VI-D" prefix, while comments from the public hearing use a "IV-F" prefix.)

This document includes many citations to other authorities outside of part 64 or the conforming amendments. 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 PA is the permitting authority of record.

Section 1: [Reserved]

Section 2: Statutory Purpose

Section 2.1: The Authority of Section 114(a)(3) and Related Sections

2.1.1: General Intent of Section 114(a)(3)

Comment a: Environmental groups stated that the general intent of section 114(a)(3) and related provisions in the 1990 Amendments was to require sources to document that they are in fact in compliance, not merely capable of being in compliance as was generally the case prior to the 1990 Amendments. Numerous industry commenters, however, stated that the proposed rule exceeds the mandate of section 114(a)(3) and is more burdensome than Congress intended. Commenters objected that the rule was too comprehensive and complex for the limited statutory mandate. Many argued that the proper reading of the statute is that the function of enhanced monitoring is to improve monitoring by generally increasing the amount and accuracy of compliance data. Others considered it improper to create this large a proposed regulatory program based on a single sentence in the Act. One commenter noted that the short two year time period EPA had to implement the rule demonstrated that Congress did not intend such a large program. Other commenters stated that the proposed rule does not meet section 114's reasonableness test. One commenter stated that Congress merely intended to place an affirmative duty on major stationary sources to conduct regular monitoring and to report the resulting data to permitting authorities. Commenters also disagreed that the other sections cited as authority for part 64, including sections 113 and 504(a), provide support for the monitoring requirements in part 64. Several commenters favored an approach that the Enhanced Monitoring Program be limited to the minimum requirements and the minimum cost required to generate compliance certification for major sources and some noted that the proposal failed generally to address the substantial comments from industry on the implementation approach over the past few years. Finally, another commenter pointed to section 503 and its legislative history to show that Congress intended for monitoring and certification requirements to be reasonable and appropriate, which the proposed rule is not.

Response: The Agency believes that it has, in promulgating the final part 64 rule, adopted an interpretation of the statute which responds to certain of these concerns and remains consistent with the language of section 114(a)(3),

the other provisions of the Act cited as authority for part 64, and congressional intent. The 1990 Amendments to the Clean Air Act directed the Agency to promulgate enhanced monitoring and compliance certification requirements for major sources pursuant to title VII of the Act and to require the inclusion of monitoring, compliance certification, reporting, and recordkeeping permit terms designed to assure compliance in operating permits issued under the permitting programs developed pursuant to title V of the Act. The CAM approach satisfies these statutory mandates by requiring that major sources use enhanced monitoring which will ensure the proper operation and maintenance of control measures and by requiring that sources use the data derived from such monitoring to certify compliance with air pollutant emission limitations or standards. As expressed in section 504(b) and elsewhere, Congress also wanted sources to have the flexibility to use monitoring other than continuous emission monitoring systems (CEMS) where such other monitoring was sufficient to determine compliance. The final rule achieves this goal by establishing broad principles and performance criteria for appropriate monitoring without mandating the use of a particular technology. The Agency also believes that changes in the final rule provide a reduced burden to permitting authorities and the regulated community and a proper balancing of the certification requirements in section 114(a)(3) with the general concepts of reasonableness in section 114(a)(1) and elsewhere in the Act. These changes include the focused applicability provisions in part 64; the use of existing regulatory monitoring approaches as the baseline for determining what monitoring is required by the rule; the extended implementation schedule; and the revised language in parts 70 and 71 that clarify an owner or operator's compliance certification duty.

Letter(s): ASARCO (IV-D-327); Aluminum Association (IV-D-378); 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); 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); Coalition for Clean Air Implementation (IV-D-304); Columbia Gas System Service Corporation (IV-D-341); E.I. DuPont de Nemours and Company (IV-D-329); Eastman Chemical Company (IV-D-347); East Ohio Gas Company, The (IV-D-355); El Paso Natural Gas Company (IV-D-271); ENRON Operations Corp. (IV-D-390); Illinois Power Company (IV-D-274); International Business Machines Corporation (IV-D-238); Kaiser Aluminum & Chemical

Corporation (IV-D-295); Kennecott Corporation (IV-D-262); Mississippi Chemical Corp. (IV-D-179); Mississippi River Transmission Corp. (IV-D-344); Mobil Oil Corporation (IV-D-285); National Association of Manufacturers (IV-D-261); National Environmental Development Association (IV-D-334); 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 Manufacturers Association (IV-D-348); Pharmaceutical Manufacturers Association (IV-D-367); Questar Corporation (IV-D-505); Questar Pipeline Company (IV-D-480); Rubber Manufacturers Association (IV-D-331); Shell Oil Company (IV-D-280); South Carolina Electric & Gas Company (IV-D-394); Southwestern Public Service Company (IV-D-272); Total Petroleum, Inc. (IV-D-354); Union Camp (IV-D-359); United States Sugar Corporation (IV-D-382); Utility Air Regulatory Group (IV-D-489)

Comment b: Certain commenters cited various passages from the legislative history of section 114(a)(3), which stated that section 114(a)(3) was to "clarify and confirm" the Administrator's existing authority to require enhanced monitoring, not to change the nature of all monitoring requirements.

Response: The cited language appears to be addressing the reasons for the changes to section 114(a)(1) of the Act in the 1990 Amendments, which clarified and confirmed that under that general authority, the Agency may require any source to conduct monitoring on a "one-time, periodic or continuous basis" and to submit compliance certifications in accordance with section 114(a)(3). The cited legislative history passage continues by stating that section 114(a)(3) requires enhanced monitoring and compliance certifications for all major stationary sources, that enhanced monitoring may include the use of CEMS, and that the data submitted will facilitate enforcement because it "can be used as evidence." In light of this legislative history and the new requirements in section 504(b), and given that section 114(a)(3) now requires EPA to promulgate regulations requiring all major stationary sources to conduct enhanced monitoring and submit compliance certifications, EPA believes it is plain that the 1990 Amendments as a whole do more than clarify and confirm existing authority. In addition, the Agency does not believe that part 64, in either its proposed or final forms, changes the nature of all existing monitoring requirements. EPA believes that such comments are certainly inapplicable to the CAM approach that builds upon existing monitoring as necessary to satisfy the minimum criteria set forth in part 64.

Letter(s): Coalition for Clean Air Implementation (IV-D-304); Mobil Oil Corporation (IV-D-285); National Environmental Development Association (IV-D-334)

Comment c: Commenters noted that the emphasis in the legislative history of section 114(a)(3) was on the role of compliance certifications in allowing sources and agencies to agree upon applicable requirements for the source. These commenters stated that there was no language in section 114(a)(3) authorizing EPA to ignore its mandate to require reasonable improvements in monitoring, and instead require sources to develop monitoring systems that will provide a "perfect" understanding of their compliance status.

Response: The EPA agrees that the compliance certification process can assist the regulated community and the regulators to agree upon the nature of a source's compliance obligations and that this is an important element of the certification process. However, this facet of a certification program is most important in the initial certification submitted by a source. Subsequent certifications will focus on demonstrating that the source remains in compliance with the requirements that apply to the source. The requirements for the initial certification are already included as part of the operating permits program in 40 CFR 70.5 and therefore the Agency has not focused on this initial certification in part 64 or the revisions to 40 CFR 70.6. Furthermore, the redesigned part 64 requires that monitoring provide a reasonable assurance of compliance, not a "perfect" understanding of a source's compliance status, as argued in one comment.

Letter(s): Chemical Manufacturers Association (IV-D-301); Clean Air Implementation Project (IV-D-242)

Comment d: A few commenters argued that the intent of the rule appeared to be to identify any violation of the Act as opposed to the statutory objective of reasonably assuring compliance. A commenter at the November 19, 1993 public hearing said that EPA misinterpreted section 114(a)(3) as a mandate to establish an enforcement tool designed to catch every deviation, no matter how insignificant. The commenter added that section 114(a)(3) merely provides authority to implement a cost-effective program to identify and control those sources that unknowingly exceed

applicable requirements because they never had to monitor emissions in the past, and to catch chronic offenders who ignore Clean Air Act requirements.

Response: The Agency notes that the changes adopted in the final rule make it clear that the objective of compliance assurance monitoring is to provide a reasonable assurance of compliance. Although information acquired through part 64 monitoring may be used in enforcement actions, the Agency primarily intends that part 64 monitoring will provide information about potential control measure operation and maintenance problems to owners or operators and permitting authorities so that the appropriate corrective actions can be taken before any violations of an applicable requirement occur. The Agency believes that the final rule properly balances the statutory objectives of improving the means for assuring compliance with emission limitations or standards and of achieving air quality improvements in a cost-effective manner. The EPA disagrees with the last commenter's narrow construction of the authority granted to the Agency under section 114(a)(3) because, as described in the responses above, EPA does not believe that either the plain language or the legislative history of that section support such an interpretation.

Letter(s): Chemical Manufacturers Association (IV-D-301); Clean Air Implementation Project (IV-D-242); Eastman Chemical Company (IV-D-347); General Electric Company (IV-F-2)

Comment e: A few commenters stated that Congress did not intend enhanced monitoring to revise all monitoring requirements at all existing sources currently in compliance. Another commenter stated that because section 114(a)(3) is clear that the purpose of enhanced monitoring is compliance determination, no enhancements can be made where monitoring is already sufficient for that purpose. The commenter added that standards routinely include monitoring or testing requirements that are considered adequate for purposes of assuring compliance with their terms. As one example, the commenter referred to standards developed on the basis of reasonably available control technology (RACT) that, under section 182(a)(2) of the Act, States must impose through State Implementation Plan (SIP) revisions. Some commenters added that, instead, enhanced monitoring should be required where current monitoring is insufficient.

Response: The EPA notes that section 114(a)(3) has not been construed so as to

revise all monitoring requirements at all existing sources currently in compliance. The EPA believes that many owners and operators will be able to use existing monitoring for compliance assurance monitoring purposes, and that other owners and operators will be able to use existing monitoring with certain upgrades (e.g., the monitoring of additional parameters) to satisfy part 64 monitoring requirements. Those owners or operators whose monitoring is insufficient to provide a reasonable assurance of compliance for an emissions unit will be the most likely to propose monitoring that includes a monitoring methodology which consists of the existing monitoring with upgrades, or a new monitoring methodology.

Letter(s): Coalition for Clean Air Implementation (IV-D-304); International Business Machines Corporation (IV-D-238); Kerr-McGee Corporation (IV-D-232); National Environmental Development Association (IV-D-334); Pennzoil Company (IV-D-373); Union Camp (IV-D-359)

Comment f: One commenter stated that section 114(a)(3) is intended, as is the Clean Water Act, to provide an owner or operator a means to determine the level of pollution control being achieved, and then report on compliance efforts in certifications; the use of the reports for enforcement should be ancillary. Similarly, another commenter pointed to the legislative history to show that Congress intended for the permit program to be modeled after the Clean Water Act, with the same type of reasonable, non-burdensome monitoring and certification requirements that exist for water pollution sources.

Response: The Agency agrees with the commenters that throughout the 1990 Amendments, Congress generally intended to make compliance under the Clean Air Act more closely mirror compliance under other programs, such as the Clean Water Act, that rely on sources to report on their efforts to achieve compliance. The Agency also agrees that the information obtained through part 64 monitoring should generally be used to provide assurance that control measures are operated and maintained so as not to deteriorate to the point of noncompliance, and not primarily for enforcement purposes. However, the Agency does not agree with the commenters' further comments on the appropriate use of data obtained through the monitoring required by regulations promulgated under section 114(a)(3). For example, in a Senate committee report, Congress noted that "similar to the reporting requirements of the Clean Water Act, 33

U.S.C. 1342, 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., 368 (1989). In Section I.E. of the preamble to the final rule, EPA notes that it will continue to take appropriate enforcement investigations and actions where the information obtained pursuant to CAM requirements documents that enforcement is warranted. The Agency believes that its interpretation of section 114(a)(3) is consistent with the language of that section and with congressional intent.

Letter(s): County Sanitation Districts of Orange County, California (IV-D-235); El Paso Natural Gas Company (IV-D-271)

2.1.2: Statutory Interpretation of Major Stationary Source in Section 114(a)(3)

Comment a: Many industry commenters argued that section 114(a)(3) did not authorize EPA to require enhanced monitoring at emissions units that are not by themselves major stationary sources. Environmental groups argued that section 114(a)(3) did not provide EPA discretion to limit the applicability of the proposed rule to only certain units at major sources.

One industry association presented a detailed rationale for why "major stationary source" as used in section 114(a)(3) had to be interpreted as applying to single emissions units. This commenter stated that generally EPA is granted direct authority only over major sources, with indirect authority over minor sources through SIP approvals. However, section 114(a)(3) requires EPA to apply enhanced monitoring for all major stationary sources and provides discretion for EPA to cover additional sources. The only way to interpret this grant of discretion in a manner that is consistent with the rest of the Act is to interpret "major stationary source" narrowly as applying to individual emissions units, with EPA having discretion to apply enhanced monitoring at other emissions units at facilities that are title V major sources. (See Section 7.12 for related comments on the proposed definition of major source in § 64.2 and responses on this issue.)

Response: The EPA has adopted the part 70 definition of "major source" in the final rule. The Agency believes that it is important for part 64 to use terms in a consistent manner with the operating permits programs to avoid confusion

in the implementation of part 64 through those programs. Furthermore, the final rule does not in fact require monitoring under part 64 for each major stationary source because not every title V major source will have a pollutant-specific emissions unit that meets the applicability criteria in part 64. Instead, EPA has determined to rely on part 70 periodic monitoring as "enhanced monitoring" for at least some units. The EPA suggested this option in both the 1993 EM proposal and the December 1994 notice reopening the comment period on that proposal (see 58 FR 54648, 54653 and 59 FR 66844, 66849). Industry commenters generally supported this option with many suggesting that EPA rely completely on periodic monitoring as "enhanced monitoring." Some environmental groups, however, argued against this option. They asserted further that EPA's part 64 applicability provisions would not meet the statutory requirement that all major stationary sources conduct enhanced monitoring. EPA considered including in part 64 requirements analogous to the existing part 70 provisions (see Subpart C of part 64 in the 1996 part 64 Draft). This approach would clearly indicate EPA's position that the part 70 monitoring requirements, including periodic monitoring, if necessary, constitute the appropriate "enhanced monitoring" for units not covered by part 64. However, in the final rule, EPA has determined to rely on the position originally discussed in the 1993 EM proposal that existing monitoring when supplemented as necessary by periodic monitoring is sufficiently enhanced for emissions units not subject to part 64.

Letter(s): American Gas Association (IV-D-265); Arkla Energy Resources Company (IV-D-343); ENRON Operations Corp. (IV-D-390); East Ohio Gas Company, The (IV-D-355); Gas Processors Association (IV-D-227); Natural Resources Defense Council, et al. (IV-D-225); Ohio Manufacturers Association (IV-D-348); Sierra Club, Pennsylvania Chapter (IV-D-23); Southwestern Public Service Company (IV-D-272); Union Camp (IV-D-359)

2.1.3: Section 114(a) Requirements for Determining Compliance

Comment a: Some commenters supported EPA's position that section 114(a)(3) represents a requirement that sources conduct sufficient monitoring to determine whether they remain in compliance on a continuous basis. Many industry commenters, however, objected to EPA's interpretation of section 114(a)(3) as generally requiring enhanced monitoring sufficient to determine compliance on a continuous basis. Some of these

commenters also argued that section 114(a)(3) does not require a certification of continuous compliance, but rather that section 114 allows for monitoring and certifying intermittent compliance. One commenter, citing section 114(a)(1), stated that the legislative history of that section indicates that compliance could be certified on either a periodic or continuous basis, demonstrating that a continuous record of compliance is not required. Another commenter stated that a certification of compliance is not something that happens only if compliance is continuing, and does not require a continuous record of compliance status. Other commenters argued that section 114(a) allows for certifying compliance without actually determining compliance on a continuous basis, and thus enhanced monitoring did not have to be sufficient to determine continuous compliance.

Response: The Agency has addressed these comments by modifying the criteria in the final rule for monitoring under part 64. In developing an implementation approach in the 1993 EM proposal, EPA indicated that owners or operators must rely on methods for determining continuous compliance to submit a certification of whether compliance is continuous or intermittent. Many industry representatives and State and local agencies objected to the burdens associated with the 1993 proposal. A large part of those burdens would have resulted from developing monitoring that could produce data of sufficient reliability to make determinations of continuous compliance with a degree of representativeness, accuracy, precision, and reliability equivalent to that provided by conducting the test method established for a particular requirement. In response to those concerns, the Agency opted to pursue the CAM approach which provides a reasonable assurance of compliance through monitoring of control operations. The EPA believes that the CAM approach does enhance existing monitoring requirements and provides sufficient information for an owner or operator to reach a conclusion about the compliance status of the owner or operator's source that is adequate to satisfy the compliance certification obligations in the Act. Such monitoring also provides data sufficient for EPA, permitting authorities, and the public to evaluate a source's compliance status and to take appropriate action where potential compliance problems are discovered.

The part 64 rulemaking also clarifies the Agency's interpretation of the phrase "continuous or intermittent" as used in section 114(a)(3) of the Act. The 1993 EM proposal interpreted the requirement that source owners or operators certify "whether compliance is continuous or intermittent" to

require monitoring sufficient to determine if compliance was continuous. (58 FR 54654, 54658) Thus the term "continuous" was read as meaning that compliance was achieved during all averaging periods for a standard and "intermittent" was read generally as meaning that one or more deviations occurred during the certification period. (58 FR 54665). This interpretation was consistent with the Agency's position in the preamble to proposed part 70 as well (see 56 FR 21737, May 10, 1991 ("The compliance certification must document . . . whether compliance was continuous or intermittent (i.e., whether there were periods of noncompliance).").

The Agency reconsidered this interpretation in reopening the public comment period on the 1993 EM proposal and noted that "intermittent" could mean either that noncompliance had occurred or that the owner or operator has data sufficient to certify compliance only on an intermittent basis. (See 59 FR 66848, col. 2 ("nothing in section 114(a)(3) dictates that all source owners or operators must certify to being in either continuous compliance or else be considered in noncompliance; source owners or operators may also certify to being in compliance as demonstrated on an intermittent basis.")). The EPA believes that the statutory interpretation discussed in the preamble to the 1993 EM proposal and this alternative interpretation are both reasonable, and that EPA has discretion to clarify the meaning of this statutory provision given the ambiguity in the legislation. As outlined in Section II.K of the preamble to the final rule, the revisions to § 70.6(c)(5) are derived from the interpretation contained in the December 1994 notice reopening the comment period on the 1993 EM proposal.

Letter(s): American Automobile Manufacturers Association (IV-D-538); American Electronics Association, Clean Air Task Force (IV-D-437); Chemical Manufacturers Association (IV-D-301); Clean Air Implementation Project (IV-D-242); Colorado Association of Commerce and Industry (IV-D-243); County Sanitation Districts of Orange County, California (IV-D-235); Exxon Company, USA (IV-D-310); Monsanto Company (IV-D-273); National Environmental Development Association (IV-D-334); Occidental Chemical Corporation (IV-D-240); Ohio Edison (IV-D-266); Union Camp (IV-D-359)

Comment b: Several commenters pointed to the use of the term "enhanced monitoring" in section 182(c)(1) as dispositive as to what "enhanced monitoring" means. That section indicates that enhanced monitoring is designed "to

obtain more comprehensive and representative data." Commenters argued that because section 182(c) applies to ozone nonattainment areas that are of the most regulatory concern, it is completely improper for EPA to require more enhancement of monitoring for other areas through part 64.

Response: The Agency disagrees that section 182(c)(1) is dispositive to defining the concept of enhanced monitoring under section 114(a)(3). Looking at the text of section 182(c)(1), the enhanced monitoring that applies under that section applies only to ozone and its precursors, and is limited primarily to ambient monitoring designed to assess attainment of the ambient air quality standard for ozone. The single reference to monitoring emissions in that section is with reference to improving programs for monitoring both ambient air and source emissions based on the results of the enhanced ambient monitoring required under section 182(c)(1).

The Agency has in fact promulgated regulations implementing section 182(c) in 40 CFR part 58. The Agency notes that these regulations, although based only on the general "comprehensive and representative data" language in section 182(c), contain monitoring criteria similar to those included in part 64, such as accuracy and frequency. Thus, even if the language in section 182(c) had some bearing on the part 64 rulemaking, the general "comprehensive and representative" language in section 182(c)(1) is broad enough to support the inclusion of the general criteria included in the final part 64 rule.

Letter(s): Chemical Manufacturers Association (IV-D-301); Clean Air Implementation Project (IV-D-242); Council of Industrial Boiler Owners (IV-D-319); Eastman Chemical Company (IV-D-347); International Business Machines Corporation (IV-D-238); Texaco Inc. (IV-D-357)

Comment c: Several commenters stated that enhanced monitoring should only provide monitoring beyond standard monitoring where necessary to give the operator "reliable and timely" information on the compliance status of the facility. This approach is consistent with section 504(b), and the compliance monitoring requirements of the Clean Water Act.

Response: The Agency disagrees that the criteria to be included in part 64 must mirror exactly the "reliable and timely" phrase in section 504(b). As noted above in the case of enhanced ambient ozone monitoring, EPA

regulations that implement similar language in section 182(c)(1) (i.e., that section refers to "comprehensive and representative data") include criteria such as accuracy and frequency that are not exactly the same as the statutory language. The concepts of reliability and timeliness as used in section 504(b), therefore, should be read in the context of other Clean Air Act regulatory actions that the Agency has taken in developing methods to determine compliance. In such instances, the Agency considers data accuracy, precision, and representativeness as important elements for the method to be used to determine compliance. So, at the very least, the Agency interprets the terms "reliable" and "timely" as used in the statute as supportive of including these other criteria as appropriate factors to be used in evaluating methods for determining compliance.

The real issue that is raised in these comments is whether the inclusion of "frequency" is appropriate in the list of criteria in § 64.4 of the proposed rule. The Agency has included similar "frequency" requirements as monitoring criteria in § 64.3 of the final rule. Without reference to any other statutory authority, the Agency believes that it may properly include the element of "frequency" as an implicit component of "timely" as used in section 504(b). However, the Agency believes that the statutory requirement to certify whether compliance determination methods obtain data on a continuous or intermittent basis in section 114(a)(3), together with other sections of the 1990 Amendments and supporting legislative history, indicates congressional intent that an owner or operator obtain data with sufficient frequency to provide a reasonable assurance of a source's compliance with applicable requirements. In developing the final part 64 rule, the Agency has relied on an interpretation of section 114(a)(3) which does not require a distinction between "continuous compliance" and "intermittent compliance." The final rule's monitoring frequency criteria are therefore not designed to facilitate the making of such a distinction. Under the CAM rule, the element of "frequency" is necessary to ensure that data are obtained often enough to detect any excursions from indicator ranges which signal the need for the owner or operator to take corrective action. Likewise, the Agency believes that all of the other general criteria in § 64.3 for acceptability of monitoring are necessary to provide a reasonable assurance of compliance and are therefore justified under the statute.

Letter(s): American Automobile Manufacturers Association (IV-D-538); Chemical Manufacturers Association (IV-D-301); Clean Air Implementation Project (IV-D-242); Council of Industrial Boiler Owners (IV-D-319); County

Sanitation Districts of Orange County, California (IV-D-235); Eastman Chemical Company (IV-D-347); Shell Oil Company (IV-D-280)

Comment d: Some commenters noted that section 114(a)(3)(B) states that one element of a compliance certification is to identify the method used to determine compliance. These commenters argue that if Congress intended enhanced monitoring to be the sole or essential method used to support compliance certifications, this provision would be unnecessary.

Response: The Agency agrees and does not consider the interpretation adopted by EPA in the final rule to be inconsistent with this section 114(a)(3)(B) language. The revised compliance certification language in § 70.6(c) clearly states that the owner or operator must consider not only all required monitoring but other data as necessary to avoid submitting a false certification (for instance, voluntary test data that document a violation).

Letter(s): Chemical Manufacturers Association (IV-D-301); Clean Air Implementation Project (IV-D-242); Shell Oil Company (IV-D-280)

Comment e: One commenter argued that while section 114(a)(3) shifts the burden of monitoring and certifying compliance to sources, EPA retains the burden of demonstrating noncompliance and thus it is improper to require that enhanced monitoring demonstrate definitively whether a source is in or out of compliance.

Response: The final rule does not require that part 64 monitoring demonstrate definitively whether a source is in or out of compliance, and thus this comment is no longer applicable. The rule requires the owner or operator to document continued operation of control devices within ranges of specified indicators of performance that are designed to provide a reasonable assurance of compliance with applicable requirements; indicate excursions from those ranges; and respond to the data so that excursions are corrected. In addition, all excursions must be identified in a compliance certification so that an agency or public citizen can evaluate the information and determine whether any such possible exception warrants further investigation or possible enforcement action.

Letter(s): American Automobile Manufacturers Association (IV-D-538)

2.1.4: Whether Section 114(a)(3) Requires Continuous Monitoring

Comment a: Some commenters argued that EPA has mistakenly equated continuous compliance with continuous monitoring, noting that only periodic monitoring is necessary to determine that a facility is in continuous compliance. One commenter said that in order to have a continuous record, CEMS is the only technology that meets that requirement. Another commenter noted that requiring all sources to use CEMS would be extremely expensive, would provide little net benefit, and would be an unreliable monitoring method for many applications.

Several commenters argued that the term "continuous," as used in section 114(a)(3), neither requires continuous monitoring nor creates a presumption in favor of continuous monitoring. Other commenters argued that section 412 of the Act (establishing the monitoring requirements for the Acid Rain Program) demonstrates that Congress knew how to ask for continuous compliance monitoring when it wanted to do so. Certain commenters argued that EPA provides no justification for requiring in part 64 the equivalent of the Acid Rain Program monitoring under section 412 and for going beyond the limited authorizations in sections 182(c) and 504(b), even though those latter two sections and not section 412 are the sections that directly relate to enhanced monitoring under section 114(a)(3). Commenters also argued that the continuous monitoring requirements in part 64 go far beyond the reasonableness concepts in sections 182(c) and 504(b), as well as the explicit language that monitoring requirements be reasonable found in section 114(a)(1). Commenters also stated that in section 504(b) Congress had in fact explicitly rejected the notion that continuous monitoring is required. At the November 19, 1993 public hearing, a commenter said that section 114(a)(3) does not require continuous monitoring, but only requires that a facility certify whether its compliance is continuous or intermittent. This, the commenter said, could be fulfilled through the process of statistically representative sampling; a continuous stream of data is neither necessary nor practical.

Response: The EPA agrees that section 114(a)(3) does not require continuous monitoring. As noted above, part 64 generally requires that owners and operators only conduct such monitoring as is sufficient to provide a reasonable assurance of compliance. The final rule does not require an affected owner or operator to certify whether compliance is "continuous" or

"intermittent." Comments which were based on such requirements in the proposed rule are not applicable to the final rule. Part 64 does require that, where an affected emissions unit is required to use a continuous emissions or opacity monitoring system or a predictive emission monitoring system by any other authority under the Act or state or local law, such monitoring be used to satisfy part 64 as well. In addition, for certain large pollutant-specific emissions units, the final rule includes a presumption that such units should monitor on a continuous basis.

The monitoring required under part 64 is distinguishable from that required under section 412 of the Clean Air Act. That section requires continuous emission monitoring systems or equivalent monitoring, while the type of control device monitoring required under part 64, even if conducted on a continuous basis, often will involve much less sophisticated instrumentation. As for those comments pertaining to section 504(b), the EPA notes that section 504(b) allows for alternatives to continuous emissions monitoring only "if alternative methods are available that provide sufficiently reliable and timely information for determining compliance." As noted above, EPA believes the criteria and requirements for monitoring in part 64 are consistent with this "reliable and timely" standard of this statutory provision. The Agency responded to comments concerning the relationship of section 182(c) to the Enhanced Monitoring Program in section 2.1.3 (Part 1) of this document, above. Finally, the Agency notes that statistically representative sampling may often be sufficient to satisfy the requirements of the redesigned part 64, but such a determination will have to be made on a case-by-case basis.

Letter(s): Alcan Rolled Products Company (IV-D-519); American Automobile Manufacturers Association (IV-D-538); American Electronics Association, Clean Air Task Force (IV-D-437); ASARCO (IV-D-327); AT&T (IV-F-1); Chemical Manufacturers Association (IV-D-301); Clean Air Implementation Project (IV-D-242); Council of Industrial Boiler Owners (IV-D-319); County Sanitation Districts of Orange County, California (IV-D-235); Eastman Chemical Company (IV-D-347); El Paso Natural Gas Company (IV-D-271); Exxon Company, USA (IV-D-310); General Electric Company (IV-D-278); International Business Machines Corporation (IV-D-238); Lone Star Gas Company (IV-D-211); National Environmental Development Association (IV-D-334); National Petroleum Refiners Association (IV-D-276); Ohio Edison (IV-D-266); Pacific Gas Transmission Co. (IV-D-234); Shell Oil Company (IV-D-280); Texaco Inc. (IV-D-357); Total Petroleum, Inc (IV-D-354); Union Camp (IV-D-359)

2.1.5: What Kind of Rule Section 114(a)(3) Requires

Comment a: As summarized and responded to in more detail in Section 3.2 (Part I), below, some commenters stated that section 114(a)(3) requires a rule that prescribes procedures and methods for determining compliance, not a general rule that relies on permits to prescribe such procedures and methods. Several commenters said that EPA's first priority should be to write rules that shift the burden of compliance, in accordance with existing compliance methods, to owners and operators, and to prescribe general enhanced monitoring criteria to evaluate the sufficiency of existing monitoring techniques. If existing monitoring is insufficient, then the monitoring requirements should be revised by rulemakings or SIP calls.

Some commenters recommended that a rule be promulgated under section 114(a)(3) that provides guidance on implementing monitoring requirements under the title V permit program, as required by section 504(b). One commenter argued that under section 504(b) and the supporting legislative history, individual rulemakings are required to establish specific monitoring requirements, and that the permit by permit decisions required by the proposed part 64 rule would violate the goal of uniformity included in section 504(b). Another commenter stated that section 114(a)(3) and title V work together to require permitting authorities to ensure that title V permits include monitoring requirements set forth in underlying standards. The commenter added that section 114(a)(3) should be harmonized with section 504(b) by identifying the criteria by which sufficiency of the underlying standards will be judged and how the section 504(b) rulemakings will be conducted to cure deficient standards. Finally, one commenter argued that by failing to include enhanced monitoring as a permit requirement in section 503 -- but specifically including compliance certifications as a permit requirement -- Congress clearly indicated that enhanced monitoring is to be established through rulemakings, not as permit specific requirements.

Response: The EPA disagrees that the implementation approach adopted in part 64 is inconsistent with section 114(a)(3) or related provisions of the Act. See Section 3.2 (Part I), below, for further discussion on this topic.

Letter(s): Aluminum Association (IV-D-378); American Automobile Manufacturers Association (IV-D-538); American Petroleum Institute (IV-D-289);

ASARCO (IV-D-327); BP Oil Company (IV-D-315); Chemical Manufacturers Association (IV-D-301); Coalition for Clean Air Implementation (IV-D-304); Distilled Spirits Council of the United States (IV-D-300); Illinois Power Company (IV-D-274); Kennecott Corporation (IV-D-262); National Environmental Development Association (IV-D-334); Ohio Manufacturers Association (IV-D-348); Pharmaceutical Manufacturers Association (IV-D-367); Union Camp (IV-D-359); Utility Air Regulatory Group (IV-D-489)

2.1.6: Relationship to Section 110(a)(2)(F)

Comment a: Two commenters argued that section 114(a)(3) was intended to apply to SIPs only, and was added to the Act to clarify and confirm EPA's authority to mandate testing for the new enhancements to section 110(a)(2)(F). To support this argument and the argument that Congress did not intend to modify monitoring requirements in new source performance standards (NSPS) or national emission standards for hazardous air pollutants (NESHAP), one of the above commenters noted that while section 114(a)(3) was added to advance the implementation of the enhancements to section 110(a)(2)(F), no similar enhancements were made to sections 111 or 112. The same commenter stated that to properly implement section 114(a)(3) in the context of section 110(a)(2)(F), EPA need only enhance the general monitoring provisions of part 52 and then take appropriate actions with respect to SIPs to assure they reflect the general provisions.

One of these commenters also observed that section 114(a)(3) requires enhanced monitoring for "major stationary sources" only, a term defined and used for SIP purposes, but not under NSPS or NESHAP. The commenter added that there was nothing in the docket that supported a finding that the NSPS or NESHAP monitoring requirements are inadequate and need revision.

Response: The EPA disagrees with the commenters' assertions that section 110(a)(2)(F) is evidence that section 114(a)(3) was intended to apply to SIPs only and that section 114(a)(3) merely provides the authority for EPA to develop guidance to implement section 110(a)(2)(F). The EPA believes that the scope and purpose of section 110(a)(2)(F) and section 114(a)(3) are dissimilar and that section 114(a)(3) can not be read as narrowly as suggested by these commenters.

Section 110 pertains to the required contents of a SIP; the language of section 114(a)(3) applies explicitly to "any major stationary source" and section 114 generally applies to not only SIP sources, but also to sources subject to "section . . . 111(d), or any standard of performance under section 111, [or] any emission standard under section 112" Moreover, section 114 is a general enforcement provision that grants EPA certain authority regarding recordkeeping, inspections, entry, and monitoring. The section grants the Administrator broad authority to require any source to conduct monitoring that in her judgment is necessary to carry out her responsibilities under the Act. Alabama Power v. Costle, 636 F.2d 323 (DC CA 1979) [cited as Alabama Power in remainder of this document]. The EPA also notes that there is no direct linkage between section 110(a)(2)(F) and section 114(a)(3) either in the statutory language or in the legislative history of the 1990 Amendments to the Act. If Congress intended section 114(a)(3) to be implemented through section 110(a)(2)(F) only, EPA believes Congress would have at least mentioned the connections between these two provisions somewhere in the Act itself or in the legislative history.

Letter(s): ASARCO (IV-D-327); Coalition for Clean Air Implementation (IV-D-304)

2.1.7: Whether Periodic Monitoring Satisfies the Mandate of Section 114(a)(3)

Comment a: Many commenters stated that periodic monitoring and compliance certification requirements under part 70 satisfy the mandate of section 114(a)(3). Some argued that the monitoring requirements of the operating permits program already ensure that sources must certify continuous or intermittent compliance. Others added that enhanced monitoring could be used to fill gaps where periodic monitoring is not required. (See additional, related comments under section 3.3, below.)

Response: As noted above in response to comments under section 2.1.2 (Part I), in order to satisfy the statutory obligation that all major stationary sources conduct enhanced monitoring, EPA does rely in part on the part 70 periodic monitoring requirements as enhanced monitoring for units and sources not subject to part 64. However, EPA does not believe that the part 70 periodic monitoring requirements are appropriate for those environmentally significant emissions units which use active control devices to achieve compliance and which will be required to satisfy the monitoring requirements of part 64. See Section I.C.4 of the preamble to

the final rule for further discussion.

Letter(s): Aluminum Association (IV-D-378); American Gas Association (IV-D-265); American Petroleum Institute (IV-D-289); ARCO (IV-D-396); Arkla Energy Resources Company (IV-D-343); Chemical Manufacturers Association (IV-D-301); Clean Air Implementation Project (IV-D-242); East Ohio Gas Company, The (IV-D-355); Exxon Company, USA (IV-D-310); Marathon Oil Company (IV-D-376); Mississippi River Transmission Corp. (IV-D-344); National Petroleum Refiners Association (IV-D-276); Questar Corporation (IV-D-505); Questar Pipeline Company (IV-D-480); Reynolds Metals Company (IV-D-374); Shell Oil Company (IV-D-280)

Section 2.2: Section 113(a) and the Use of "Any Credible Evidence" to Determine Compliance

Comment a: A number of commenters objected to using "any credible evidence" 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 reference to "credible evidence" 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).

Some 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 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) 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: These comments are related to revisions to 40 CFR parts 51, 52, 60, and 61 which were proposed under the Enhanced Monitoring Program. See the CE Revisions Response to Comments Document for a response to these comments.

Letter(s): 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)

Comment b: One commenter stated that EPA's interpretation contradicted the requirement that enhanced monitoring protocols be the "best" for an emissions unit. The commenter argued that EPA's interpretation would allow "best" monitoring data to be impeached by other data judged inferior for that source.

Response: The final rule does not require the use of "best" monitoring, and thus this comment is no longer applicable.

Letter(s): Pharmaceutical Manufacturers Association (IV-D-367)

Section 3: General Regulatory Approach

Section 3.1: Use of Enhanced Monitoring for Determining Compliance

3.1.1: General Appropriateness of Using Enhanced Monitoring Data for Compliance Determinations

Comment a: 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.

Response: The EPA agrees with these comments. However, EPA notes that the final rule does not require continuous monitoring in all circumstances or deal specifically with the use of part 64 monitoring data as proof of compliance in an enforcement action. See the CE Revisions Response to Comment Document for further detail.

Letter(s): Koch Industries (IV-D-332); Natural Resources Defense Council, et al. (IV-D-225)

Comment b: 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 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. 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 question of whether information or data not gathered by means of a reference test can be used in enforcing or certifying compliance was addressed in the Credible Evidence rulemaking (62 FR 8314).

Letter(s): 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); Monsanto Company (IV-D-273); 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)

Comment c: Two commenters supported the option discussed in the preamble that would implement the enhanced monitoring program within the existing

structure for determining compliance so that the permit would specify either that the enhanced monitoring data would be used to trigger the conduct of reference test methods or, at the source's option, be used directly for enforcement.

Response: The EPA believes that such an approach is generally consistent with the approach adopted in the final rule. The part 64 monitoring data will be used to document compliance and possible exceptions to compliance. To determine whether a possible exception to compliance raises a true compliance problem will involve further evaluation and, possibly, a compliance test. The rule, however, does not adopt an automatic compliance test trigger because the need for such a test should be evaluated within the context of the specific incident.

Letter(s): Fertilizer Institute, The (IV-D-251); Southwestern Public Service Company (IV-D-272)

3.1.2: Necessity for a Rulemaking to Establish Compliance Test Methods

Comment a: 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.

Response: The EPA summarizes these comments in more detail, and provides a response, with related comments in Section 3.2.1 (Part I), below.

Letter(s): 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)

3.1.3: Stringency of Underlying Requirements - Defining Compliance and Compliance Test Obligations

Comment a: 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 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 Coke Corp. v. Costle, 464 F. Supp. 1295 (W.D. N.Y. 1979) [cited as Donner Hanna in remainder of this document], 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 pointed to EPA's 1983 proposed revisions to Subpart D (and the associated supporting docket materials) as a demonstration of 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 3.1.4.2, below.) Others pointed to the opacity requirements in NSPS subparts O and BB (and EPA's background documentation for those standards) to show this relationship. Certain commenters pointed to the fact that existing standards are often developed on too limited a data base 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.

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: The EPA does not agree that part 64 monitoring will redefine compliance obligations. The final rule adopts monitoring requirements for particular pollutant-specific emissions units; it does not amend any emission standards. See Sections I.C., II.C., and II.K. of the preamble to the final rule for further discussion of the use of part 64 data in certifying compliance. With respect to these comments in light of the potential use of the part 64 data as credible evidence, see the response to these comments in the CE Revisions Response to Comment Document.

Letter(s): 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)

Comment b: 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: See the response provided to similar comments in Section 9.1.1 (Part I), below, for the Agency's views with respect to the proper means of determining compliance with emission limits that have been developed and subsequently tested for compliance solely through the use of a generalized emission factor.

Letter(s): Phillips Petroleum Company (IV-D-380)

Comment c: 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 a description of monitoring requirements from the NSPS subpart BB background information document 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. See the response to these comments in the CE Revisions Response to Comment Document.

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

3.1.4: Stringency of Underlying Requirements - Averaging Time Concerns

3.1.4.1: General Concerns

Comment a: 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 SO₂ 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, 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: The EPA does not agree that the part 64 monitoring rule will have the effect of shortening or otherwise changing averaging times. The rule focuses on the appropriate period over which control device performance should be evaluated to assure that adverse changes in control performance do not occur. Whatever averaging period applies for an existing requirement, part 64 will not affect that period. See further responses to these comments in the CE Revisions Response to Comment Document.

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 part 64 or the revisions to parts 70 and 71. (See docket item A-91-52-IV-D-728, letter from Ohio Edison Company attaching November 29, 1994 letter from Steven A. Herman, Assistant Administrator, Office of Enforcement and Compliance Assurance, to Rep. Sherrod Brown (OH).) 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.

Letter(s): 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)

3.1.4.2: Use of Reference Test Method Sampling Times

Comment a: 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 NO₂ NAAQS.

Response: The EPA addresses these comments in the CE Revisions Response to Comment Document. For purposes of establishing an averaging period for part 64 data, the final rule requires that the averaging period be consistent with the time period over which changes in control performance that may require corrective action are likely to occur.

Letter(s): American Gas Association (IV-D-265); Arkla Energy Resources Company (IV-D-343); Chemical Manufacturers Association (IV-D-301); 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); Mississippi River Transmission Corp. (IV-D-344); Tennessee Valley Authority (IV-D-389)

Comment b: 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 proposed 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 SO₂ 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: See the CE Revisions Response to Comment Document for a response to these comments. As noted above, the final rule does not necessarily require that averaging periods for part 64 monitoring data be consistent with the stated time period for averaging test method results.

Letter(s): Chemical Manufacturers Association (IV-D-301); Cincinnati Gas & Electric Company (IV-D-259); Clean Air Implementation Project (IV-D-242); Large Public Power Council (IV-D-336); United States Sugar Corporation (IV-D-382); Utility Air Regulatory Group (IV-D-489)

3.1.4.3: Gap-filling Authority to Specify Averaging Times

Comment a: 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: These comments relate to part 70 and not part 64; nonetheless, the EPA would note its disagreement with these comments. The Agency believes that in order to implement the title V operating permits program properly, 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 and to assure compliance with applicable requirements of

the Clean Air Act. 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.

Letter(s): 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)

Comment b: 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 Agency believes that these comments reflect a misunderstanding of what was stated or a misstatement at the meeting. An appropriate averaging time must take into account the means used to develop the emission limitation or standard and the means subsequently used to determine compliance with that limitation or standard. See the CE Revisions Response to Comment Document for further response.

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

3.1.4.4: Need for Short Term Averaging Periods

Comment a: 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 part 64 does not affect in any manner the averaging period that applies for purposes of determining compliance with an underlying applicable requirement. See the CE Revisions Response to Comment Document for further response.

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

3.1.5: Effect of DCPLs on Regulatory Stringency

Comment a: Certain commenters stated that a "demonstrated compliance parameter level" (DCPL) may result in ranges of values currently deemed acceptable being redesignated as noncompliance. One commenter cited the example provided in the Reference Document of calculating a DCPL for particulate matter emissions from a cement kiln as a clear demonstration that calculating a DCPL would tighten the opacity standard. According to the example, this would result in a DCPL of 6% opacity as a surrogate limit for the particulate matter standard. This is more stringent than the cement NSPS, which sets forth a regulatory opacity limit of 20% for cement kilns. (See related comments in section 9.3, below, concerning the establishment of DCPLs for parameter monitoring.)

Response: The final rule relies on the concept of indicator ranges or designated conditions. Excursions from such ranges or conditions will have to be identified as possible exceptions to compliance, but will not necessarily constitute a violation of an underlying requirement. The EPA notes that the examples in the September 1993 draft Enhanced Monitoring Reference Document (docket item A-91-52-II-A-7) represent early drafts of possible examples. The cited example includes bracketed, italicized text

(see page 108 of the draft document) which was specifically identified as merely illustrative and not intended as widely applicable (see page 91 of the draft document). The proposed and final part 64 rule allow for the extrapolation of test results used to establish indicator ranges so that the ranges take into account the fact that test conditions may document a significant margin of compliance.

Letter(s): American Portland Cement Alliance (IV-D-284); Chemical Manufacturers Association (IV-D-301); Clean Air Implementation Project (IV-D-242); Eastman Chemical Company (IV-D-347); Union Carbide Corporation (IV-D-293)

3.1.6: Means of Addressing Stringency Concerns

Comment a: 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: Part 64 establishes monitoring requirements. These comments address the relevance of monitoring data to compliance and that issue was addressed by the Credible Evidence rulemaking.

Letter(s): 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)

3.1.7: Excused Excess Emissions

Comment a: 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. (See related comments in section 13.3, below, Prohibitions/Violations.)

Response: The 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 evaluating the results of monitoring under part 64. However, excess emissions are not universally excused. In addition, EPA disagrees with adding excused periods as part of part 64. Any excused periods should be addressed directly in the underlying standards.

Letter(s): 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)

3.1.8: Use of Opacity Data to Determine Compliance with Particulate Matter Standards

Comment a: Certain commenters objected to the possibility that continuous opacity monitoring 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), 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. (See related comments under section 9.3 (Part I), below.)

Response: For over 25 years, EPA has used opacity monitoring data as a tool for assessing compliance with particulate matter standards. That approach will be continued under part 64 as promulgated. Nothing in part 64 changes the obligation of the regulatory agency to evaluate reported opacity data in assessing compliance with particulate matter standards.

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

3.1.9: Compliance Issues for Work Practice and Similar Operational Standards

Comment a: A few commenters argued that the proposed rule would encourage States to impose new standards of performance, work practices, and operation and maintenance requirements under the guise of enhanced monitoring.

Response: Because there is no evidence that part 64 will have the effect feared by these commenters, EPA disagrees with these comments.

Letter(s): Colorado Association of Commerce and Industry (IV-D-243); Greater Cincinnati Chamber of Commerce (IV-D-224); Pennzoil Company (IV-D-373)

3.1.10: Use of Other Data to Determine Compliance

Comment a: 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. (See related comments in sections 7.2.3, 10.1.2 and 15.3, below.)

Response: The EPA generally agrees with the concerns of those commenters that stated that other data should be considered in the certification process. Revisions to part 70 and part 71 in the final rule require that a compliance certification be based on part 64 monitoring data, other required monitoring data, and other material information to the extent necessary to satisfy statutory prohibitions against submitting false certifications. See Section II.K. of the preamble to the final rule for further discussion.

Letter(s): 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)

Comment b: 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: The EPA does not disagree that part 64 data will be used for compliance certification and that data used to certify compliance constitutes evidence of compliance status that is admissible in Federal court. See the CE Revisions Response to Comment Document for further response.

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

Comment c: 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 generally agrees with this comment. See the CE Revisions Response to Comment Document for further response.

Letter(s): Ohio EPA (IV-D-283)

Section 3.2: Flexible Selection versus Source Category Rulemakings

3.2.1: Supports Source Category Rulemaking/Opposes Case-by-Case Implementation

Comment a: Numerous commenters expressed their support for issuing regulations by source category and their opposition to implementing enhanced monitoring on a case-by-case basis through the part 70 operating permit

program. Most of these commenters argued that EPA must follow rulemaking procedures if it intends for enhanced monitoring to be used as a direct compliance test method. 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 recordkeeping, 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, recordkeeping, 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 Donner Hanna Coke decision, 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 and U.S. v. Zimmer Paper Products, Inc.). Similarly, the Portland Cement case 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. All of these cases, the commenters claim, 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 indicate 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, 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. This SIP does not specify a federally-approved averaging time, because EPA wished to avoid this issue when the SIP was established. 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. 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 the experience in EPA's attempt to establish CEMS as a continuous compliance method for Subpart D sources under the NSPS.

Commenters noted 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 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 contended 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.

Commenters also provided practical reasons for opposing the case-by-case approach. The primary practical reasons provided in support of a source category rulemaking include the following: (1) a rulemaking would reduce the workload and costs burdens for sources, States, and EPA; (2) source category regulations would provide monitoring uniformity within source categories and among the States; (3) national rulemaking would allow for more meaningful input from State and local regulators, affected industries, the public, and reviewing courts; and (4) rulemakings would be subject to the section 504(b) standard of sufficiency and, therefore, could not mandate top-down, "best," or other standards that disregard cost-effectiveness. Other practical objections to the proposed approach were raised. Certain commenters stated that EPA's authority to create monitoring requirements where underlying

standards do not require monitoring is at issue in current litigation, while others argued that EPA has overstated the time and effort necessary to implement enhanced monitoring through the rulemaking process and has not adequately explained why current monitoring provisions must be revised. Finally, others argued that title V was not intended to create new substantive requirements. One commenter argued for use of a SIP revision process instead of a permit-based implementation approach.

Some commenters acknowledged that EPA could develop a general enhanced monitoring rule with broad criteria that would guide future source category, individual rulemakings. One commenter felt that EPA should promulgate a general rule stating how enhanced monitoring and compliance certification provisions will be addressed in all future standards. Then each substantive standard would include all of the specific compliance provisions applicable to that standard, including test methods, reporting, recordkeeping, and compliance certification requirements. (See related comments summarized under G-1.2.) Several commenters also supported the concept of prescribing a generic enhanced monitoring protocol on a source category basis, but then allowing an individual facility to propose alternative monitoring if it considers the prescribed method inappropriate for its circumstances. This type of source category rulemaking would provide consistency while at the same time allowing for the flexibility that EPA wants to provide in the proposed rule.

Response: The EPA disagrees with the argument that individual source category rulemakings are required. With respect to some of the averaging time concerns raised in these comments, see the related comments and response in section 3.1.4.2 (Part I), above.

First, EPA rejects the commenters' position on policy grounds, because it would be too costly, cumbersome, and time consuming, and thus would fail to achieve the congressional mandates set forth in the 1990 Amendments.

Second, revisions to individual standards are not legally necessary. The EPA believes it is appropriate to provide for development of monitoring in the manner prescribed by part 64. Contrary to the commenters' arguments, part 64 does not redefine compliance determination methods, as the specified compliance test method for a particular standard remains as the benchmark for establishing compliance with that standard. The

part 64 rulemaking merely adds monitoring requirements for particular types of sources and emissions units under the authority of section 114 and other provisions of the Act. As discussed in Section II.C.1.a. of the Final Rule Preamble, the general criteria for monitoring under part 64 rests on the assumption that once an owner or operator has shown that installed control equipment can comply with an emission limit, there will be a reasonable assurance of ongoing compliance with the emission limit as long as the emission unit is operated under the conditions anticipated and the control equipment is operated and maintained properly. The final rule language at § 64.3(a)(2) clearly establishes this basic principle of the CAM approach. In addition, the final rule clarifies the purpose and extent of establishing indicator ranges through performance testing. These clarifications of the basic CAM approach and the indicator range setting process address many of these comments.

The Agency also disagrees with the argument that part 64 monitoring cannot apply retroactively or independently to a pollutant-specific emissions unit without increasing the stringency of the underlying standards (even if the data are not used to determine compliance directly).

For instance, the Agency has previously used its section 114 authority, even before the express enhanced monitoring authority under the 1990 Amendments, to require additional monitoring for units subject to an NSPS standard. (See 53 FR 50354, 50360, December 14, 1988, adding monitoring retroactively for Portland cement plants affected by 40 CFR Part 60, Subpart F.) Nothing in the section 114(a)(3) language indicates that individual rulemakings are required to add enhanced monitoring. In fact, the Agency believes that part 64 represents a reasonable means of fulfilling the statutory requirement in section 114(a)(3) that the Agency promulgate rules on enhanced monitoring for all major stationary sources.

The part 64 requirements are established by rule as required by section 114(a)(3), although the particular monitoring used to satisfy the part 64 requirements will be established through the permit process. This is consistent with the statutory language which requires EPA to "promulgate rules to provide guidance and to implement this paragraph . . ." (emphasis added). In addition, a Senate Committee Report on this provision stated that this "new authority will be implemented by EPA through regulations or implementation plan and permit program requirements . . ." (See Senate Committee Report 101-228, p. 368 (1989).) Both the statutory language and this legislative history indicate that it is appropriate for EPA to promulgate a rule containing general criteria requirements that is implemented through the permit process.

Third, EPA believes that implementing enhanced monitoring on a case-by-case basis will allow for a flexible implementation approach that allows for adopting monitoring that is suited most appropriately to a particular source's circumstances. With respect to consistency concerns, the EPA acknowledges the potential significance of these concerns. Although EPA believes that they have been overstated by the commenters, steps have been taken to minimize inconsistencies. See Section I.C.2.c. of the preamble to the final rule for further discussion.

Fourth, EPA must weigh these concerns against the significant policy concerns that would exist if the Agency attempted to develop specific enhanced monitoring rules for each NSPS and NESHAP standard, as well as the burdens on States to revisit each SIP regulation, as well as individual State preconstruction and operating permits. The administrative burdens associated with that approach would severely hinder the effective and timely implementation of enhanced monitoring for most sources for many years. In addition, such an approach fails to acknowledge the new benefits of the operating permits program to tailor general requirements in a manner that most appropriately suits the circumstances at a particular source.

Letter(s): 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 Petroleum Institute (IV-D-289); 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); 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); Cincinnati Gas & Electric Company (IV-D-259); Class of '85 Regulatory Response Group (IV-D-338); 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); Distilled Spirits Council of the United States (IV-D-300); 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); Enserch Development Corp. (IV-D-239); Entergy (IV-D-281); 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); Houston Lighting & Power (IV-D-322); Kaiser Aluminum & Chemical Corporation (IV-D-295); 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); Leather Industries of America (IV-D-286); Lone Star Energy Company (IV-D-401); Lower Colorado River Authority, et al. (IV-D-256); 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); National Petroleum Refiners Association (IV-D-276); 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); Pennzoil Company (IV-D-373); Pharmaceutical Manufacturers Association (IV-D-367); Rubber Manufacturers Association (IV-D-331); Shell Oil Company (IV-D-280); South Carolina Electric & Gas Company (IV-D-394); Southwestern Public Service Company (IV-D-272); Specialty Steel Industry of the United States (IV-D-328); State and Territorial Air Pollution Program Administrators, et al. (IV-D-439); Steel Manufacturers Association (IV-D-326); Tennessee Valley Authority (IV-D-389); U.S. Steel Group, The (IV-D-340); United States Sugar Corporation (IV-D-382); Utah Division of Air Quality, State of (IV-D-487); Utility Air Regulatory Group (IV-D-489); Whirlpool Corporation (IV-D-493)

Comment b: Certain commenters also argued that SIPs may not be revised without a finding by EPA that the provisions in question are "substantially inadequate" which cannot be performed through the proposed approach. (See related comments in section 3.4, below.)

Response: The final rule does not revise SIPs. The final rule promulgates monitoring requirements for certain emissions units under the authority of section 114(a) and other provisions of the Act.

Letter(s): Cincinnati Gas & Electric Company (IV-D-259); Ohio Chamber of Commerce (IV-D-370)

Comment c: With respect to NSPS requirements, certain utility commenters argued that under sections 111 and 301(d), EPA does not have the authority to

delegate to the States the ability to revise NSPS requirements.

Response: The final rule does not delegate authority to revise NSPS requirements. The final rule promulgates monitoring requirements for certain emissions units under the authority of section 114(a) and other provisions of the Act.

Letter(s): Carolina Power & Light Company (IV-D-297); Cincinnati Gas & Electric Company (IV-D-259); Ohio Edison (IV-D-266); Utility Air Regulatory Group (IV-D-489)

Comment d: One commenter argued that prior court decisions (see Donner Hanna and NLRB v. Wyman-Gordon) have held that where a statute requires "legislative" rulemaking, "adjudicative" rulemakings are insufficient. Therefore, EPA cannot use the adjudicative permit process as a substitute for legislative rulemakings required for NSPS and similar requirements.

Response: The minimum monitoring requirements to satisfy part 64 have been established through a "legislative" rulemaking. Nothing in the statute indicates that the Agency cannot rely on the permit process to establish how those minimum requirements are to be achieved for a particular facility.

Letter(s): American Electronics Association, Clean Air Task Force (IV-D-437)

3.2.2: Supports Flexibility in the Monitoring Selection Process/Opposes Source Category Rulemaking

Comment a: Many commenters supported the basic goal of providing flexibility in the monitoring selection process, without specifically endorsing case-by-case implementation through the permit process. Often these commenters emphasized the need for flexibility in order to promote cost-effectiveness and preserve the economic competitiveness of American industry. Other commenters supporting flexibility had more specific concerns, including fear that EPA would undermine the rule's flexibility by overusing its veto power under part 70, emphasis on the need for flexibility in determining the frequency of sampling and analysis, and caution with regard to the scope of the program so as to not create an overwhelming permitting burden.

A few commenters directly opposed establishing source category monitoring requirements, because that approach would restrict a source's ability to select the most cost-effective means of compliance and would fail to account for facility-specific differences.

Response: The Agency agrees with these comments, and believes that the final part 64 rule will provide flexibility and enable owners or operators to select cost-effective options for providing a reasonable assurance of compliance with applicable requirements. Provided that the minimum criteria of part 64 are achieved, an owner or operator may consider any of the circumstances at an emissions unit so that the monitoring which is most appropriate for the unit is selected.

As to the concern that EPA will overuse its veto power, there is no reason for EPA to exercise a veto provided that proposed monitoring satisfies the requirements of part 64. The rule itself does not favor a particular monitoring methodology over another.

With respect to flexibility in measurement frequency, the general measurement frequency requirement of § 64.3(b) provides that the frequency of measurements for the largest emissions units should be continuous absent a justification for less frequent monitoring. For smaller units, the general criteria provide sufficient latitude for less frequent monitoring. Because the final rule focuses on emissions units with control devices, the Agency believes that much of the concern about measurement frequency has been reduced because many of the situations in which reduced frequency would be appropriate applied to uncontrolled sources. The Agency does not believe that any specific test for margin of compliance or potential variability of emissions can be articulated in a manner that is applicable to all potential circumstances and therefore has not included such a test in the final rule. The Agency is committed, however, to working with affected industries and permitting authorities to clarify through guidance and examples how these factors may best be considered in various situations. See Section II.C. of the preamble to the final rule for further discussion.

To address the concern of the commenters that the rule will be a burden to the permitting process, EPA has made significant revisions to the final rule that greatly reduce the burdens of part 64 on the title V permitting process. See Section I.C.2.a. of the preamble to the final rule for further discussion of these changes.

Letter(s): American Cyanamid Company (IV-D-201); American Textile Manufacturers Institute (IV-D-440); Arizona Public Service Company (IV-D-18); Arkansas Department of Pollution Control and Technology (IV-D-3); Boeing Company, The (IV-D-337); Bunge Corporation (IV-D-444); China Clay Producers Association, Inc. (IV-D-254); Colorado Department of Health (IV-D-209); County Sanitation Districts of Orange County, California (IV-D-235); Department of the Navy (IV-D-206); Dow Chemical Company (IV-D-260); El Paso Natural Gas Company (IV-D-271); Energy Efficiency Systems, Inc. (IV-D-255); Entergy (IV-D-281); Gas Research Institute (IV-D-303); Hazardous Waste Treatment Council (IV-D-392); Kingsford Products Company, The (IV-D-246); Los Angeles County Sanitation Districts (IV-D-26); Montana Power Company (IV-D-499); NESCAUM (IV-D-253); New Mexico Environment Department (IV-D-247); Oklahoma Department of Environmental Quality (IV-D-463); Pennsylvania Department of Environmental Resources (IV-D-482); PQ Corporation, The (IV-D-25); Public Service Company of Oklahoma (IV-D-477); Rocky Mountain Oil and Gas Association (IV-D-183); Safety-Kleen Corporation (IV-D-22); Sugar Cane Growers Cooperative of Florida, et al. (IV-D-252); Texas Natural Resource Conservation Commission (IV-D-371); Tri-TAC (IV-D-24); Union Carbide Corporation (IV-D-293); Unocal Corporation (IV-D-268); Washington Department of Ecology (IV-D-279); Wyoming Department of Environmental Quality (IV-D-462)

3.2.3: Role of Enhanced Monitoring Reference Document

Comment a: Numerous industry commenters argued that the Enhanced Monitoring Reference Document should be included as part of the formal rulemaking and subject to formal public notice and comment. Some commenters stated that the document will be used to establish a minimum standard for evaluating protocols and therefore should be included in the rulemaking and review process. One trade association cited legal precedent for subjecting this type of document to notice and comment rulemaking procedure. Other industry and some State agency commenters, however, argued that EPA should state clearly in the rule or in the Enhanced Monitoring Reference Document that the document is only guidance and does not establish minimum requirements. These commenters did not want the document to frustrate the flexibility provided in the rule.

Response: The guidance materials developed for the final rule are intended to serve two purposes. First, the materials describe the overall program in general terms and provide general background information. This purpose is consistent with many other general Agency program guidance materials, and the Agency does not believe this aspect of the guidance should raise concerns. Second, EPA will make available example monitoring approaches for various combinations of emissions units, pollutants, and types of control devices. The EPA emphasizes that these example approaches are not intended to be minimum or de facto requirements. The examples will provide guidance as to one or more general types of monitoring EPA considers appropriate for a particular set of broadly applicable circumstances, but are not intended to foreclose the owner or operator from proposing other types of monitoring that can satisfy the requirements of part 64. Therefore, EPA disagrees that the guidance materials must be subject to notice and comment rulemaking. The Agency will, however, provide an opportunity for comment on the examples by making drafts available on the Agency's Technology Transfer Network bulletin board system (TTNBBS) and also by publishing a notice of availability in the Federal Register. The Agency will provide a notice and comment period prior to designating any example monitoring approaches as presumptively acceptable under the provisions of § 64.4(b)(5).

Letter(s): ASARCO (IV-D-327); Agribusiness Association of Iowa (IV-D-529); Aluminum Association (IV-D-378); American Automobile Manufacturers Association (IV-D-538); American Electronics Association, Clean Air Task Force (IV-D-437); American Textile Manufacturers Institute (IV-D-440); Association of International Automobile Manufacturers (IV-D-264); Baltimore Gas and Electric Company (IV-D-296); Chemical Manufacturers Association (IV-D-301); Clean Air Implementation Project (IV-D-242); Colorado Association of Commerce and Industry (IV-D-243); Council of Industrial Boiler Owners (IV-D-319); County Sanitation Districts of Orange County, California (IV-D-235); E.I. DuPont de Nemours and Company (IV-D-329); Eastman Chemical Company (IV-D-347); Exxon Company, USA (IV-D-310); Kaiser Aluminum & Chemical Corporation (IV-D-295); Marathon Oil Company (IV-D-376); Monsanto Company (IV-D-273); National Grain and Feed Association (IV-D-312); Oklahoma Department of Environmental Quality (IV-D-463); Rubber Manufacturers Association (IV-D-331); Texaco Inc. (IV-D-357); Tri-TAC (IV-D-24); Wyoming Department of Environmental Quality (IV-D-462)

Comment b: Some State and local agency commenters suggested that the rule include a schedule for regularly updating the document to assist sources and permitting authorities streamline the permit process.

Response: Although the final rule does not include a fixed schedule, EPA intends to make available example monitoring over the next several years for most types of general process/pollutant/control device combinations and has structured the final rule to delay implementation for many emissions units until after the period in which EPA expects to publish these examples.

Letter(s): Oklahoma Department of Environmental Quality (IV-D-463); State and Territorial Air Pollution Program Administrators, et al. (IV-D-439)

Comment c: A few commenters argued that the comment period did not allow sufficient time to properly review the Enhanced Monitoring Reference Document.

Response: As noted in the December 15, 1993 notice extending the original comment period (58 FR 65573), the comment period for the guidance materials associated with the rulemaking does not parallel that of the rule package because the materials are not a formal element of the rulemaking package. Comments on the materials may be submitted to EPA at any time and will be given appropriate consideration. The EPA notes that it did receive many comments on the September 30, 1993 draft document, including comments: expressing disagreement or concern about the material in the draft document; recommending new protocols that should be added; and suggesting non-regulatory processes for adding new example protocols. The Agency has considered those comments and suggestions in the process of preparing the materials released with the final rule. Because the Enhanced Monitoring Reference Document was not part of the formal proposed rulemaking package, the Agency has responded in this document only to those comments that directly relate to the status of the document in relation to the rulemaking package.

Letter(s): Agribusiness Association of Iowa (IV-D-529); National Grain and Feed Association (IV-D-312); Rubber Manufacturers Association (IV-D-331)

3.2.4: Miscellaneous Issues

Comment a: Although not expressly opposing case-by-case implementation, a commenter at the November 19, 1993 public hearing said that emission standards should conform to operating conditions at a source and should be established through a source category rulemaking. The commenter said that complying with an emission limit based on a source's operating range would provide technologically achievable emission standards, minimize the risk for noncompliance, ensure reasonable operating flexibility, and eliminate the need for continuous monitoring since the permit standard would reflect the capability of the system.

Response: Part 64 does not establish what the compliance obligations for an emission limitation or standard are. Therefore, while noting this comment for the record, the issue raised is beyond the scope of this rulemaking.

Letter(s): American Gas Association (IV-F-3)

Section 3.3: Relation to Part 70 Periodic Monitoring

3.3.1: Distinguishing Periodic Monitoring from Enhanced Monitoring

Comment a: State and local agency groups, as well as an industry commenter, requested that EPA clarify how periodic monitoring under part 70 relates to enhanced monitoring. Some commenters suggested that EPA clearly state that there is a difference between periodic monitoring and enhanced monitoring, and recommended allowing more comment time on part 64 to allow States to understand periodic monitoring. One State agency group suggested that the distinction be made by applying the general principle that there should be a gradation of monitoring requirements as the significance of an emissions unit increases (size for criteria pollutants and public health risk for toxics). Another agency group said that, if the enhanced monitoring criteria are essentially the same as the periodic monitoring criteria, EPA should make the enhanced monitoring applicability threshold much higher. The commenter also said that the lack of timely draft guidance on periodic monitoring has complicated the preparation of title V submittals and limits the ability to determine the scope and form of an adequate Enhanced Monitoring Program.

Response: This relationship is discussed in detail in Section I.C.4. of the preamble to the final rule and in 2.1.7 above.

Letter(s): Colorado Department of Health (IV-D-209); Independent Liquid Terminals Association (IV-D-468); NESCAUM (IV-D-253); State and Territorial Air Pollution Program Administrators, et al. (IV-D-439)

Comment b: A commenter said that proposed part 64 is inconsistent with the determination in part 70 that new periodic monitoring should only be required where there is no existing periodic monitoring or testing requirement. The commenter added that 40 CFR 70.6(a)(3)(i)(B) requires new monitoring only when the applicable requirement does not specify such monitoring. However, the proposed rule extends the requirement of periodic monitoring to sources already subject to sufficient monitoring requirements.

Response: The EPA disagrees with the commenter's interpretation of 40 CFR 70.6(a)(3)(i)(B). It is not reasonable to construe that section without also referring to 40 CFR 70.6(c), which requires monitoring that can support a certification of compliance over the certification period. Taken together, these two provisions require that the owner or operator conduct periodic monitoring that is sufficient for use in determining and certifying compliance. Thus, the requirement to conduct additional monitoring under § 70.6(a)(3)(i)(B) applies where existing monitoring requirements do not provide monitoring that is sufficient to adequately support a compliance certification. For instance, under Subpart E of part 60, the only monitoring required relates to process throughput, which is of little value in providing a reasonable assurance of compliance with the applicable emission limits in Subpart E over time. Thus, until such time as part 64 may be applicable to an emissions unit under Subpart E, the provisions of § 70.6(a)(3)(i)(B) will require the permit to include appropriate additional monitoring for units subject to this standard.

Letter(s): Kerr-McGee Chemical Corp. (IV-D-385)

3.3.2: Whether Periodic Monitoring Satisfies Section 114(a)(3)

Comment a: Many commenters said that periodic monitoring should be relied on as sufficient to fulfill the requirements of section 114(a)(3). (See related comments in section 2.1.7 (Part I), above.) Several commenters said that part 70 monitoring will improve monitoring by requiring monitoring where it previously did not exist. Other commenters said that the part 70 program

will require monitoring for all emissions units that would be subject to the enhanced monitoring requirements. Some commenters said that the majority of the benefits that EPA contends will be achieved by part 64 will actually be achieved by part 70 monitoring requirements. Commenters also said that part 70 accomplishes the compliance certification goal of part 64 by requiring semiannual compliance certifications, including a statement of whether compliance was continuous or intermittent. One commenter recommended that the proposed rule be withdrawn, since title V monitoring satisfies the Act's monitoring requirements, while another commenter said that an enhanced monitoring rule should just provide guidance on how to fill gaps where current monitoring is insufficient.

Response: In order to satisfy the statutory obligation that all major stationary sources conduct enhanced monitoring, the preamble to the final rule explains that EPA has adopted part 70 periodic monitoring, reporting and recordkeeping requirements as enhanced monitoring for certain emissions units and applicable requirements. Part 70 periodic monitoring requirements will constitute enhanced monitoring for all emissions units and applicable requirements that do not meet the applicability thresholds for the specific monitoring, reporting and recordkeeping required in part 64. See 2.1.7. However, EPA believes that the general criteria outlined in part 64 provide a more appropriate set of criteria for monitoring for pollutant-specific emissions units that require a control device to achieve compliance than the part 70 periodic monitoring requirements.

Letter(s): ARCO (IV-D-396); Allied Signal, Inc. (IV-D-313); Ashland Petroleum Company (IV-D-307); BP Oil Company (IV-D-315); Chemical Manufacturers Association (IV-D-301); Consolidated Natural Gas Company (IV-D-350); Eastman Chemical Company (IV-D-347); Exxon Company, USA (IV-D-310); Independent Liquid Terminals Association (IV-D-468); Kaiser Aluminum & Chemical Corporation (IV-D-295); Mobil Oil Corporation (IV-D-285); Pennzoil Company (IV-D-373); Proctor & Gamble Company (IV-D-330); Reynolds Metals Company (IV-D-374); Texaco Inc. (IV-D-357); Union Carbide Corporation (IV-D-293)

3.3.3: Miscellaneous Issues

Comment a: A State agency group said that title V periodic monitoring requirements should be no less stringent than existing monitoring required by the permitting authority for the source category. The commenter said that

this approach avoids backsliding and is consistent with the part 64 approach of using best established monitoring.

Response: Comments concerning the appropriate stringency of part 70 monitoring requirements are beyond the scope of this rulemaking.

Letter(s): NESCAUM (IV-D-253)

Comment b: An industry trade group said that EPA cannot add requirements through operating permits that change the underlying standard, and recommended giving States substantial flexibility in deciding how to implement the title V monitoring requirements.

Response: For a response generally as to whether the adoption of enhanced or periodic monitoring requirements through permits will change underlying standards, see the responses to comments in section 3.1 (Part I) above. As discussed above, EPA does intend to provide permitting authorities with substantial discretion in the implementation of periodic monitoring requirements provided that the monitoring is sufficient to determine compliance and support the required certification of compliance.

Letter(s): Chemical Manufacturers Association (IV-D-301)

Comment c: Finally, a Federal agency requested clarification of how part 64 affects alternative operating scenarios under part 70 permits, and asked whether enhanced monitoring can be specified under one operating scenario at an emissions unit and not required during another operating scenarios.

Response: For emissions units with alternative operating scenarios, the owner or operator should consider the impact of the various operating scenarios on the appropriate monitoring that should be conducted in order to demonstrate compliance. If appropriate, the owner or operator should develop different monitoring methodologies that are most appropriate for the alternative operating scenarios.

Letter(s): Department of Energy (IV-D-358)

Section 3.4: SIP Call

3.4.1: Whether a SIP Call is Warranted

Comment a: Two State agencies supported the proposed elements of the SIP Call because States could not feasibly alter each and every individual standard. However, several other agency and industry commenters opposed the SIP Call. Some industry commenters said that a SIP Call is fundamentally inconsistent with State enforcement roles under the Act, because it requires revision of State laws which presently only allow monitoring reports to be used as indicators of compliance, not proof of a violation.

Response: These comments concern the credible evidence portion of the 1993 proposed rule and the subsequent credible evidence rulemaking. See the CE Revisions Response to Comment Document.

Letter(s): Distilled Spirits Council of the United States (IV-D-300); New Mexico Environment Department (IV-D-247); Ohio Chamber of Commerce (IV-D-370); Texaco Inc. (IV-D-357); Texas Natural Resource Conservation Commission (IV-D-371)

Comment b: Certain industry commenters stated that the proposed SIP Call will not comply with the requirement that SIPs be "substantially inadequate" to attain ambient air standards. One commenter argued that the SIP Call cannot be based on EPA's policy preference, and that a SIP Call is not necessary to meet NAAQS. As an example, the commenter said that Ohio has periodic compliance methods using 30-day averages and is attaining short-term ambient air standards. This commenter stated that if EPA decides to issue a SIP Call to require shorter term averaging, EPA is required to demonstrate that the use of 30-day averaging is substantially inadequate and that shorter term averaging is necessary to attain and maintain short-term ambient standards. The commenter added that, to avoid unwarranted emission reductions solely designed to reduce infrequent peak emissions, an analysis of the existing SIP modeling that statistically accounts for simultaneous occurrence of peak emissions and worst-case meteorological conditions would be required.

Response: The EPA disagrees with these comments. The EPA has determined that SIPs are substantially inadequate to comply with the requirements of sections 110(a)(2)(A), (C) and (F), and 113(a) and (e). See the CE Revisions Response to Comment Document and the preamble to the final

CE Revisions rulemaking for further discussion. The EPA also notes that the purposes of the SIP Call do not include implementing short-term averages to meet NAAQS. 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 enhanced monitoring rule.

Letter(s): Clean Air Implementation Project (IV-D-242); Ohio Edison (IV-D-266)

Comment c: A commenter said that the SIP Call will not provide the required public notice and comment for all future SIP changes that would occur through permits under the proposed rule.

Response: The EPA disagrees because the commenter erroneously assumes that States will use the permit process to revise each individual SIP limitation on a permit-by-permit basis. The SIP limitation will remain the same, and new, independently applicable "enhanced monitoring" requirements established by part 64 also will be applicable. The exact nature of how the part 64 monitoring requirements will be fulfilled will be addressed through the permit process.

Letter(s): Ohio Edison (IV-D-266)

Comment d: Two State agencies said that the SIP Call should recognize those States that already have authority under existing regulations to implement the Enhanced Monitoring Program.

Response: The EPA notes that for a SIP to satisfy the SIP Call, it must: (1) provide enforceable emission limitations, establish an adequate enforcement program and require, "as may be prescribed by the Administrator," owners or operators of stationary sources to implement other necessary steps to monitor emissions from such sources, submit periodic reports of such emissions, and to correlate such reports with the applicable emission limitation or standard, as provided by sections 110(a)(2)(A), (C) and (F); (2) provide that any required monitoring under part 64 or part 70 that is approved for the source and included in a federally enforceable operating permit may form the basis of the compliance certification, and provide that any credible evidence may be used for purposes of enforcement in Federal court, as provided in sections 113(a) and (e); (3) ensure that all credible evidence may be used in enforcement; and (4) not limit the types

of testing or monitoring data that may be used for determining compliance and establishing violations, in fulfillment of section 114(a)(3). Where a State already has adequate authority to satisfy these prerequisites, no SIP revisions in response to the SIP Call will be necessary.

Letter(s): California Air Resources Board (IV-D-387); Tennessee Department of Environment and Conservation (IV-D-399)

Comment e: Two commenters proposed that EPA require only that States incorporate enhanced monitoring in all future rules, not existing requirements. These commenters contended that this was consistent with EPA's approach to MACT standard development and would reduce burdens of significant SIP amendments to implement enhanced monitoring for existing requirements.

Response: The EPA disagrees with this approach and believes it would be improper to exempt all existing requirements from the duty to conduct enhanced monitoring.

Letter(s): Exxon Company, USA (IV-D-310); South Coast Air Quality Management District (IV-D-524)

3.4.2: Delaying the Proposed SIP Call

Comment a: Several State agencies and agency associations, and some industry commenters recommended that the proposed SIP Call be delayed until the final part 64 is issued. A commenter expressed concern about the ability to modify a SIP in the time provided in the proposed rule, and the likelihood that the SIP will have to be modified again when the final rule is issued. An industry commenter said that the timing of the SIP Call will interfere with review of operating permit applications.

Some State agencies and agency associations also stated that EPA should not institute a SIP Call until the final rule is issued because EPA does not have the authority to issue a SIP Call based on a proposed rule that has not been subject to public review and comment. Commenters also noted that most States are unable to amend regulations or revise SIPs based on a proposed rule. Another commenter noted that if States revise their SIPs based on the proposed rule, then their SIPs will be in conflict with current EPA rules. Still another commenter requested that

the timing of the required SIP revision be clarified. Finally, one State agency objected to including the proposed rule in a SIP because of earlier assurances from an EPA Regional Office that the SIP would not have to be modified.

Lastly, a State agency said that the primary purpose of a SIP Call is to clarify what evidence can be used in an enforcement proceeding in light of the changes to section 113(e). This agency suggested that part 70 monitoring and other compliance provisions were sufficient in the interim without requiring SIP changes based on a proposed rule.

Response: The EPA believes that the commenters' concerns are unfounded. The SIP Call, initiated in February 1994, is not based solely on the proposed enhanced monitoring rule. Instead, it was issued on the basis that SIPs are substantially inadequate to comply with the requirements of sections 110(a)(2)(A), (C) and (F), 113(a) and (e) and 114(a)(3) of the Clean Air Act. In addition, the revisions to SIPs required by the SIP Call are fundamental to meet the requirements of the Clean Air Act Amendments of 1990, including the part 70 regulations, and will not be affected by changes to the language of part 64 between the proposed rule and the final rule.

Letter(s): California Air Resources Board (IV-D-387); Clean Air Implementation Project (IV-D-242); Colorado Department of Health (IV-D-209); Distilled Spirits Council of the United States (IV-D-300); Iowa Department of Natural Resources (IV-D-4); NESCAUM (IV-D-253); Oklahoma Department of Environmental Quality (IV-D-463); State and Territorial Air Pollution Program Administrators, et al. (IV-D-439); Washington Department of Ecology (IV-D-279); Wyoming Department of Environmental Quality (IV-D-462)

3.4.3: Miscellaneous Issues

Comment a: A commenter said that the proposed SIP Call recognizes that SIPs may have inconsistent provisions with proposed part 64. This commenter added that the proposed rule should be revised to specifically ensure that industry is not subject to any conflicting requirements and, therefore, inappropriately held to be in noncompliance.

Response: The purpose of the SIP call is to eliminate inconsistencies.

Letter(s): American Textile Manufacturers Institute (IV-D-440)

Section 4: Regulatory Benefits and Costs

Section 4.1: The Regulatory Impact Analysis - General Issues

4.1.1: General Comments about the RIA

Comment a: Many commenters stated that the preliminary RIA does not sufficiently analyze the impacts of the proposed rule and fails to fulfill its function of weighing costs against benefits. Some commenters stated that the analysis was flawed, poorly designed and used old or erroneous information, while others argued that a correct analysis would show that the costs far exceed any benefits. Several commenters stated that the overall approach chosen in the proposed rule may require unnecessary enhanced monitoring of sources that are already achieving continuous compliance because the cost and benefit analysis of the various alternative approaches may not have been as complete or thorough as needed. Several other commenters recommended that the cost-effectiveness of the rule be reevaluated with a more accurate assessment of costs and benefits.

Many commenters generally criticized that the cost of complying with the enhanced monitoring rule will not provide any net environmental benefit. Certain commenters argued that the proposed enhanced monitoring rule is an ineffective way to catch a very few noncomplying sources, and noted that other provisions in the Act encourage compliance and assist in enforcement. Other commenters argued that, although enforcement of emissions standards is vital, industry resources should be directed to controlling emissions, developing new emission control technology and/or instituting source reduction and pollution prevention measures. Finally, one commenter noted that the proposed rule will result in no benefits and makes no sense for States that are in attainment and have already taken proactive steps to develop monitoring and permitting programs to document compliance.

Several commenters presented information on costs and emission characteristics at their facilities to show that there would be no benefits for implementing enhanced monitoring for their facilities. Others argued that EPA has not provided any evidence generally or for particular industries that the type of monitoring that would be required will result in greater benefits than costs. Certain commenters raised particular concerns

about the effect of the rule when applied to their industries, including the natural gas industry, industrial boilers, oil and gas production facilities and other facilities located in remote areas, the grain handling industry, the cast metal industry, and the oilseed processing industry. One commenter noted that the costs will burden small businesses and that the rule does not reward voluntary efforts taken to reduce emissions.

Many commenters urged that EPA rethink the proposed rule, use more realistic assessments of costs and benefits, and demonstrate more fully that there are demonstrable net benefits to the regulation. Because of the uncertain nature of the net benefits, certain commenters urged EPA to withdraw the enhanced monitoring proposal, with some proposing that EPA initiate a pilot program with appropriate public input.

Response: As discussed in Section III. B. of the preamble to the final rule, the Agency believes that the preliminary RIA satisfied EPA's obligations under existing Executive Orders. However, based on the comments received, the final RIA includes many improvements, although it does continue to rely on many of the basic premises included in the preliminary RIA. These changes are discussed below in the context of the specific comments on aspects of the preliminary RIA.

Letter(s): ALCOA (IV-D-288); Allied Signal, Inc. (IV-D-313); Aluminum Association (IV-D-378); Alyeska Pipeline Service Company (IV-D-360); Armco Steel Company (IV-D-395); Ashland Petroleum Company (IV-D-307); Asphalt Roofing Manufacturers Association (IV-D-495); AT&T (IV-D-361); BP Oil Company (IV-D-315); Chevron (IV-D-397); City Gas Company of Florida (IV-D-184); Class of '85 Regulatory Response Group (IV-D-338); CONSAD Research Corporation (IV-D-335); Corn Refiners Association, Inc. (IV-D-391); Council of Industrial Boiler Owners (IV-D-319); Department of Energy (IV-D-358); Dow Chemical Company (IV-D-260); E.I. DuPont de Nemours and Company (IV-D-329); Eastman Chemical Company (IV-D-347); El Paso Natural Gas Company (IV-D-271); ENRON Operations Corp. (IV-D-390); Enserch Development Corp. (IV-D-239); Exxon Chemical Americas (IV-D-339); Exxon Company, USA (IV-D-310); Gas Processors Association (IV-D-227); General Electric Company (IV-D-278); GPM Gas Services Company (IV-D-229); Greater Cleveland Growth Association (IV-D-314); International Business Machines Corporation (IV-D-238); Iten Industries (IV-D-219); Kennecott Corporation (IV-D-262); Kerr-McGee Chemical Corp. (IV-D-385); Kerr-McGee Corporation (IV-D-232); Louisiana Mid-Continent Oil and Gas Association

(IV-D-454); Marathon Oil Company (IV-D-376); Merck & Co., Inc. (IV-D-443); Mobil Oil Corporation (IV-D-285); National Grain and Feed Association (IV-D-312); National Oilseed Processors Association (IV-D-267); National Petroleum Refiners Association (IV-D-276); 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 EPA (IV-D-283); Oklahoma Grain and Feed Association (IV-D-485); People's Natural Gas Company (IV-D-27); Phillips Petroleum Company (IV-D-380); Society of the Plastics Industry, Inc. (IV-D-287); Sun Company, Inc. (IV-D-231); Texas Intrastate Natural Gas Pipelines (IV-D-221); U.S. Steel Group, The (IV-D-340); Union Camp (IV-D-359); Union Carbide Corporation (IV-D-293); Vermont Petroleum Association (IV-D-492); W.B. Johnston Grain Company (IV-D-486)

Comment b: Many commenters argued that the proposed rule fails to satisfy the reasonableness criteria of Executive Order 12866. Reasons cited in support of this position included that: EPA has not considered all of the costs that the proposed rule will impose on the regulated community, such as the cost of installing CEMS under the "best monitoring system" requirement; there has been no actual determination of the environmental benefits that the rule would produce; to follow E.O. 12866, EPA must consider the cumulative costs of regulations, and develop and adopt cost containment, cost minimization, or cost effectiveness principles to govern the implementation of the proposed rule; to follow E.O. 12866, the rule must allow flexibility in choosing effective monitoring techniques, must take into account physical limitations of monitoring equipment, and must increase innovation and flexibility; and the preliminary RIA is deficient and the enhanced monitoring requirements of the proposed rules are overly broad.

Commenters also noted that the proposed rule fails to allow for explicit recognition of cost to be taken into account in the selection of monitoring, which contravenes the Act as well as E.O. 12866. All underlying Act requirements provide for considering cost as a factor in establishing that requirements are reasonable. Many industry commenters expressed that cost be an explicit criterion of the selection process (see related comments in section 9.5.3 (Part I)), while one local agency recommended including a specific cost per ton figure in the final rule that would place the outer bounds on what can reasonably be required in selecting enhanced monitoring.

Response: The Agency disagrees with these comments and believes that the final rule in incorporating broad flexibility in monitoring selection has satisfied all requirements of E.O. 12866. See also response to comments in section 9.5.3 (Part I) of this document.

Letter(s): ALCOA (IV-D-288); Allied Signal, Inc. (IV-D-313); American Electronics Association, Clean Air Task Force (IV-D-437); American Gas Association (IV-D-265); American Petroleum Institute (IV-D-289); Arkla Energy Resources Company (IV-D-343); Armco Steel Company (IV-D-395); Bay Area Air Quality Management District (IV-D-402); Chemical Manufacturers Association (IV-D-301); Clean Air Implementation Project (IV-D-242); Colorado Association of Commerce and Industry (IV-D-243); Delhi Gas Pipeline Corporation (IV-D-351); Department of Energy (IV-D-358); E.I. DuPont de Nemours and Company (IV-D-329); ENRON Operations Corp. (IV-D-390); East Ohio Gas Company, The (IV-D-355); Eastman Chemical Company (IV-D-347); El Paso Natural Gas Company (IV-D-271); Mississippi River Transmission Corp. (IV-D-344); Monsanto Company (IV-D-273); Occidental Chemical Corporation (IV-D-240); Ohio Chamber of Commerce (IV-D-370); Ohio Edison (IV-D-266); Pennzoil Company (IV-D-373); Proctor & Gamble Company (IV-D-330); Shell Oil Company (IV-D-280); Society of the Plastics Industry, Inc. (IV-D-287); Texaco Inc. (IV-D-357)

Comment c: Commenters said that the preliminary RIA mistakenly assumed a level playing field and ignored the effect that the proposed rule will have on U.S.-based companies trying to compete in the global marketplace.

Response: Given the relatively small aggregate costs of this regulatory action in the context of the overall size of the domestic economy, the Agency does not believe that this regulatory action will appreciably affect the global competitiveness of U.S. industry as a whole.

Letter(s): ALCOA (IV-D-288); E.I. DuPont de Nemours and Company (IV-D-329); Ohio Cast Metals Association (IV-D-324)

4.1.2: The Data Used from Four Selected States as Representative of United States Industry

Comment a: Numerous commenters criticized the methodology used in the preliminary

RIA by which four States were selected to extrapolate to the nation as a whole. Some commenters stated that Florida, Colorado, Wisconsin and Indiana are not representative of the U.S. industry as a whole. Some noted that the four States are not representative of the petroleum industry in particular, while others noted that major gas producing States have a different manufacturing base than Colorado or Florida. Other commenters argued that the four States are not representative of areas that are nonattainment for ozone. Certain commenters argued that States in the ozone transport region should not be matched with States having only a few ozone nonattainment areas, unless adjustments are made to reflect the disparity. Finally, a study sponsored by several companies argued that the preliminary RIA underestimated costs because the four reference States have better monitoring programs (according to the RIA supporting documents) than the remaining States.

Response: In the final RIA, EPA has included data from one additional State (Connecticut) to support the analysis. The States were selected on the basis of their willingness to participate in the study on short notice and because of the compatibility of their emission and source databases. In addition, the extrapolation method adopted in the final RIA relies on a different approach which documents that the extrapolation method selected is appropriate.

Letter(s): American Gas Association (IV-D-265); American Petroleum Institute (IV-D-289); CONSAD Research Corporation (IV-D-335); Columbia Gas System Service Corporation (IV-D-341); Council of Industrial Boiler Owners (IV-D-319); E.I. DuPont de Nemours and Company (IV-D-329); ENRON Operations Corp. (IV-D-390); Exxon Chemical Americas (IV-D-339); Gas Processors Association (IV-D-227); General Electric Company (IV-D-278); Pennzoil Company (IV-D-373); Texaco Inc. (IV-D-357)

4.1.3: Whether the RIA Underestimated the Number of Affected Units, Pollutant Points and Enhanced Monitoring Protocols

Comment a: Some commenters stated that the figures for the four sample States underestimate the number of units covered and the costs of implementation. The reasons include that: the model States do not include a major industrial State with significant serious or severe nonattainment areas; no correction was made for relative sizes of facilities

even though other States have many more units per facility than the model States; and that none of the model States have a large industrial base. Some commenters suggested that the State by State estimates of affected units should include a ratio reflecting the number of manufacturing facilities or the number of production workers. One commenter suggested comparing the data against a major State such as Texas, New Jersey or California, as was done for the part 70 RIA. That same commenter suggested using a pollutant point multiplier for major industrial States.

Response: The Agency did explore using data from Texas and two of the largest California districts, but those efforts were unsuccessful because of data incompatibility issues and an inability of the affected agencies to provide the necessary assistance within the time required. However, based on a SIC code analysis, EPA believes that the data from the five States used to support the final RIA are reasonably representative and that further analysis is unnecessary.

Letter(s): ALCOA (IV-D-288); American Gas Association (IV-D-265); Clean Air Implementation Project (IV-D-242); Columbia Gas System Service Corporation (IV-D-341); CONSAD Research Corporation (IV-D-335); ENRON Operations Corp. (IV-D-390); Exxon Chemical Americas (IV-D-339); Exxon Company, USA (IV-D-310); Gas Processors Association (IV-D-227); Mobil Oil Corporation (IV-D-285); Pennzoil Company (IV-D-373); Texaco Inc. (IV-D-357); Union Camp (IV-D-359); Union Carbide Corporation (IV-D-293)

Comment b: Some commenters criticized the failure of the preliminary RIA to include facilities and pollutant points that would be affected by the rule due to their potential to emit and noted that the databases used in the preliminary RIA contained only information about actual emissions. The commenters also stated that this problem in the approach also applies to sources currently listed as minor sources that will be reclassified as major under the new nonattainment provisions.

Response: The final RIA relies on potential pre-control device emissions to define which units would be subject to the rule.

Letter(s): CONSAD Research Corporation (IV-D-335); Exxon Chemical Americas (IV-D-339); General Electric Company (IV-D-278)

Comment c: Some commenters argued that the preliminary RIA underestimated the number of emissions units that will need to have monitoring equipment installed because the preliminary RIA did not estimate the number of units within bubbles or other aggregated emissions units that will have to comply with part 64 because of the collective emissions of all such units as required in the proposed rule.

Response: This comment is no longer applicable because of the changes in the applicability provisions in the final rule. See section 6.5.1 (Part I), below, for further discussion.

Letter(s): American Petroleum Institute (IV-D-289); Exxon Chemical Americas (IV-D-339); General Electric Company (IV-D-278)

Comment d: Commenters also argued that many emissions units will have more than one pollutant point or more than one emission limit for each pollutant point that will require separate enhanced monitoring protocols. These multiple point/standards situations will increase the number of enhanced monitoring protocols actually required. Commenters noted that, even where the same protocol could be used for separate standards, the owner or operator would have separate burdens for permitting, testing, reporting and recordkeeping.

Response: For emissions units that may have more than one pollutant point, the preliminary RIA took into account that many emissions units may be a pollutant point for more than one pollutant; that was the reason for labeling the incrementally affected emissions units as "pollutant points" rather than simply "emissions units." In addition, the State emission inventory data relied on to develop the analysis was compiled at the regulated emission point level, which would account for a large unit with multiple emission points. The role of multiple emission limits is not applicable to the final rule. Regardless of how many limits apply, the final rule focuses on assuring that the control device(s) (and associated capture systems and processes where applicable) are operated and maintained in an appropriate manner for minimizing emissions at least to the levels required by applicable requirements.

Letter(s): CONSAD Research Corporation (IV-D-335); Clean Air Implementation Project (IV-D-242); Coalition for Clean Air Implementation (IV-D-304);

Exxon Chemical Americas (IV-D-339); Pennzoil Company (IV-D-373);
Union Camp (IV-D-359)

Comment e: One commenter argued that the preliminary RIA should have projected that a certain number of air quality areas would be "bumped up" to serious or severe nonattainment status prior to promulgation of the rule, which would increase the number of emissions units subject to the rule.

Response: The impact analysis does not attempt to project the potential for "bumping up" areas or for "bumping down" areas on the basis that such shifts, especially when viewed over time, will be hard to predict. The Agency notes, however, that since listing classifications for ozone nonattainment areas on November 6, 1991 (56 FR 56694), as of May 9, 1997, the Agency has bumped up or identified new nonattainment areas in 3 instances. In contrast it has redesignated 52 areas from nonattainment to attainment and has bumped down 5 areas. See Areas Designated Nonattainment, May 9, 1997, prepared by Office of Air Quality Planning and Standards, U.S. Environmental Protection Agency, available through the internet at <http://www.epa.gov/oar/oaqps/greenbk/>.

Letter(s): General Electric Company (IV-D-278)

Comment f: Two commenters questioned the low preliminary RIA estimate of affected NO_x emission units in attainment areas. These commenters added that most natural gas compressor stations are in ozone attainment areas and there are many more natural gas-fired reciprocating engines in use by other industries. Some commenters stated that EPA's ACT document for internal combustion engines documents the large number of engines with potential NO_x emissions contemplated for regulation under enhanced monitoring. However, the preliminary RIA data shows an average of only 79 NO_x emissions units per State being subject to part 64.

Response: The estimate is based on the information provided in the States contacted as to the number of NO_x pollutant points that satisfy the proposed rule criteria. The Agency notes that, because the final rule focuses on units with control devices, the vast majority of NO_x sources, such as internal combustion engines, will be subject only to part 70 monitoring because such units employ control methods (e.g., lean burn kits, air-to-fuel controllers, low-NO_x burners, etc.) that do not meet the part 64 definition of control device.

Letter(s): American Gas Association (IV-D-265); Columbia Gas System Service Corporation (IV-D-341)

Comment g: One commenter stated that the preliminary RIA appears to state that units not subject to regulation were included for nonattainment areas, but excluded for attainment areas, resulting in significant undercounting of units. The commenter also noted that on page 9 of the RIA, the first bullet states that one applicability criterion was including units greater than 100 tons per year in nonattainment areas. If true, this would result in undercounting by not including units below that level that are subject to the reduced major source thresholds in nonattainment areas.

Response: Emissions units that are not subject to regulation have been excluded from the analysis in all areas, not just attainment areas. In addition, both the preliminary and final RIA did include major sources based on the reduced thresholds in nonattainment areas as well as the standard 100 tons per year threshold that applies in all attainment areas and marginal/moderate nonattainment areas.

Letter(s): Columbia Gas System Service Corporation (IV-D-341)

Comment h: Commenters also argued that the preliminary RIA excluded all units subject to NESHAP, NSPS, Title IV, and existing CEMS requirements, even though many such units will not have sufficient monitoring in place to satisfy part 64. At the least, the commenters asserted, costs related to monitoring protocol submission, reporting and recordkeeping, performance testing, and compliance certification should be calculated for such units. For Title IV sources, commenters also pointed out that such sources also may be subject to particulate matter, VOC and other pollutant requirements, which are not subject to Title IV regulations. (See related comments in section 4.3.2., below.)

Response: The final RIA addresses the costs and benefits associated with NSPS units. The decision to exclude NSPS points in the preliminary RIA was made early on in the regulatory development process at a time when the elements of enhanced monitoring were unclear. For title IV requirements, the preliminary RIA excluded only SO₂ and NO_x emissions points; the analysis included utility units as pollutant points for particulate matter or

VOC where appropriate. The decision to exclude Title IV SO₂ and NO_x pollutant points, and pollutant points subject to existing CEMS requirements, is retained in the final RIA. Any development costs for such units should be minimal and no greater than what would be required to include such units as satisfying the part 70 periodic monitoring requirements. Similarly, the compliance certification and reporting for such units will not be greater than what would have been required under part 70 if used to satisfy the periodic monitoring requirements, given that part 64 requires semiannual reports and annual compliance certifications consistent with part 70. The Agency notes that by excluding the potential for minor costs associated with these units, the Agency has also excluded any potential benefits associated with these units as well.

The preliminary RIA assumed that emissions units subject to part 61 emission limits would not be incrementally affected by part 64 because either the monitoring under part 61 would suffice for part 64 purposes and/or monitoring used for other pollutants emitted by the unit could be used to demonstrate compliance with part 61 limits as well. This assumption was made in part because of the lack of available quantitative information on the number of part 61 emissions units that may be affected.

Subsequent to the preliminary RIA, the Agency collected data from the AIRS database, knowledgeable EPA staff, completed RIAs for NESHAP rules, and the Toxic Release Inventory System (TRIS). Information on 14 NESHAP subparts was identified (asbestos removal actions under subpart M were excluded). Using best judgment on the quality of sometimes conflicting information, this analysis provided an estimate of approximately 1200 sources nationwide that may be affected by part 61 standards, with total emissions after controls of 16,000 metric tons per year of hazardous air pollutants. The analysis, however, was unable to provide an estimate of the number of emissions units at these facilities that may be covered or the average emissions associated with those units.

As in the preliminary RIA, EPA has excluded consideration of impacts on emissions units regulated by part 61 in the final RIA. The Agency opted to continue this approach because the final rule applies only to individual units that have the pre-control device potential to emit above the major source threshold (i.e. potential emissions taking into account enforceable restrictions on throughput, operating hours and similar limits, but excluding emission reductions that may occur as a result of control devices). The 1993 proposed rule would not have established any threshold for hazardous air pollutants and would have applied to units that are

controlled by means other than control devices. The revised applicability approach adopted in the final rule will drastically reduce the number of part 61 emissions units that may be affected by part 64. In addition, the final rule focuses on documenting operation and maintenance of control devices as a means of providing a reasonable assurance of compliance with applicable emission limits. Many of the subparts in part 61 that may apply to emissions units potentially affected by part 64 already include at least some monitoring similar to that required by part 64. Thus, any impacts associated with applicability to part 61 emission limitations or standards is considered small in relation to the overall cost impacts associated with part 64.

Letter(s): CONSAD Research Corporation (IV-D-335); Exxon Chemical Americas (IV-D-339)

Comment i: One commenter pointed out that the preliminary RIA estimated that 23,000 to 54,000 emissions units would be subject to part 64. Part 70 estimated that over 30,000 sources would be required to obtain permits. This commenter found it inconceivable that an average of approximately only one point per source will be subject to proposed part 64. Another commenter suggested that the final RIA specify with greater detail the emissions units and applicable requirements that will be impacted.

Response: The RIA evaluates the costs and benefits for those emissions units that would be incrementally affected by proposed part 64. Therefore, there are several categories of emissions units that will be subject to the specific monitoring, reporting and recordkeeping requirements in part 64, but for which the Agency does not anticipate either significant cost or benefits to occur because of the existing monitoring conducted by such units. In addition, the analyses conducted by EPA estimate that many part 70 sources will not in fact have any emissions units subject to part 64 because of the composition of the emissions units at those sources (i.e., the sources are made up of many small and/or uncontrolled emissions units). These two factors make it inappropriate to compare the part 70 source estimates with the part 64 emissions unit estimates.

The Agency does not believe that the final RIA need describe the emissions units and applicable requirements that will be impacted with any greater specificity than the preliminary RIA. Section 64.2 of the final

rule, with the accompanying discussion in the final preamble, clarify what emissions units and applicable requirements are subject to part 64.

Letter(s): American Gas Association (IV-D-265); Exxon Chemical Americas (IV-D-339)

4.1.4: Consideration of the Impact of the Rule on Certain Sources

Comment a: Commenters complained that the preliminary RIA failed to distinguish between the various industrial sectors that will be affected by the proposed rule. One commenter asserted that the electronics industry differs substantially from other more traditional manufacturers. Other commenters raised concerns about the impacts on the natural gas or oil industry, especially on remote unmanned sites. One gas industry commenter noted that Table 4.1 in the preliminary RIA did not list pipeline compressor stations as a source category affected even though the draft Enhanced Monitoring Reference Document includes an example protocol for such sources. One commenter argued that the preliminary RIA should account for costs from closing down marginal businesses impacted by enhanced monitoring.

Response: The preliminary RIA did in fact include some analysis that related impacts of the rule in relation to revenues, grouped by SIC code. Although this type of analysis is not conducted in the final RIA as a whole, some analysis of costs in relation to revenues is included in the Regulatory Flexibility Analysis portion of the final RIA. Moreover, EPA considers the analysis of affected sources as a whole that is included in the final RIA to be appropriate for a generally applicable rule such as CAM.

Letter(s): CONSAD Research Corporation (IV-D-335); ENRON Operations Corp. (IV-D-390); Eastman Chemical Company (IV-D-347); Louisiana Mid-Continent Oil and Gas Association (IV-D-454)

Comment b: One commenter that criticized the RIA for excluding part 61 NESHAP facilities, suggested counting part 61 sources by tallying initial notices sent to EPA and then multiplying that number by the number of emission limits in part 61.

Response: See the response for Comment in section , above.

Letter(s): Exxon Chemical Americas (IV-D-339)

4.1.5: Consideration of the Impact of Part 64 on Small Emissions Units and Small Businesses

Comment a: Some commenters stated that the preliminary RIA underestimated the disproportionate impact the proposed rule will have on small units and small facilities. One commenter noted that the preliminary RIA is based on the number of sources and units that would be required to perform enhanced monitoring and not on the amount or proportion of pollutants involved. Other commenters observed that the proposed rule will impose costs on small units and small businesses that will have little or no environmental benefit. (See also section 4.5 (Part I), below, for comments concerning the Regulatory Flexibility Analysis.)

Response: The focus on solely emissions units with control devices is in part a recognition that the emission reduction benefits of monitoring uncontrolled emissions units will likely decrease faster than the costs of monitoring such units. The Agency does not believe that, at the facility level, impacts will fall disproportionately on small facilities given that such facilities will have fewer emissions units than large sources that meet the applicability thresholds in the rule. For further discussion of small business impacts, see section 4.5 (Part I), below.

Letter(s): American Electronics Association, Clean Air Task Force (IV-D-437); Engine Manufacturers Association (IV-D-490); Public Systems (IV-D-345)

4.1.6: Availability of Certain Documents Used in the RIA

Comment a: Several commenters complained that numerous documents cited in the preliminary RIA were unavailable for public review and, thus, the rulemaking was legally deficient under section 553 of the APA and section 307(d) of the Act.

Response: The documents cited by the commenters were secondary materials cited in certain reports, and were included in the docket prior to the close of the public comment period based on commenters' concerns. The Agency acknowledges that commenters may have had some marginal

improvement in ability to comment on the preliminary RIA if these documents had been included in the docket at an earlier date. However, the breadth and depth of comments on the preliminary RIA demonstrate that the public had a full opportunity to comment on this supporting documentation associated with the rulemaking. Moreover, the documents cited by the commenters were minor in relation to the findings of the preliminary RIA and the Agency does not believe that the availability of these documents would have provided any significant additional detail that would be useful in adding to the extensive comments received by the Agency. In light of these circumstances, the Agency does not believe that the difficulty experienced by some commenters in obtaining materials referenced in regulatory support documents rises to the level of a legal deficiency in the rulemaking.

Letter(s): American Petroleum Institute (IV-D-289); AT&T (IV-D-361); BP Oil Company (IV-D-315); CONSAD Research Corporation (IV-D-335); General Electric Company (IV-D-278); Mobil Oil Corporation (IV-D-285); National Environmental Development Association (IV-D-334)

4.1.7: Alternative Implementation Strategies

Comment a: Some gas industry commenters noted that EPA contends that enhanced monitoring is a less costly tool than other regulatory alternatives, but EPA does not specify or analyze those alternatives in the preliminary RIA. The EPA should have considered alternative implementation schedules or a rule that emphasized least-cost monitoring.

Response: The final RIA compares the reduced monitoring requirements adopted in the final rule with the more stringent monitoring requirements that would have been required under the proposed rule. In addition, the RIA analyzes different applicability options that greatly influence the costs and benefits of the rule.

Letter(s): American Gas Association (IV-D-265); ENRON Operations Corp. (IV-D-390); Gas Processors Association (IV-D-227)

4.1.8: Options Evaluated

Comment a: Two commenters argued that the options for applicability discussed in the

preamble are different than the options in the preliminary RIA. In addition, these commenters argued that it was impossible to effectively evaluate the options because the backup documents in the docket evaluated different options and backup tables showing the incrementally affected emissions units were not available. Finally, one commenter stated that the estimates of the number of affected facilities and the costs of the proposed rule are substantially different in the preliminary RIA than in the technical support documents, because the five regulatory options considered in the preliminary RIA are dissimilar from the four regulatory options considered in the support documents.

Response: The Agency believes that the information available in the docket allowed for a full opportunity to comment on the preliminary RIA and that inclusion of backup tables was unnecessary to understand the purpose, conduct, or findings of the study. The options in the preamble to the proposed rule were the same as the options in the preliminary RIA, although the preamble used cardinal numbers while the preliminary RIA used roman numerals. Finally, the document entitled "Technical Support Document for the Regulatory Impact Analysis of the Enhanced Monitoring Rule" and dated September 30, 1993 served as the principal support document for the preliminary RIA. That document analyzed the same five options as the preliminary RIA.

Letter(s): CONSAD Research Corporation (IV-D-335); ENRON Operations Corp. (IV-D-390); Exxon Chemical Americas (IV-D-339)

Comment b: One commenter stated that options 2, 3 and 4 in the RIA were improper because they were based on "allowed" or "permitted" emissions. The commenter believed that including sources that were "permitted" below the levels that define a source as major was improper and resulted in under-estimating pertinent costs.

Response: Only major sources that will be subject to title V permitting were included in the preliminary RIA. In quantifying emissions from individual units, the preliminary RIA used the actual emissions data available in State emission inventory databases. The reasons for this approach are discussed in section 4.1.3 (Part I), above.

Letter(s): ENRON Operations Corporation (IV-D-390)

4.1.9: Suggested Additions to the RIA

Comment a: Some commenters suggested specific additions to the RIA, and they were: (1) add to Tables 2-3 and 3-2 categories of costs for sources with existing CEMS and COMS, including costs to upgrade such systems and comply with the testing, reporting, and recordkeeping requirements in part 64; (2) add an estimate of the number of NO_x emissions units to the category of sources that must upgrade existing process/parameter monitors to recognize the costs of compliance and system upgrades, and make the appropriate additions to Table 3-2; (3) add a table to show the ton per emissions unit ratios for boilers, non-boilers, nonattainment areas, attainment areas and total emissions; (4) explain the phrase "incrementally affected units" and provide a comparison to total units; (5) add a table for cost-effectiveness in attainment areas similar to Table 4-7; (6) use population data more recent than 1980 and 1986 to support Table 2-4; (7) clarify how estimates were derived for VOC and TSP emission reduction; and (8) include all supporting data so reviewers can effectively analyze conclusions about emission reductions.

Response: Consideration of these comments was given in developing the final RIA. However, the significant changes that have been made in restructuring the analysis has made most of these comments no longer applicable.

Letter(s): American Gas Association (IV-D-265); Columbia Gas System Service Corporation (IV-D-341); ENRON Operations Corp. (IV-D-390)

4.1.10: Technical or Typographical Errors

Comment a: Several commenters noted technical or typographical errors, and they were: (1) affected NO_x points in Table 2-4 appear to have a typo; (2) the nationwide annual costs for Option I in Table 3-3 do not equal other data from Tables 2-2 and 3-4; (3) the reference in the third bullet on page 5 should be changed from VOC nonattainment areas to ozone nonattainment areas; (4) the nationwide number of affected emissions units is stated differently at page 9, paragraph 2, than it is in Table 2-2; because the numbers in Table 3-6 are internally consistent, they should replace the numbers in Table 2-2; (5) the preliminary RIA is unclear as to whether ozone transport regions are classified as nonattainment areas; if they are, major sources in those states may be subject to RACT requirements; if they are considered to be in attainment areas, they would

not be subject to an emission limitation or standard; (6) questioned why the number of affected units in Table 2-4 is the same for Options I and II since Option I is the most inclusive and should have more units; (7) questioned why the number of NO_x units affected by Option V is lower than the number of such units affected under Option IV, since Option V is the least inclusive option; (8) questioned why, in Table 2-2, the number of VOC affected units increased from Option I to Option II, since Option I is the most inclusive; (9) there are errors in Option III of Table 4-3, including CO reduction figures, and rounding errors in other columns; (10) suggested changing the reference on page 29 from section 812(a) to section 312; (11) the figures in the text on page 14 of the preliminary RIA describe VOC capital, O & M, and burden costs but those figures do not appear under VOC capital costs; (12) the discussion of the CO burden cost in Table 3-1 is inconsistent with the text; the burden cost for CO given in the table is \$4,250; the burden cost in the text is \$3,300; (13) in the discussion of NO_x costs, the sum of the costs for operation and maintenance and burden activities in Table 3-1 is \$39,955 but the sum in the text for these costs is \$40,831; likewise, recurring costs for burden activities are stated to be \$18,382 in Table 3-1, but are listed as being \$20,258 in the text; (14) the 1988 data used for the preliminary RIA's COMS cost estimates were not adjusted to reflect increases in the consumer price index, the 1984 CO capital costs must be updated, and generally costs in Table 3-1 should be expressed in terms of a single year rather than several different years; (15) it is unclear how the NO_x CEMS costs on page 16 of the preliminary RIA can be exactly the same as the CO₂ and VOC CEMS costs; (16) Table 4-2 needs to be explained in more detail, especially the significance of "t-ratio" and "R2"; (17) the capital cost of a COMS is listed as \$32,000 in the table on page 17 of the preliminary RIA even though EPA cost estimates state that the cost of a COMS may vary from \$32,000 to \$40,000; (18) the O&M cost used for COMS (\$6300) must be reconciled with the \$20,000 figure provided in the 1991 report that is cited; (19) the range of emission reductions stated on page 36 should be 75,000 to 950,000 tons instead of 50,000 to 1,000,000 tons; and (20) the discussion on page 32 concerning the lack of data for CO and NO_x does not comport with the statement on page 39 that EPA has compiled significant data on these pollutants.

Response: The final RIA corrects these discrepancies where still relevant.

Letter(s): American Gas Association (IV-D-265); Arkla Energy Resources Company (IV-D-343); Columbia Gas System Service Corporation (IV-D-341);

CONSAD Research Corporation (IV-D-335); ENRON Operations Corp. (IV-D-390); Enserch Processing, Inc. (IV-D-210); Gas Processors Association (IV-D-227); Mississippi River Transmission Corp. (IV-D-344)

Section 4.2: The Regulatory Impact Analysis - Calculation of Benefits

4.2.1: Assumptions Used in Developing the Benefits Analysis

Comment a: Many commenters asserted that the claim of substantial emission reductions resulting from the rule was erroneous for several reasons. First, these commenters argue that the assumption is based on the erroneous assumption of widespread noncompliance and the notion that sources have no interest in voluntary compliance. Many commenters asserted that the level of noncompliance assumed in the preliminary RIA is not supported by evidence, and that EPA's own 1993 Air Quality Trends Report shows just the opposite fact. Another commenter criticized EPA for not having any peer-reviewed data to show that enhanced monitoring actually results in emission reductions. Certain commenters argued that only by improperly increasing the stringency of underlying rules could the rule result in significant emission reductions. Finally, other commenters argued that many existing requirements already have good compliance monitoring in place so that any emission reductions from improvements would be negligible. Another commenter argued that any reductions that do occur will occur only at the early stages, with no benefits in later years but continuing costs. This commenter also noted that the preliminary RIA assumes emission reductions at all sources even though many sources will have to do nothing to show continuous compliance. Another commenter said that the health benefits and avoided costs assumed in the preliminary RIA will not exist because enhanced monitoring will not cause any significant emission reductions.

Response: The benefits analysis portion of the final RIA relies on a different methodology and thus these comments are no longer applicable. See Section VI of the final RIA for a complete discussion of the methodology used. The Agency continues to believe, however, that the rule will result in significant emission reductions through the prevention of excess emission events. The benefits are based on improved rates of compliance, not increased rule stringency as argued by some commenters. See section 3.1 (Part I), above, generally for a discussion of those stringency concerns.

Letter(s): ALCOA (IV-D-288); Aluminum Association (IV-D-378); American Portland Cement Alliance (IV-D-284); Clean Air Implementation Project (IV-D-242); Coalition for Clean Air Implementation (IV-D-304); Columbia Gas System Service Corporation (IV-D-341); Council of Industrial Boiler Owners (IV-D-319); E.I. DuPont de Nemours and Company (IV-D-329); Eastman Chemical Company (IV-D-347); El Paso Natural Gas Company (IV-D-271); ENRON Operations Corp. (IV-D-390); Exxon Chemical Americas (IV-D-339); Gas Processors Association (IV-D-227); General Electric Company (IV-D-278); Kerr-McGee Chemical Corporation (IV-D-232); 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); Pennzoil Company (IV-D-373); Phillips Petroleum Company (IV-D-380); Questar Pipeline Company (IV-D-480); Shell Oil Company (IV-D-280); Texas Intrastate Natural Gas Pipelines (IV-D-221)

Comment b: One commenter stated that the enhanced monitoring program will be burdensome and divert resources away from an effective enforcement program to paperwork exercises. The result will be less effective enforcement rather than improved enforcement as assumed in the preliminary RIA. The same commenter argued that the rule would similarly affect sources and result in shifts of manpower from actual compliance oversight and pollution prevention toward paperwork activities.

Response: The Agency disagrees with these assertions. The goal of part 64 is to promote the development of quality information related to the compliance status of the facility and to assure that the information is available for public inspection. The Agency believes that this approach is consistent with congressional intent in the 1990 Amendments and will result in increased awareness and responsiveness to potential non-compliance situations.

Letter(s): Monsanto Company (IV-D-273)

Comment c: One commenter criticized the preliminary RIA's reliance on the most prescriptive method of monitoring for calculating benefits (i.e., CEMS), but estimating costs over a range of monitoring methods.

Response: The Agency believes that the ability to achieve emission reductions is not necessarily dependent upon the type of monitoring involved but rather the existence of the monitoring data and the use of the data for assessing compliance with emission limitations and standards and taking steps to correct indications of potential decreased control effectiveness. The use of the existing CEMS data in the preliminary RIA to quantify benefits of enhanced monitoring was based on the availability of the information for the analysis as opposed to a belief that only CEMS could produce benefits of the nature described in the study. The basis for the benefits analysis in the final RIA is described in Section VI of the final RIA.

Letter(s): American Gas Association (IV-D-265)

Comment d: Two commenters stated that the preliminary RIA improperly assumed that sources would achieve reductions by installing best control equipment, an assumption that is contrary to EPA's stated position that the rule would not increase underlying stringency.

Response: The preliminary RIA did not in fact assume that emission reductions would be achieved through installation of new control equipment, but rather that emission reductions would be achieved by sources achieving compliance by whatever means are necessary to comply with existing emission limitations and standards. The final Impact Analysis retains this assumption.

Letter(s): Clean Air Implementation Project (IV-D-242); Exxon Chemical Americas (IV-D-339)

Comment e: Several commenters argued that Russell's model used for economic analysis in the preliminary RIA erroneously assumes that a malfunction continues until an inspector inspects the unit. Several commenters also criticized the assumption that all sources operate at full capacity or 8,760 hours per year in calculating benefits.

Response: The benefits analysis in the final rule does not rely on the Russell model or the cited assumptions about capacity factors or operating hours. The basis for the benefits analysis in the final RIA is described in Section VI of the final RIA.

Letter(s): American Gas Association (IV-D-265); Columbia Gas System Service Corporation (IV-D-341); ENRON Operations Corp. (IV-D-390); Exxon Company, USA (IV-D-310); Gas Processors Association (IV-D-227); Lower Colorado River Authority, et al. (IV-D-256); Mobil Oil Corporation (IV-D-285); Monsanto Company (IV-D-273); Texaco Inc. (IV-D-357)

4.2.2: Emission Rate Model Used for the Benefits Analysis

Comment a: One model used in the preliminary RIA to analyze benefits was the "emissions rate model." According to a commenter that submitted a study funded by several industry commenters, the standard mathematical form for the "emission duration function" developed for use in this model provides an incomplete and inadequate description of the outcomes of the actual technological and behavioral processes that determine the frequencies and levels of pollutant emissions from industrial facilities. Specifically, the commenter stated that the description was flawed because the data used to calibrate the emission duration function for individual facilities were outdated, inadequate to represent all important types of regulated facilities, and selectively and inappropriately applied in the calibration. Several other commenters also criticized the data used to support the benefits analysis as too old and too limited both in the number of sources and number of industrial categories included in the data. Some commenters noted that significant changes have taken place in air pollution compliance since the time the data were collected and so it is improper to now use that information to predict potential excess emission occurrences. Commenters argued that any benefits analysis associated with enhanced monitoring must first account for the baseline improvements in compliance that have occurred since the data used to support the preliminary RIA were collected and that will occur with the substantial new compliance provisions in the 1990 Amendments to the Act. Many commenters pointed to the periodic monitoring and compliance certification provisions in part 70 as creating a new, improved compliance baseline that was not taken into account in preparing the preliminary RIA for the proposed part 64.

Response: The final RIA does not use the "Emission Rate Model" used in the preliminary RIA. See Section VI of the final RIA for further discussion.

Letter(s): ALCOA (IV-D-288); Allied Signal, Inc. (IV-D-313); Aluminum Association (IV-D-378); American Petroleum Institute (IV-D-289); American Portland

Cement Alliance (IV-D-284); Ash Grove Cement Company (IV-D-311); CONSAD Research Corporation (IV-D-335); Chemical Manufacturers Association (IV-D-301); Clean Air Implementation Project (IV-D-242); Coalition for Clean Air Implementation (IV-D-304); E.I. DuPont de Nemours and Company (IV-D-329); ENRON Operations Corp. (IV-D-390); Eastman Chemical Company (IV-D-347); Exxon Chemical Americas (IV-D-339); Exxon Company, USA (IV-D-310); Gas Processors Association (IV-D-227); General Electric Company (IV-D-278); Kaiser Aluminum & Chemical Corporation (IV-D-295); Mobil Oil Corporation (IV-D-285); National Association of Manufacturers (IV-D-261); National Environmental Development Association (IV-D-334); Proctor & Gamble Company (IV-D-330); Rubber Manufacturers Association (IV-D-331); Shell Oil Company (IV-D-280); Union Carbide Corporation (IV-D-293)

Comment b: Commenters also pointed to the limited types of industrial sources included in the data as improperly biasing the results of the model in the preliminary RIA. One commenter noted that the sources included in the data generally were large sources that rely on add-on controls for nearly all emissions compliance. In contrast, the commenter stated that the proposed part 64 would apply to many uncontrolled sources or sources that are controlled by product composition or engineering controls, as well as many types of emission standards that do not involve emission reductions. These types of sources will not experience the same rate of potential exceedances as large, controlled sources, according to the commenter. Another commenter noted generally that the benefits were calculated based only on sources with sulfur emissions, which is not appropriate for other pollutant types.

Response: The final part 64 in fact applies only to pollutant-specific emissions units that use control devices. Thus, these comments are no longer applicable.

Letter(s): Clean Air Implementation Project (IV-D-242); Exxon Chemical Americas (IV-D-339)

Comment c: A study prepared on behalf of several industrial commenters characterized an assumption made in the preliminary RIA as a mathematical error in the calculation procedure developed to estimate the percentage reduction in annual emissions that is associated with any increase in a facility's

compliance rate. This error causes a substantial overestimation of emission reductions attributable to the rule, according to the study.

Response: The error discussed in the prepared study was, in fact, a criticism of an assumption made in the preliminary RIA. This concern about which assumption to use is no longer applicable because the final RIA calculates emission reductions in a different manner than the preliminary RIA.

Letter(s): CONSAD Research Corporation (IV-D-335)

4.2.3: Compliance Rate Model Used for the Benefits Analysis

Comment a: Some commenters also criticized the compliance rate model used in the preliminary RIA to estimate the behavioral changes to excess emission incidents that would occur with the adoption of an enhanced monitoring program. According to one commenter that prepared a study funded by several industry commenters this model is based on an incorrect conceptualization of the manner in which facility operators will react in response to the proposed rule. This commenter contended that it was essential for the analysis to examine how timely information from enhanced monitoring might enable facility operators to reduce excess emissions during noncompliance incidents and thereby allow them to increase average emission rates during periods of compliance without violating their permissible levels of cumulative emissions. Without these probable behavior responses, the commenter argued, the preliminary RIA's impact predictions were unfounded and unreliable to support the rulemaking. Other commenters also argued that sources that generally overcomply now will be able to increase their emissions because of the improved information provided by enhanced monitoring and thereby reduce any benefits from sources that may currently have unexcused excess emissions. One commenter also stated that, like the emission rate model, it was inappropriate to extrapolate potential compliance rate changes from large, controlled SO₂ sources to other pollutant sources that are generally uncontrolled or controlled through engineering changes.

Response: The Agency believes that the focus of the final rule on proper operation and maintenance of control equipment for minimizing emissions will not result in sources increasing emissions based on improved understanding of the degree to which present operations may result in overcompliance. Many sources operate with that type of margin of compliance so that

fluctuations in process operations will not affect the source's compliance status. With respect to the concerns that the preliminary RIA derived compliance rate changes from large controlled sources, the Agency notes that the final rule does apply only to pollutant-specific emissions units that rely on control devices to achieve compliance.

Letter(s): CONSAD Research Corporation (IV-D-335); Exxon Chemical Americas (IV-D-339); Kerr-McGee Corporation (IV-D-232); Monsanto Company (IV-D-273)

Comment b: Certain commenters criticized the preliminary RIA for not using the data from sources that already showed 95% or better compliance in establishing the compliance rate model.

Response: This comment is no longer applicable. See Section VI of the final RIA.

Letter(s): CONSAD Research Corporation (IV-D-335); Clean Air Implementation Project (IV-D-242); Coalition for Clean Air Implementation (IV-D-304); Exxon Chemical Americas (IV-D-339)

Comment c: One commenter argued that the compliance rate model assumed the use of "best" control as opposed to average control, even though part 64 does not require that degree of control.

Response: This comment is no longer applicable. See Section VI of the final RIA.

Letter(s): Exxon Chemical Americas (IV-D-339)

4.2.4: Benefits in Attainment Areas as Compared to Nonattainment Areas

Comment a: Several commenters stated that environmental and health benefits from enhanced monitoring will not be realized in attainment areas. Several commenters suggested that enhanced monitoring not be required for attainment areas because the preliminary RIA shows no substantial benefits from imposing enhanced monitoring in such areas even though the rule would impose significant costs and other burdens. Commenters also argued that cost savings from emission reductions will not be realized in attainment areas because the emission reductions in question are required only in nonattainment areas. Still another commenter stated

that, unless major sources in attainment areas are exempted, the proposed rule does not conform to Executive Order No. 12291's mandate that regulatory action not be undertaken unless potential benefits to society for the regulation outweigh the potential costs to society.

A study report prepared on behalf of several companies argued that health and welfare benefits should have been assessed for nonattainment areas, and avoided pollution control costs in attainment areas. This approach is the exact opposite of the preliminary RIA, and would have shown much lower benefits than the preliminary RIA. One commenter also stated that in attainment areas, the size of the emission reductions is so small that there will be a negligible effect on ambient concentrations; thus, the commenter concluded, the preliminary RIA erroneously assumed that significant health and welfare benefits would accrue, especially for the CO and NO₂ NAAQS.

Response: As a threshold matter, EPA rejects the notion that the rule should only apply in nonattainment areas. See Section VI of the final RIA for a discussion of the benefits considerations for the final rule.

Letter(s): Clean Air Implementation Project (IV-D-242); Columbia Gas System Service Corporation (IV-D-341); CONSAD Research Corporation (IV-D-335); ENRON Operations Corp. (IV-D-390); Enserch Processing, Inc. (IV-D-210); Gas Processor Association (IV-D-227); Kerr-McGee Chemical Corp. (IV-D-385); Questar Pipeline Company (IV-D-480)

Comment b: Some commenters argued that the preliminary RIA improperly assigned large benefits to emission reductions because the potential reductions in both attainment and nonattainment areas are small in comparison to total emissions in such areas. The study report prepared on behalf of several companies stated that the "benefit transfer values" used to calculate health and welfare benefits were too simplified to accurately reflect actual behavioral and scientific processes. Commenters also cited a statement in the preliminary RIA acknowledging that total emission reductions in nonattainment areas is small relative to total emissions and surmised that the preliminary RIA attempted to get around this problem by assuming emission reductions from enhanced monitoring would replace reductions that would otherwise be required. Commenters argued that it was not a valid assumption that permitting authorities would rely on intangible enhanced monitoring emission reductions to replace other, more tangible

reductions planned by the permitting authority through additional control requirements.

Response: These comments are no longer applicable. See Section VI of the final RIA.

Letter(s): CONSAD Research Corporation (IV-D-335); Columbia Gas System Service Corporation (IV-D-341); E.I. DuPont de Nemours and Company (IV-D-329)

Comment c: Other commenters criticized the benefits analysis for nonattainment areas because EPA only analyzed TSP and SO₂ nonattainment areas, even though ozone nonattainment is the most critical problem.

Response: These comments are no longer applicable. See Section VI of the final RIA.

Letter(s): ENRON Operations Corp. (IV-D-390); Gas Processors Association (IV-D-227)

4.2.5: Miscellaneous Concerns

Comment a: One commenter argued that enhanced monitoring might provide benefits in areas implementing economic incentive programs, but would not be appropriate in most areas that will not implement such programs. Another commenter stated that the preliminary RIA failed to evaluate the lack of benefits of reduced VOC emissions by major source manufacturing in most nonattainment areas. The commenter stated that the costs of enhanced monitoring for these sources will be much higher than estimated and, thus, net benefits will be correspondingly lower. Another commenter argued that a more appropriate means of achieving emission reductions would be to provide improved training for air pollution source operators rather than design a program based on the threat of punitive responses to any excess emission occurrences.

Response: The Agency disagrees with these general comments. The Agency believes that the structure of the CAM program is consistent with the congressional purpose in enacting section 114(a)(3) and related provisions of the Act. See Section VI of the final RIA for a discussion of

the benefits considerations in the final RIA.

Letter(s): E.I. DuPont de Nemours and Company (IV-D-329); Monsanto Company (IV-D-273); Rocky Mountain Oil and Gas Association (IV-D-183)

Section 4.3: The Regulatory Impact Analysis - Calculation of Costs

4.3.1: Certain Assumptions Used for the Cost Analysis

Comment a: Environmental groups and a trade association stated that the preliminary RIA incorrectly assumes that the cost of monitoring a second pollutant is the same as the cost of monitoring the first one. Instead, the incremental cost of adding the capability to monitor a second gas is much less than estimated in the preliminary RIA because different analyzers can share common probes, sample lines, and data acquisition and handling systems.

Response: Because of the focus on pollutant-specific emissions units with control devices, and the reduced number of units for which CEMS is projected to be used for part 64 compliance, the final RIA does not attempt to incorporate the potential cost savings of adding a second pollutant.

Letter(s): Institute of Clean Air Companies (IV-D-379); Natural Resources Defense Council, et al. (IV-D-225)

Comment b: Some commenters questioned the assumption used in developing VOC costs that recordkeeping generally will be the appropriate enhanced monitoring. Two industry commenters believed the CEMS bias in the rule would foreclose reasonable recordkeeping alternatives, while a trade group of clean air companies noted that total hydrocarbon analyzers have been proven to be effective, and could be used by sources to show lower emissions by providing accurate emissions data as opposed to worst case estimation techniques.

Response: Because the final rule applies solely to emissions units with control devices, the final RIA assumes that appropriate control device parameter monitoring, generally consistent with existing NSPS monitoring of VOC control devices, will be used to satisfy part 64.

Letter(s): E.I. DuPont de Nemours and Company (IV-D-329); Gas Processors

Association (IV-D-227); Institute of Clean Air Companies (IV-D-379)

4.3.2: Completeness and Accuracy of Costs in the RIA

Comment a: Commenters stated generally that the preliminary RIA failed to consider all of the costs to the permitting authorities and the regulated community, which resulted in too low a cost overall and too low a cost average for certain monitoring approaches. Many commenters suggested the following elements of cost that should have been included in the analysis: (1) the costs required to come into continuous compliance (such as additional abatement equipment, or fuel supply or process feed changes); (2) the costs to upgrade many NSPS and NESHAP monitoring requirements (especially since many NSPS only cover some pollutants at sources, the others being covered under SIPs), and perform additional recordkeeping, reporting and compliance certifications; (3) the costs to upgrade existing monitoring systems including CEMS, COMS, fuel sampling and analysis techniques, and parameter monitoring systems (e.g., adding QA, data loggers, etc.); (4) construction costs associated with retrofitting or modifying facilities to accommodate monitors (e.g., modifying stacks and ducts to provide acceptable location and emission flow characteristics for CEMS and COMS; adding ladders and platforms; and providing an acceptable enclosure for stack monitors to protect them from the elements); (5) the costs associated with designing, developing and testing enhanced monitoring protocols, including parameter correlation development costs, QA/QC program costs, and consulting services; (6) the costs associated with permitting (both to a source and an agency), including permit renewals and modifications; (7) the costs associated with creating and operating internal assurance systems to verify that all enhanced monitoring requirements are being complied with; (8) the costs of backup monitors to ensure that the source is in continuous compliance; (9) the costs associated with the increased stringency of the underlying emissions limitations; (10) the costs of repetitive certification testing; and (11) the cost of overcontrolling emissions units to provide a margin of safety against deviations. Two commenters supported EPA's decision not to include the costs of compliance with emission limits in the preliminary RIA since compliance with these standards is required under the existing programs and the proposed rule will not alter that duty or increase stringency.

One State suggested that the preliminary RIA should include the costs of

complying with SIP Calls. One commenter stated that it was unclear whether the preliminary RIA included costs associated with diluent and moisture monitors that may be necessary, and any DAHS that may be needed or upgraded. Finally, one commenter noted that the zero entries in Table 4-1 of the preliminary RIA represent costs that were not accounted for and not actual zero costs.

Response: The Agency has considered all of these suggestions and has included several new areas of costs not addressed fully in the preliminary RIA. The final RIA includes costs for NSPS emissions units as suggested by the commenters. For existing monitoring, the preliminary RIA included some costs associated with upgrading existing monitoring. The final RIA also estimates costs for developing and testing proposed monitoring, and costs associated with permit modifications. The final RIA also includes costs associated with permit renewals. See Section IV(E) of the final RIA for a further discussion of these categories of cost.

Other elements of costs proposed by the commenters have not been incorporated. First, as explained above in response to comments under section 4.1.3 (Part I), the Agency has not considered any costs or benefits for emissions units with existing CEMS or COMS for purposes of the RIA. Second, the costs of internal assurance systems beyond the quality assurance requirements of the rule is not a required element of the rule and thus any potential costs associated with such efforts are not directly attributable to the rule. Likewise, the potential costs for backup monitors, and costs of achieving compliance because of increased rule stringency or of overcontrolling emissions to provide a margin of safety against violating emission limits are all elements of cost that are not required by this rulemaking.

The Agency did not include the State agency costs associated with the SIP Call. The Agency believes the SIP Call to be necessary and appropriate even absent part 64. See the CE Response to Comment Document.

Finally, the Agency clarifies that CEM cost estimates include costs for diluent monitors and for data recording systems. These costs reflect standard data recorder costs because nothing in part 64 requires use of a customized data acquisition and handling system, such as may be necessary to comply with other programs like the Acid Rain Program.

Letter(s): Allied Signal, Inc. (IV-D-313); American Gas Association (IV-D-265); American Petroleum Institute (IV-D-289); American Portland Cement Alliance (IV-D-284); Arkla Energy Resources Company (IV-D-343); Ash Grove Cement Company (IV-D-311); Asphalt Roofing Manufacturers Association (IV-D-495); Association of International Automobile Manufacturers (IV-D-264); Baltimore Gas and Electric Company (IV-D-296); BP Oil Company (IV-D-315); CONSAD Research Corporation (IV-D-335); California Air Resources Board (IV-D-387); Clean Air Implementation Project (IV-D-242); Coalition for Clean Air Implementation (IV-D-304); Colorado Association of Commerce and Industry (IV-D-243); Columbia Gas System Service Corporation (IV-D-341); Consolidated Natural Gas Company (IV-D-350); Council of Industrial Boiler Owners (IV-D-319); Department of Energy (IV-D-358); Department of the Navy (IV-D-206); E.I. DuPont de Nemours and Company (IV-D-329); ENRON Operations Corp. (IV-D-390); Eastman Chemical Company (IV-D-347); El Paso Natural Gas Company (IV-D-271); Exxon Chemical Americas (IV-D-339); Exxon Company, USA (IV-D-310); Gas Processors Association (IV-D-227); Kaiser Aluminum & Chemical Corporation, Primary Prod. Div. (IV-D-368); Kerr-McGee Corporation (IV-D-232); Mississippi Chemical Corp. (IV-D-179); Mississippi River Transmission Corp. (IV-D-344); Mobil Oil Corporation (IV-D-285); Monsanto Company (IV-D-273); Motorola Inc. (IV-D-302); National Association of Manufacturers (IV-D-261); National Environmental Development Association (IV-D-334); Natural Gas Pipeline Company of America (IV-D-248); New Mexico Oil and Gas Association (IV-D-228); Ohio Chamber of Commerce (IV-D-370); Ohio EPA (IV-D-283); Pennzoil Company (IV-D-373); Phillips Petroleum Company (IV-D-380); Questar Pipeline Company (IV-D-480); Rubber Manufacturers Association (IV-D-331); Texaco Inc. (IV-D-357); Union Camp (IV-D-359); Williams Natural Gas Company (IV-D-213)

4.3.3: Other Cost Accuracy Concerns

Comment a: Many commenters stated that the preliminary RIA significantly underestimated certain costs. Certain areas of cost that commenters considered inaccurate included: (1) the costs and burden of recordkeeping requirements, which were underestimated because the preliminary RIA failed to consider the amount of time required to maintain records and to perform analyses and quality checks; (2) the costs of reporting, because the preliminary RIA estimates reporting costs on a

semiannual basis even though the proposed rule requires quarterly reporting; (3) the costs and burdens of recordkeeping on permitting authorities; (4) the costs of recordkeeping and reporting for units currently with CEMS or other monitoring requirements, because these units will have new, specific paperwork costs incurred to comply with the enhanced monitoring rule; (5) CEMS and COMS O&M costs; and (6) the capital costs for CEMS and COMS.

Response: For CEMS and COMS costs, the final RIA includes updated information on equipment, installation, certification, and recurring operation and maintenance costs. The final rule also clarifies that the part 64 reporting and recordkeeping requirements are the same as the requirements in part 70, so the use of semiannual reporting estimates is appropriate. The final RIA does not include costs for reporting and recordkeeping associated with existing CEMS. Although there may be some level of additional burden in these circumstances, that same level of burden would likely apply under part 70 even absent part 64. Therefore, the Agency believes that the exclusion of pollutant points with existing CEMS remains a proper assumption that has little bearing on the overall findings of the study. For the other items raised in the comments, the Agency believes that the cost estimates used in the final RIA represent a reasonable estimation of the costs that are likely to be incurred on account of part 64.

Letter(s): ARCO (IV-D-396); Allied Signal, Inc. (IV-D-313); American Gas Association (IV-D-265); American Petroleum Institute (IV-D-289); American Portland Cement Alliance (IV-D-284); Arkansas Western Gas Company (IV-D-346); Arkla Energy Resources Company (IV-D-343); Ash Grove Cement Company (IV-D-311); Asphalt Roofing Manufacturers Association (IV-D-495); Association of International Automobile Manufacturers (IV-D-264); BP Oil Company (IV-D-315); CONSAD Research Corporation (IV-D-335); Coalition for Clean Air Implementation (IV-D-304); Consolidated Natural Gas Company (IV-D-350); Council of Industrial Boiler Owners (IV-D-319); Delhi Gas Pipeline Corporation (IV-D-351); E.I. DuPont de Nemours and Company (IV-D-329); ENRON Operations Corp. (IV-D-390); Eastman Chemical Company (IV-D-347); El Paso Natural Gas Company (IV-D-271); Exxon Chemical Americas (IV-D-339); Exxon Company, USA (IV-D-310); Gas Processors Association (IV-D-227); Kerr-McGee Corporation (IV-D-232); 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 Mexico Oil and Gas Association (IV-D-228);

Pennzoil Company (IV-D-373); Phillips Petroleum Company (IV-D-380); Texaco Inc. (IV-D-357); Union Camp (IV-D-359); Union Carbide Corporation (IV-D-293)

Comment b: Commenters considered the cost estimates inaccurate because the preliminary RIA failed to account for the costs of CEMS at sources that should only have to use parameter monitoring, but cannot because the parametric correlation and QA/QC requirements are so stringent and unnecessary that sources will be forced to use CEMS.

Response: As discussed in Section I.C. of the preamble to the final rule, EPA has significantly modified the basic criteria for acceptability of monitoring under part 64 and has simplified the performance criteria as well. These changes will allow for the use of parametric monitoring of control device operation without the requirement for the level of correlation that would have been required under the proposed EM rule.

Letter(s): CONSAD Research Corporation (IV-D-335); E.I. DuPont de Nemours and Company (IV-D-329); ENRON Operations Corp. (IV-D-390); Eastman Chemical Company (IV-D-271); El Paso Natural Gas Company (IV-D-271); Exxon Chemical Americas (IV-D-339); Gas Processors Association (IV-D-227); Pennzoil Company (IV-D-373)

Comment c: One industry coalition group stated that the preliminary RIA underestimated or overlooked costs because the extra cost of enhanced monitoring was measured on an "average cost" basis, across the whole spectrum of affected source types and sizes, rather than by looking to the marginal cost of the enhancement at particular types of sources.

Response: As a study of the overall impacts of the rulemaking, the use of an average cost basis is appropriate. The final RIA includes a breakdown of potential different responses and makes projections of what types of sources would likely fall within each of the general response categories. Given the complexity of the affected industry population, the Agency believes that this general breakdown is the most appropriate approach to estimating the varying impacts of the rulemaking on different industry sources.

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

Comment d: A trade group of clean air companies stated that the preliminary RIA overestimated the cost of CEMS because CEMS costs are lower than estimated in the preliminary RIA, especially for smaller sources who will likely use CEMS with less exacting relative accuracy capability and simpler data recorders. The commenter added that the preliminary RIA failed to reflect the fact that CEMS capital costs decrease over time given technical advances and increased manufacturing experience.

Response: As noted earlier, the final RIA includes some revised costs for CEMS. However, the revised costs do not reflect any decrease in costs over time as suggested by the commenters. The Agency has opted to use the more conservative approach of assuming constant costs over time.

Letter(s): Institute of Clean Air Companies (IV-D-379)

Comment e: Certain industry commenters provided extensive total cost and other cost impact information. For instance, the petroleum industry estimated that its estimated total costs for compliance are \$877 million for initial costs and \$318 million for annual costs. Many commenters also provided detailed data on the cost of CEMS, and some commenters provided data on the cost of COMS. Several commenters also provided detailed data on the cost of parameter monitoring systems. All of these industry commenters argued that their information demonstrated the significant underestimation of costs in the preliminary RIA.

Response: The Agency has considered this cost information in preparing the final RIA. The Agency believes that the costs projected by the industry commenters generally overestimate the costs of complying with part 64, both in the 1993 proposed version and in the final promulgated version, in many instances. For instance, the Agency contracted for pilot studies of enhanced monitoring at two facilities for which commenters had previously submitted compliance cost estimates. At one facility, total capital costs dropped from the industry estimate of approximately \$4 million to an EPA contractor estimate of approximately \$1 million; at the other facility, the costs were comparable (the EPA estimate had lower initial costs but higher recurring costs). However, the EPA contractor's estimate included several CEMS that were not necessarily required by part 64, but which the facility wanted as its enhanced monitoring for operational flexibility reasons. More importantly, the significant changes to the criteria for acceptability of monitoring under the final rule will substantially reduce the

costs of the rule even further. (See Docket #A-91-52-IV-A-1 for a copy of this report and the participant's comments.)

Letter(s): American Petroleum Institute (IV-D-289); American Portland Cement Alliance (IV-D-284); Ash Grove Cement Company (IV-D-311); Chevron (IV-D-397); E.I. DuPont de Nemours and Company (IV-D-329); Eastman Chemical Company (IV-D-347); Exxon Chemical Americas (IV-D-339); General Electric Company (IV-D-278); Monsanto Company (IV-D-273); Ohio Edison (IV-D-266); Union Carbide Corporation (IV-D-293)

4.3.4: Offsetting Operational Cost Increases with Price Increases

Comment a: One commenter disagreed with the statement in the preliminary RIA that sources may be able to pass through increased compliance costs in the form of relatively small price increases since these costs are unnecessary and will further increase costs, erode competitiveness and reduce U.S. jobs.

Response: The Agency continues to believe that the costs of complying with part 64 will be a relatively small percentage of a source's operating costs and thus in certain situations may be passed through to consumers as part of a product price increase. The ability to pass through such costs will of course vary from industry to industry depending on the particular circumstances involved. The final RIA does not include this statement, however, to avoid the commenter's concerns.

Letter(s): E.I. DuPont de Nemours and Company (IV-D-329)

Section 4.4: General Cost/Benefit Impacts

Comment a: Many commenters stated generally that the costs of complying with proposed part 64 will be significant, and include costs for additional monitoring equipment, maintenance of monitoring equipment, quality assurance/control, recordkeeping, and facility staff to perform work. Certain commenters stated that the proposed rule will require enormous spending by both industry and regulatory agencies. Commenters stated that the initial outlay and the costs of maintaining enhanced monitoring systems would be significant and that not all of the technology required is commercially available. Commenters noted generally that the cost impacts are far greater than EPA projects and include significant

permitting complexity costs. One commenter stated that in previous regulatory efforts, EPA has underestimated the costs by an order of magnitude. Some commenters argued that proposed part 64 would result in costs that, in many instances, would far exceed the costs of controlling the units that are to be monitored.

Response: The Agency believes that the final RIA represents a reasonable estimate of the costs and benefits of the part 64 rulemaking. The categories of costs analyzed in the final study include monitoring development costs, installation and testing costs, equipment costs, agency review costs, annual operation and maintenance costs, and reporting and recordkeeping costs. In addition, the extended implementation schedule, EPA's guidance development efforts and other changes to the final rule will reduce permitting burdens. Finally, by simplifying the standards under part 64 and focusing solely on emissions units that rely on control devices to achieve compliance, the Agency believes that part 64 can be implemented in a cost-effective manner.

Letter(s): Alcan Rolled Products Company (IV-D-519); American Electronics Association, Clean Air Task Force (IV-D-437); Arkla Energy Resources Company (IV-D-343); Armco Steel Company (IV-D-395); Chemical Manufacturers Association (IV-D-301); Clean Air Implementation Project (IV-D-242); Eastman Chemical Company (IV-D-347); Greater Cincinnati Chamber of Commerce (IV-D-224); International Business Machines Corporation (IV-D-238); Los Angeles County Sanitation Districts (IV-D-26); Mississippi River Transmission Corp. (IV-D-344); National Grain and Feed Association (IV-D-312); National Petroleum Refiners Association (IV-D-276); Ohio Coal Development Office, Ohio Department of Development (IV-D-230); Ohio Manufacturers Association (IV-D-348); Pacific Gas Transmission Co. (IV-D-234); Sun Company, Inc. (IV-D-231)

Comment b: One commenter stated that EPA has not considered the cost of implementing part 64 for facilities in serious, severe, and extreme nonattainment areas, and that implementing part 64 for all sources with the potential to emit pollutants in excess of 3 tons per year in extreme nonattainment areas would require implementing part 64 for virtually all processes.

Response: The final RIA includes data from serious and severe nonattainment areas. The Agency believes that the narrow applicability provisions and other

changes in the final rule, will result in part 64 monitoring being required at appropriate emissions units in these nonattainment areas.

Letter(s): Association of International Automobile Manufacturers (IV-D-264)

Comment c: Many natural gas industry commenters raised concerns about the cost of implementing the rule for the natural gas industry. They noted that EPA estimates that there are approximately 8500 natural gas compressor engines, rated at greater than 750 hp, which would qualify as major sources. Installing CEMSs for all of these sources would cost \$951 million, and annual operation and maintenance costs would total \$347 million. They also noted that the proposed rule would potentially require enhanced monitoring for 150 hp natural gas engines. The cost of installing CEMSs or performing the verification testing required for parametric monitoring would be prohibitive. In addition, the costs of installing and operating enhanced monitoring systems and performing the required recordkeeping and reporting may prohibit some technologies such as small-scale cogeneration; users of small natural gas-fired engines would have to switch to electric engines. These commenters argued that the air quality improvements due to the use of non-electric technologies would be lost if sources find using electric engines more cost-effective.

Response: Because of the narrowed focus of the final rule, the concerns raised in the comments are generally no longer applicable. Only those sources with applicable requirements and that rely on control devices to achieve compliance must employ part 64 monitoring. Based on information available to the Agency, most of the internal combustion engines cited by the commenters do not satisfy both of these criteria. Also, nothing in the proposed or final rule requires the use of CEMS on such engines.

Letter(s): American Gas Association (IV-D-265); Arkansas Western Gas Company (IV-D-346); Arkla Energy Resources Company (IV-D-343); Consolidated Natural Gas Company (IV-D-350); Delhi Gas Pipeline Corporation (IV-D-351); ENRON Operations Corp. (IV-D-390); East Ohio Gas Company, The (IV-D-355); El Paso Natural Gas Company (IV-D-271); Mississippi River Transmission Corp. (IV-D-344); Northwest Pipeline Corporation (IV-D-270); Peoples Gas Light and Coke Company, The (IV-D-527)

Comment d: Some commenters disagreed with the assertion in the preamble to the proposed rule that enhanced monitoring may allow sources to reduce operating costs and to minimize control system upsets. One commenter argued that existing monitoring already provides that benefit, while others stated generally that the costs of the rule would outweigh many potential spending swings.

Response: The degree to which existing monitoring may provide that benefit depends on the type of existing monitoring that is in place (if any) and the degree to which that monitoring is relied on to track control performance and assess compliance with emission limitations or standards. In those situations where existing monitoring is in place and has a known and consistent relationship with compliance, the Agency acknowledges that significant benefits from reducing operating costs and avoiding control device degradation will not likely occur. However, additional, significant costs to comply with part 64 in those circumstances will be unlikely to occur as well because that type of existing monitoring will satisfy part 64 in large part. The Agency also notes that the value of these benefits to owners and operators has not been included in the assessment of benefits in the RIA for the rulemaking.

Letter(s): E.I. DuPont de Nemours and Company (IV-D-329); ENRON Operations Corp. (IV-D-390); Rocky Mountain Oil and Gas Association (IV-D-183); Texaco Inc. (IV-D-357)

Comment e: A trade association and a State agency stated that EPA has failed to provide States and local governments with the funding necessary to implement the enhanced monitoring mandates and that the funding under the Title V permitting program will not be sufficient for an enhanced monitoring program as broad as the program envisioned by the proposed rule. The agency recommended that EPA provide more funding to States and municipalities to cover the costs of the Enhanced Monitoring Program, including the cost of State and local sources to comply with enhanced monitoring.

Response: The Agency believes that the permitting authority costs associated with implementation of part 64 are covered by title V permit fees. As with any other element of an agency program which is covered by title V permit fees, the adequacy of the fees must be assessed and changes to the fee structures must be made as necessary.

Letter(s): National Petroleum Refiners Association (IV-D-276); Ohio EPA (IV-D-283)

Comment f: One commenter stated that EPA could reduce the costs of the proposed Enhanced Monitoring Program by clarifying the applicability of the proposed rule because State and local programs would then be more certain of what requirements they should include, and avoid citizen suits that adopt erroneous interpretations of which sources are required to implement the proposed rule.

Response: The Agency believes that the clarifications to part 64 applicability provided in the final rule and supporting preamble adequately address this comment.

Letter(s): El Paso Natural Gas Company (IV-D-271)

Comment g: One commenter opposed the possibility of future increases in permit fee rates to compensate for the reduction in total fees that will occur when enhanced monitoring reduces emissions.

Response: The Agency believes as a general matter that the benefits from reductions in emissions, especially where such reductions are needed to attain ambient air quality standards, far outweigh the potential that title V permit fee rates may need to be adjusted as total emissions decrease. Furthermore, total costs under such a scenario should not change because the higher fee rate would be applied against a smaller emissions inventory.

Letter(s): Los Angeles County Sanitation Districts (IV-D-26)

Comment h: One commenter argued that the proposed rule would result in unwarranted costs by potentially requiring monitoring of hazardous air pollutants (HAPs) not required under categorical standards. The commenter believed that appendix C of proposed part 64 could require speciated monitoring of such pollutants. The commenter also believed that proposed part 64 could require monitoring of all HAPs on a State toxic list where a State had its own hazardous air pollutant program.

Response: Nothing in part 64 requires speciated monitoring of HAPs. See section 6.1.6 (Part I), below, for further discussion of that issue. In addition, part 64 applies only to NESHAP requirements under 40 CFR part 61 that were proposed prior to the 1990 Amendments to the Act, and thus will not apply to State toxics programs that go beyond part 61 requirements.

Letter(s): Association of International Automobile Manufacturers (IV-D-264)

Section 4.5: Regulatory Flexibility Analysis (RFA)

Comment a: A study report prepared on behalf of several companies stated that 4-digit SIC codes should have been used for the screening analysis instead of 2-digit codes. The study also noted that, according to Dun & Bradstreet (1992), a firm in SIC 28 (Chemicals and Allied Products) with \$3.8 million in sales will, on average, have only \$135,000 in profit, which is barely enough to cover the cost of a single enhanced monitoring instrumentation unit. Thus, businesses smaller than EPA's upper limit will have an even more difficult time accommodating regulatory mandates. Two other commenters stated generally that the RFA incorrectly assumes no substantial small business impacts.

Response: A revised RFA screening analysis has been included in the final RIA. As described in Section V of the final RIA, the final RFA screening analyses support a finding of no significant impact on a substantial number of small entities. The analyses are still conducted with 2-digit SIC data to accommodate data availability restrictions.

Letter(s): CONSAD Research Corporation (IV-D-335); Louisiana Mid-Continent Oil and Gas Association (IV-D-454); Printing Industries of America, Inc. (IV-D-473)

Comment b: A commenter asked that EPA consider impacts to individual oil and gas production sites to be small business impacts, even if some large parent company owns many such individual sites, because the sites are all evaluated on a stand-alone basis in terms of economic feasibility and enhanced monitoring will be a significant extra cost that could result in decisions to terminate existing or future production sites.

Response: Consistent with Agency guidance developed to implement RFA

requirements, a small business is one with fewer than 500 employees as provided by regulations adopted by the Small Business Administration. The RFA analysis for this rule was conducted in accordance with these guidelines without developing special exceptions for various industry categories that may be affected by the final rule.

Letter(s): Louisiana Mid-Continent Oil and Gas Association (IV-D-454)

Comment c: A study report prepared on behalf of several companies disagreed with the estimated impact of the proposed rule on small government entities. The commenter said that without artificially lowering the ratio of small government entities as calculated by EPA, more than 20 percent of the government entities would be affected and EPA would be required by its own guidelines to prepare a complete regulatory flexibility analysis for small government entities.

Response: The revised RFA screening analysis of small government entity impacts in Section V of the final RIA uses a different method than the one presented in the preliminary RIA. The revised analysis relies on data from specific state government emission sources included in the sample state databases. The revised analysis indicates that a substantial number of small government entities are not likely to be impacted by the applicable requirements of part 64.

Letter(s): CONSAD Research Corporation (IV-D-335)

Section 5: General Issues

Section 5.1: Means of Simplifying or Streamlining Proposal

The preamble to the proposed rule requested comment on how the proposed rule could be simplified or streamlined to achieve the same regulatory objectives with less burden. As set out in this section 5.1, several commenters offered specific suggestions in response to this request.

5.1.1: Applicability

Comment a: A commenter suggested that the rule clarify exactly which units are subject to enhanced monitoring.

Response: This comment is responded to in the areas summarized under section 6 (Part I), below.

Letter(s): Union Carbide Corporation (IV-D-293)

Comment b: Another commenter recommended eliminating enhanced monitoring requirements for fugitive emissions, area sources, and research and development facilities. The commenter also proposed that the rule should not apply to engineering standards or work practices, but instead should apply only to numeric standards and limitations.

Response: As to area sources, this comment is responded to in section 6.1.3 (Part I). As to fugitive emissions, this comment is responded to in sections 6.5.2 and 6.7.4 (Part I), below. As to research and development facilities, this comment is responded to in section 6.7.7 (Part I), below. As to engineering standards or work practices and other non-numerical limitations or standards, this comment is responded to in section 6.7.5 (Part I), below.

Letter(s): Monsanto Company (IV-D-273)

5.1.2: Permitting Process

Comment a: A commenter recommended revising the rule so that it states at its

beginning that the intent of part 64 is to assure compliance, and not to require the latest technological advance in monitoring.

Response: The EPA believes that the rule is clear that the primary purpose of part 64 is to provide a reasonable assurance of compliance with a source's applicable requirements.

Letter(s): Union Carbide Corporation (IV-D-293)

Comment b: Another commenter recommended separating the title V and part 64 implementation schedules.

Response: This comment is responded to in section 8.1.6 (Part I), below.

Letter(s): ENRON Operations Corp. (IV-D-390)

Comment c: Commenters also recommended implementing enhanced monitoring only through operating permits and not through preconstruction permits.

Response: This comment is responded to in section 8.3 (Part I), below.

Letter(s): Monsanto Company (IV-D-273); Texas Natural Resource Conservation Commission (IV-D-371)

Comment d: A commenter suggested using general permits to incorporate enhanced monitoring into similar emissions units.

Response: Part 64 monitoring may be implemented through general permits, provided that the requirements of part 70 for the use of general permits and the requirements of part 64 monitoring are satisfied. The EPA believes that the use of general permits will be particularly helpful to those small businesses that will be affected by part 64.

Letter(s): Los Angeles County Sanitation Districts (IV-D-26)

Comment e: Two commenters recommended moving permit application requirements and permit requirements to part 70 and proposed simplifying part 64 by

eliminating permit-related requirements (i.e., proposed §§ 64.3(d), 64.4(f)(5), 64.5(a)(3), 64.7, and 64.8) that have been addressed and defined in part 70.

Response: These comments are responded to in section 12.1 (Part I), below.

Letter(s): Monsanto Company (IV-D-273); Texas Natural Resource Conservation Commission (IV-D-371)

Comment f: A commenter recommended deleting the requirement to identify all technologically feasible monitoring methodologies when a source seeks to propose monitoring other than established monitoring or as part of the permit renewal process. The commenter said that sources should be allowed to simply find one enhanced monitoring technology that works, and said that once an enhanced monitoring protocol is established with the permitting authority, it should be permanent.

Response: The final rule does not include the cited provision.

Letter(s): Union Carbide Corporation (IV-D-293)

Comment g: A commenter recommended eliminating permit modification requirements for minor enhanced monitoring protocol changes and for changes to applicable requirements.

Response: This comment is responded to in section 8.2.1 (Part I).

Letter(s): Monsanto Company (IV-D-273)

5.1.3: Monitoring and Performance Testing

Comment a: A commenter suggested that the rule avoid duplicative monitoring requirements.

Response: This comment is responded to in section 6.8.1 (Part I), below.

Letter(s): Monsanto Company (IV-D-273)

Comment b: A commenter proposed a streamlined means of monitoring remotely controlled unmanned sources by monitoring them through detailed maintenance records, fuel records, hours of operation records, and control parameter records.

Response: The final rule applies only to emissions units with control devices, which are unlikely to be located at such facilities. If the units at such facilities do require the use of control devices, those control devices must be operated and maintained to the same extent as any other controlled units, and thus must meet the same monitoring criteria under part 64.

Letter(s): Pacific Gas Transmission Co. (IV-D-234)

Comment c: A commenter suggested that part 64 and the Enhanced Monitoring Reference Document clarify that annual compliance tests are not required.

Response: This comment is responded to in section 9.1.1 (Part I), below.

Letter(s): Pharmaceutical Manufacturers Association (IV-D-367)

Comment d: One commenter recommended that the rule provide for protocol downtime and that enhanced monitoring requirements should not apply during monitoring equipment downtime such as during startups, shutdowns, and malfunctions.

Response: This comment is responded to in Section 9.1.6, below.

Letter(s): Monsanto Company (IV-D-273)

5.1.4: Reporting

Comment a: Two commenters suggested that the reporting requirements be simplified by requiring less frequent reporting and by decreasing the amount of information required to be reported.

Response: As to reporting frequency, this comment is responded to in section 10.2.1 (Part I). As to the content of reports, this comment is responded to in the comment areas under sections 10.3 and 10.6.1 (Part I), below.

Letter(s): ENRON Operations Corp. (IV-D-390); Pharmaceutical Manufacturers Association (IV-D-367)

5.1.5: Recordkeeping

Comment a: A commenter supported the provision allowing sources to maintain required records off-site.

Response: This comment is responded to in section 11.2.2 (Part I), below.

Letter(s): Pharmaceutical Manufacturers Association (IV-D-367)

5.1.6: Miscellaneous Issues

Comment a: A commenter said that the rule ignores other means of addressing monitoring deficiencies and may be unmanageable because of the details in the rule and appendices. The commenter suggested reducing the program to general guidelines and phasing in implementation.

Response: The EPA disagrees that the rule should be reduced to general guidelines. However, implementation of the rule will be phased in, as discussed in section 8.1 (Part I), below.

Letter(s): Questar Pipeline Company (IV-D-480)

Comment b: A commenter recommended eliminating all sections of the appendices that overlap or conflict with appendix B of part 60.

Response: The final rule does not include any appendices, so this comment is no longer applicable.

Letter(s): Monsanto Company (IV-D-273)

Section 5.2: Relationship to Title I Programs

5.2.1: Credit Toward the 15% RFP Requirement

Comment a: A number of commenters showed support for granting credit toward the 15% "reasonable further progress" (RFP) reduction requirement for ozone nonattainment areas under title I of the Act (or EPA's 80% rule effectiveness assumption used for evaluating SIP attainment demonstrations) upon implementation of enhanced monitoring. One commenter argued that continuous compliance monitoring can achieve emission reductions more cost-effectively than additional control requirements. Two commenters suggested establishing a set percentage credit for SIPs in those States that commit to implementing enhanced monitoring requirements for all major sources, and then providing the option for individual States to show that more credit is warranted based on factors unique to the State. Another commenter suggested applying enhanced monitoring to smaller sources in nonattainment areas and granting appropriate credit for the additional emission reductions.

Other commenters, however, asserted that EPA has no basis for providing a credit toward RFP requirements for States implementing enhanced monitoring, because there are no data to show that enhanced monitoring will actually result in emission reductions. One State agency added that credit above the 80% rule effectiveness credit should be given only upon verifying that the reductions are achieved and have not already been assumed in prior attainment demonstrations. Another commenter opposed granting RFP credit to States on the grounds that doing so would provide a built-in incentive for States to require the most stringent form of monitoring and to broaden the scope of applicability beyond what EPA would require.

Response: The EPA has decided not to provide an automatic RFP credit related to part 64 implementation at this time. Given the extended implementation schedule for the rule, and the coverage of only those units that rely on control devices to achieve compliance, further analysis of how the implementation and applicability affect a particular jurisdiction will be necessary prior to allocating an RFP credit to that jurisdiction on account of part 64 implementation.

Letter(s): American Automobile Manufacturers Association (IV-D-538); California Air Resources Board (IV-D-387); Can Manufacturers Institute (IV-D-478); Department of Energy (IV-D-358); Distilled Spirits Council of the United States (IV-D-300); Los Angeles County Sanitation Districts (IV-D-26); NESCAUM (IV-D-253); Pennzoil Company (IV-D-373); Proctor & Gamble

Company (IV-D-330)

5.2.2: Emissions Trading/Averaging/Netting

Comment a: Several industry commenters were concerned that the proposed rule would greatly discourage emissions trading, netting or averaging programs, because all emissions units participating in such programs would be subject to part 64. One commenter stated that part 64 should allow monitoring protocols of market-based local programs to be deemed equivalent to the Enhanced Monitoring Program in order to avoid regulatory overlap and conflicting program requirements. (Note: most of the comments that raised objections to the specific provisions in proposed § 64.1 that would apply part 64 to groups of emissions units are summarized and responded to in section 6.5 (Part I), below.) Environmental groups and a State agency group, on the other hand, argued that all emissions units in emission trading schemes should have enhanced monitoring, or that such programs require CEMS. With regard to the latter point, some environmental groups asserted that, if participating in a trading program, a source must be able to measure emissions exactly to determine how far below emission limits its emissions are and, therefore, how many credits it has earned. A CEMS will provide the means for this type of measurement, according to these commenters. Furthermore, the commenters argued, if EPA allows floating limits over time for each emissions unit in an averaging group, then it will be necessary to identify the exact amount emitted at any point in time from each unit in the group.

Response: In a change from the proposed rule, the final rule does not apply part 64 on the basis of groups of emissions units involved in emissions trading, netting, averaging, or similar types of regulatory compliance programs. See section 6.5 (Part I), below, for further discussion.

Letter(s): Appalachian Mountain Club, Northern New England Regional Office (IV-D-5); BP Oil Company (IV-D-315); NESCAUM (IV-D-253); Natural Resources Defense Council, et al. (IV-D-225); Shell Oil Company (IV-D-280); Sun Company, Inc. (IV-D-231); Unocal Corporation (IV-D-268)

5.2.3: Miscellaneous Comments

Comment a: One commenter said that part 64 is redundant as compared with other title I initiatives, and that enhanced monitoring has already been enacted through the mechanism of SIP calls to States with ozone nonattainment areas.

Response: The EPA disagrees that existing initiatives have fully addressed the requirements under section 114(a)(3) of the Act. To the extent prior Agency efforts have resulted in the adoption of means that are sufficient to provide a reasonable assurance of compliance, those means may be used to satisfy part 64.

Letter(s): Kerr-McGee Corporation (IV-D-232)

Comment b: According to some environmental groups, accurate emissions inventories require the kind of continuous emissions monitoring that part 64 would implement. This was seen as particularly important for ozone studies.

Response: The EPA agrees that part 64 monitoring data may be used to improve emissions inventories in some circumstances. However, determining whether an emissions unit is in compliance, not developing accurate emissions inventories, is the primary reason for part 64, and the rule does not require the use of CEMS.

Letter(s): Appalachian Mountain Club, Northern New England Regional Office (IV-D-5); Natural Resources Defense Council, et al. (IV-D-225); Sierra Club, Lone Star Chapter (IV-D-364)

Section 5.3: Technological Innovation and Development

5.3.1: Monitoring Approaches

Comment a: A commenter said that EPA should show unambiguous support for new monitoring approaches and technical innovation, and should issue guidance documents that fully implement the flexible monitoring program intended by the policy statement. The commenter also said that EPA should encourage State regulators to support innovative and cost-effective monitoring technologies with pro-active and open EPA assistance; encourage States to undertake demonstration projects with facility owners and vendors similar to other EPA innovative technology demonstration programs; encourage States to develop proactive protocols for new

technologies to streamline acceptance and implementation under the rule; and allow some degree of "performance tolerance" for the first year of rule implementation to foster rapid diffusion of new technologies.

Response: By allowing an owner or operator to evaluate site-specific factors in selecting a monitoring methodology, EPA believes that an owner or operator will have significant flexibility in proposing the type of monitoring that best fits the owner or operator's circumstances in order to meet the requirements of part 64. In addition, the process for making available guidance on acceptable monitoring approaches can encourage the use of innovative approaches by providing a mechanism for publishing examples of how innovative approaches can be used to satisfy part 64.

Letter(s): Energy Efficiency Systems, Inc. (IV-D-225)

Comment b: An environmental group said that CEMS spur experimentation and innovation because CEMS provide sources with specific data that many of them did not previously have, which can help the sources find creative ways to reduce emissions.

Response: The EPA agrees that CEMS data, and any other data that satisfies the criteria for part 64 monitoring, provides owners or operators with information that can help them reduce emissions.

Letter(s): Appalachian Mountain Club, Northern New England Regional Office (IV-D-5)

5.3.2: Manufacturing Processes

Comment a: Commenters said that companies that make expensive investments to implement enhanced monitoring will have a significant incentive to maintain existing manufacturing processes to avoid having to modify their permits or change their enhanced monitoring systems. Several commenters said that the cost of enhanced monitoring implementation itself will be a strong incentive for industry to maintain existing manufacturing processes and associated monitoring equipment, rather than modifying them for pollution prevention or other purposes, and will severely restrict the use of environmentally superior combustion or manufacturing technologies. A commenter said that the costs and delays

associated with having to comply with part 64 will limit and perhaps dissuade companies from expanding their businesses.

Response: The EPA does not believe that part 64 will have the dramatic impact suggested by the commenters. The rule is structured in such a way so as to enable many owners or operators to rely on existing monitoring systems with little or no modifications. If existing monitoring systems are inadequate or are otherwise not desirable to continue as part 64 monitoring, the rule allows owners or operators to evaluate site-specific factors in selecting a monitoring methodology. This will provide owners or operators with significant flexibility in proposing the type of monitoring that best fits the owner or operator's circumstances in order to meet the requirements of part 64. Thus, owners or operators may propose monitoring approaches that are designed to accommodate expansion, process and operations changes, and other future considerations. In addition, the ability to avoid part 64 monitoring for emissions units that do not rely on control devices to achieve compliance provides an incentive for owners or operators to engage in pollution prevention measures.

Letter(s): Columbia Gas System Service Corporation (IV-D-341); International Business Machines Corporation (IV-D-238); National Environmental Development Association (IV-D-334); Proctor & Gamble Company (IV-D-330); Society of the Plastics Industry, Inc. (IV-D-287); Texas Chemical Council (IV-D-365); Whirlpool Corporation (IV-D-493)

Comment b: Several gas industry commenters said that the cost of CEMS or other allowed alternatives will preclude the use of technologies like natural gas-fired small-scale cogeneration. These commenters said that electric utilities, whose primary energy source is coal, will be the only economically feasible source of power for those who cannot afford the costs of enhanced monitoring. The commenters said that forcing the use of electric motors instead of gas-fired engines in order to avoid enhanced monitoring will result in pollutant increases, if emissions from the entire fuel-cycle are analyzed, and is counter to the Clinton Climate Change Action Plan and the National Energy Strategy, both of which encourage use of natural gas.

Response: The EPA does not agree that part 64 will force the use of electric motors instead of gas-fired engines. Many such engines (such as agricultural irrigation engines) may not be subject to any applicable requirements

under the Act and therefore will also not be subject to part 64. Most importantly, much natural gas-fired equipment does not rely on control devices to achieve compliance and thus would not be subject to part 64.

Letter(s): American Gas Association (IV-D-265); Arkla Energy Resources Company (IV-D-343); City Gas Company of Florida (IV-D-184); Equitable Resources, Inc. (IV-D-388); Lone Star Energy Company (IV-D-401); Mississippi River Transmission Corp. (IV-D-344); Northern Illinois Gas (IV-D-249); Peoples Gas Light and Coke Company, The (IV-D-527); Southern Union Gas (IV-D-8)

5.3.3: Restrictions Imposed by the Proposed Rule

Comment a: Commenters described the proposed rule as one that unnecessarily restricts technical innovation and flexibility of implementation through reliance on an overly detailed and inflexible set of requirements, complex implementation processes, and substantial user risks. Commenters pointed to the detailed permitting requirements, selection process, and protocol performance criteria in the proposed rule as examples of unreasonably restrictive requirements.

Response: The EPA has adopted significant changes in the final rule to ensure that the rule does not restrict innovative approaches to documenting compliance. See generally sections 8, 9 and 12 (Part I), below, for further discussion of related comments on these topics.

Letter(s): ARCO (IV-D-396); Chevron (IV-D-397); E.I. DuPont de Nemours and Company (IV-D-329); Energy Efficiency Systems, Inc. (IV-D-255)

5.3.4: Pollution Prevention

Comment a: Several commenters said that shifting manpower resources away from pollution reduction and process innovation to analyzing compliance with enhanced monitoring is inherently a bad policy initiative which thwarts real environmental progress. A commenter said that the rule discourages pollution prevention and voluntary reductions because of the requirements for federal enforceability in the potential to emit definition. Still another commenter said that the quality assurance/quality control (QA/QC) requirements are contrary to EPA's stated goals of pollution prevention and development of new monitoring technologies, and defeat the efforts of

industry to meet these goals.

A commenter said that the rule should provide explicit incentives in the form of reduced monitoring for sources that undertake pollution prevention initiatives. Another commenter proposed that EPA allow a source to prepare a facility-wide pollution prevention plan under which the source would specify its goals and achievements. The commenter added that the New Jersey environmental agency currently is instituting this type of incentive-based process and this approach is a far more effective means of obtaining emission reductions.

Response: The EPA disagrees that part 64 will hinder pollution prevention programs and activities. The Agency has revised the rule in such a way as to significantly reduce the burdens of the rule on both permitting authorities and industry. See section 8.1 (Part I), below, for further discussion of the effort to reduce the burdens of the rule.

In addition, as discussed in Section 8.1 and elsewhere in this document, part 64 is being implemented through title V operating permits programs developed pursuant to part 70. As noted in the preamble to part 70, operating permits will lead sources and permitting authorities to evaluate their air pollution control strategies, both on a source-specific basis and across the regulatory program. Implementing the operating permits program presents the best opportunity to pursue strategies that avoid pollution, rather than control it, and that eliminate pollution rather than shift it from one medium to another.

Letter(s): Asphalt Roofing Manufacturers Association (IV-D-495); Chicago Heights Steel (IV-D-515); Greater Cleveland Growth Association (IV-D-314); Houston Lighting & Power (IV-D-322); National Environmental Development Association (IV-D-334); Toledo Area Chamber of Commerce (IV-D-491); Vermont Petroleum Association (IV-D-492); Washington Department of Ecology (IV-D-279); Whirlpool Corporation (IV-D-493)

Section 5.4: Other Miscellaneous General Comments

5.4.1: Existence of a Compliance Problem

Comment a: Many industry commenters stated that the proposed rule assumes a major compliance problem without justification. Certain commenters noted that

the docket does not contain information on the compliance problem and does not state how the proposed rule will provide more compliance. Others stated that EPA has not offered evidence or arguments that there are in fact widespread problems of noncompliance with the federally-enforceable emissions limitations or standards applicable to major stationary sources, and one commenter cited a report on air violations in the U.S. from EPA showing that the actual compliance ratio for NAAQS criteria pollutants is much higher than 80%. Others noted that to the extent noncompliance exists, title V requirements will identify all noncompliance other than fraudulent behavior, which can exist even with part 64 requirements.

One commenter argued that the rule is based on a philosophy that industry is presumed out-of-compliance unless it has adequate data to show that it is in compliance, and that the present compliance status of existing facilities does not justify this approach. Another commenter stated that the only way in which EPA can argue that widespread noncompliance exists is by impermissibly redefining compliance as continuous compliance.

Response: The Agency disagrees with these comments. The statute requires that owners or operators have sufficient monitoring to demonstrate and certify that they remain in compliance with applicable requirements. The final part 64 is designed to provide a reasonable means of assessing compliance status to fulfill this statutory requirement. In addition, the final rule focuses on units that rely on control equipment to remain in compliance, which previous studies have shown to be significant compliance problems. See Section I.D. of the preamble to the final rule for further discussion.

Letter(s): American Gas Association (IV-D-265); Arkla Energy Resources Company (IV-D-343); E.I. DuPont de Nemours and Company (IV-D-329); ENRON Operations Corp. (IV-D-390); Kaiser Aluminum & Chemical Corporation (IV-D-295); Mississippi River Transmission Corp. (IV-D-344); Mobil Oil Corporation (IV-D-285); National Association of Manufacturers (IV-D-261); National Environmental Development Association (IV-D-334); Proctor & Gamble Company (IV-D-330); Questar Pipeline Company (IV-D-480)

5.4.2: General Need for Simplicity

Comment a: Several commenters stated generally that the rule must be easy to implement and require minimum resource expenditures. Commenters argued that the rule should allow States to build on existing programs wherever possible, and that States should be required to adopt reasonable implementing rules that do not increase the stringency of the part 64 requirements. One commenter cautioned that EPA must provide assurances that guidance documents that will be relied upon are not changed without notice or justification.

Commenters also noted generally that the proposed rule does not fulfill the objective of easy implementation. Several commenters complained that the proposed rule is too confusing and complex, and that it is inconsistent with Vice President Gore's call to reinvent government. Another commenter argued that the rule represents an improper shift in EPA emphasis from creative pollution prevention measures to punitive enforcement concepts. Finally, another commenter proposed that EPA shift the philosophy behind the proposed rule from traditional command and control to one in which the private sector is allowed to allocate resources on a least-cost basis to areas with demonstrated ambient air quality deficiencies where any monitoring benefits would be the largest possible.

Response: The EPA believes that the significant revisions to the proposed rule have resulted in a final rule that can be implemented with environmental and economic benefits that greatly outweigh costs. Specifically, the applicability provisions have been narrowed, implementation will be phased in over time, and the criteria for monitoring acceptability have been greatly simplified and made less onerous.

Letter(s): American Petroleum Institute (IV-D-289); Burnham Foundry (IV-D-446); E.I. DuPont de Nemours and Company (IV-D-329); El Paso Natural Gas Company (IV-D-271); Energy Efficiency Systems, Inc. (IV-D-255); Northern Illinois Gas (IV-D-249); Printing Industries of America, Inc. (IV-D-473); Unocal Corporation (IV-D-268)

Comment b: One environmental group argued against the position that the proposed rule is too complex and costly, and in favor of the position that the rule should be expanded with a greater emphasis on CEMS. This commenter argued that enhanced monitoring is an important tool to end environmental racism in the United States. The commenter noted that

most toxic air pollution affects a disproportionate number of persons that are of low income or of color, and that accurate and complete data on toxic emissions are needed to curtail emissions and improve the lives of these citizens. The commenter argued that continuous emission monitoring is a critical enforcement tool because it provides proof of emissions continuously and thereby catches violations that have gone completely undetected under the current inspection-based enforcement approach.

Response: Although addressing the issue of environmental equity is a fundamental objective of EPA, part 64 is not a proper vehicle to mandate CEMS at all hazardous air pollutant emissions units. The rule will require monitoring at significant emissions units that rely on control devices to achieve compliance at part 70 major sources. In addition, as new NESHAP requirements are developed under 40 CFR part 63, EPA will prescribe the appropriate enhanced monitoring in those part 63 regulatory actions.

Letter(s): Sierra Club, Lone Star Chapter (IV-D-364)

5.4.3: Conflicts with Federal Law, Policies and Goals

Comment a: Several commenters argued that the reporting and recordkeeping requirements of the proposed rule violate the Paperwork Reduction Act.

Response: The reporting and recordkeeping requirements have been analyzed by EPA and reviewed by the Office of Management and Budget (OMB), and they have been determined to be in compliance with the Paperwork Reduction Act. See Section III.D. of the preamble to the final rule for further discussion.

Letter(s): AT&T (IV-D-361); Clean Air Implementation Project (IV-D-242); Coalition for Clean Air Implementation (IV-D-304); Kerr-McGee Corporation (IV-D-232); Texaco Inc. (IV-D-357); U.S. Steel Group, The (IV-D-340)

Comment b: Other commenters argued that the proposed rule is another example of an unfunded federal mandate, which contravenes Executive Orders 12875 and 12866. These commenters stated that the proposed program ignores significant compliance costs for State and local governments that operate sewage treatment facilities, universities, hospitals, airports, local incinerators, and vehicle maintenance shops.

Response: The Agency disagrees. See the Regulatory Flexibility Analysis portion of the final RIA for further discussion.

Letter(s): Greater Cleveland Growth Association (IV-D-314); Ohio Chamber of Commerce (IV-D-370); Ohio Coal Development Office, Ohio Department of Development (IV-D-230); Toledo Area Chamber of Commerce (IV-D-491)

Comment c: Finally, another commenter argued that the proposal fails to acknowledge voluntary emission reduction efforts such as EPA's "33/50 Program."

Response: The EPA recognizes the value of voluntary emission reduction efforts, such as the 33/50 Program, and encourages sources to participate in the program. Voluntary reduction efforts will generally result in significant margins of compliance because the emission limits are not adjusted downward because of the voluntary reduction. In turn, increased margins of compliance can be used to justify less extensive monitoring than would otherwise be required. In this sense, part 64 does reward voluntary reductions by providing the flexibility in monitor selection to take into consideration the impact of voluntary reductions.

Letter(s): Iten Industries (IV-D-219)

5.4.4: General Burdens for Specific Circumstances

Comment a: One commenter argued that improper application of enhanced monitoring requirements could damage certain branches of industry to realize very minor environmental benefits. As an example, the commenter stated that stationary internal combustion engines offer many advantages, including fuel efficiency, but the market may be severely damaged by improper application of enhanced monitoring requirements.

Response: The EPA disagrees with these comments, particularly in light of the revisions in the final rule narrowing the applicability of the rule to only those pollutant-specific emissions units that rely on control devices to achieve compliance. Most internal combustion engines will not have such control devices.

Letter(s): Waukesha Engine Division, Dresser Industries Inc. (IV-D-342)

Comment b: One commenter raised general small business concerns. This commenter recommended that the rule should incorporate the flexibility embodied in section 507 of the Act which allows EPA to waive monitoring requirements for small businesses that do not have the technical or financial resources to comply. This commenter also argued that the complexity of the rule basically requires a full-time compliance staff, but that most small companies do not have the resources to pay someone whose time is devoted solely to regulatory compliance.

Response: The EPA believes that the final rule significantly reduces any impacts on small businesses as discussed in more detail in the RFA portion of the final RIA. The EPA adds that, pursuant to section 507 of the Act, each State is required to establish a Small Business Stationary Source Technical and Environmental Compliance Assistance Program. As its title indicates, the program will provide, among other things, technical and compliance assistance to small business. Specifically, the program elements will include, but will not be limited to, developing, collecting, and coordinating information on compliance methods and technologies for small business stationary sources; and establishing a small business stationary source compliance assistance program for determining applicable requirements and permit issuance. For additional information about the implementation of section 507, see EPA's "Guidelines for Implementation of Section 507 of the 1990 Clean Air Act Amendments," dated January 1992.

Letter(s): Printing Industries of America, Inc. (IV-D-473)

Comment c: One local agency argued that the proposed rule will likely be more burdensome to implement for agencies that have developed strong emission control requirements with multiple and/or stringent standards that have been adopted into the SIP because States with fewer and more lax requirements will not have as many standards for which to require enhanced monitoring.

Response: To address burdens for all permitting authorities, EPA has significantly revised the rulemaking. Most importantly, the burdens associated with implementing part 64 have been significantly reduced by narrowing the applicability provisions, deferring implementation of the rule for small units

until permit renewal, and by simplifying the criteria for acceptability of part 64 monitoring.

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

5.4.5: General Comments on Relationship with Other Programs

Comment a: One commenter argued that it is grossly misleading to compare enhanced monitoring to the NPDES permit program. This commenter stated that facilities under the NPDES permit program would have only one or two discharge points with relatively intense monitoring and reporting requirements. Enhanced monitoring requires much more extensive monitoring and reporting and much greater expenditures.

Response: The Agency generally has not attempted to compare part 64 with the NPDES permit program. The NPDES and the hazardous waste permit programs were cited in Section III.C. of the preamble to the proposed rule as examples of existing operating permit systems under other environmental programs. In addition, Section I.A. of the proposed preamble cited legislative history that indicated congressional intent that enhanced monitoring data, like monitoring data collected under the Clean Water Act, could be used to facilitate enforcement.

Letter(s): China Clay Producers Association, Inc. (IV-D-254)

Comment b: One commenter argued that title V and the associated enhanced monitoring rule are improper because they categorize companies based on attainment status of their location. The commenter believed that all companies emitting the same amount should be subject to the same limits.

Response: The Act specifies various major source thresholds depending on the attainment status of an area and the Agency must implement the Act in accordance with the major source thresholds established in the Act.

Letter(s): Chicago Heights Steel (IV-D-515)

Section 6: Applicability (§ 64.1)

Section 6.1: Applicability to Hazardous Air Pollutant Sources (§ 64.1(a))

6.1.1: Limiting Applicability to Part 61 NESHAP Requirements

Comment a: Several commenters recommended that enhanced monitoring be required not only for hazardous air pollutant (HAP) sources subject to the existing NESHAP requirements in 40 CFR part 61, but also other HAP sources as well. Commenters generally considered these sources to be of the highest concern because of the toxic nature of the pollutants involved. Commenters also considered this to be a critical issue for environmental equity because many of the HAP sources are located near areas with residential populations that are disproportionately poor and/or of color; one commenter considered this point crucial and believed EPA's proposed approach would allow environmental racism to continue unabated. These commenters did not believe that EPA should wait for a maximum achievable control technology (MACT) standard to be promulgated to begin monitoring these sources; they did not consider the existence of an emission limit to be appropriate as a prerequisite to enhanced monitoring applicability.

Response: The EPA does not believe that requiring part 64 monitoring for sources that are not yet subject to any applicable requirements is appropriate, because the primary purpose of part 64 is to document compliance with existing emission limitations or standards. The Agency, like these commenters, is concerned about toxic emissions and the environmental equity issues that may be raised by sources of hazardous air pollution, but believes that the key to addressing those issues is to promulgate maximum achievable control technology (MACT) emission limits to reduce HAP emissions and at that time include the appropriate monitoring to ensure that the MACT limits are complied with on a continuous basis.

Letter(s): Michigan Department of Natural Resources (IV-D-438); Natural Resources Defense Council, et. al. (IV-D-225); Sierra Club, Lone Star Chapter (IV-D-364); Sierra Club, Pennsylvania Chapter (IV-D-23); State and Territorial Air Pollution Program Administrators, et. al. (IV-D-439)

Comment b: One commenter proposed making part 64 applicable to all future MACT

requirements to be promulgated under 40 CFR part 63 because the commenter believed that the same rationale for supporting a flexible implementation approach for non-HAP sources would exist for sources subject to future MACT standards. This commenter believed that EPA should merely establish one rule (part 64) that contained the process for implementing that flexible approach rather than reinventing the process in each separate MACT rule.

Other commenters supported EPA's decision to not apply part 64 to future MACT sources, but rather to address appropriate enhanced monitoring in the individual MACT standards. Some commenters pointed to the recent hazardous organic NESHAP (HON) rule as an example of the appropriateness of this proposed approach. Commenters also noted that this proposed approach is essential to avoid increasing the stringency of part 63 MACT rules through part 64, and also to ensure that all of the rulemaking factors required to be considered in establishing MACT requirements are actually taken into account in establishing the enhanced monitoring portions of those standards.

Response: The Agency continues to believe that the most efficient means of addressing enhanced monitoring for new NESHAP requirements is through the standard setting process for each such standard. Therefore, the final rule exempts from part 64 MACT requirements promulgated under 40 CFR part 63.

Letter(s): Alabama Department of Environmental Management (IV-D-453); American Portland Cement Alliance (IV-D-284); American Automobile Manufacturers Association (IV-D-538); Eastman Chemical Company (IV-D-347); Eli Lilly and Company (IV-D-349); New Mexico Environment Department (IV-D-247); Pharmaceutical Manufacturers Association (IV-D-367); South Coast Air Quality Management District (IV-D-524); Tri-TAC (IV-D-24); Union Carbide Corporation (IV-D-293)

6.1.2: Opposition to Applying Part 64 Enhanced Monitoring to Part 61 NESHAP Requirements

Comment a: For a variety of reasons, many commenters opposed applying enhanced monitoring to 40 CFR part 61 NESHAP requirements, while at the same time supporting EPA's decision not to apply part 64 to future MACT standards. Several commenters argued that the existing part 61

requirements already have sufficient compliance monitoring and requiring different enhanced monitoring would be duplicative. One commenter also argued that applying part 64 to part 61 standards will lead to duplication for sources that are subject to both part 61 and part 63 standards. As a minimal alternative to the proposed regulations, commenters suggested that EPA apply part 64 to existing NESHAP requirements but then deem the part 61 requirements to satisfy part 64. One commenter also suggested that if the final rule does not provide a complete exemption, then it should at least apply only to emission limits and removal requirements under part 61 as opposed to equipment, operating, work practice, or similar types of emission standards.

Commenters also stated that applying enhanced monitoring to HAP sources was insupportable from both an air quality and an economic standpoint. Commenters argued that to require enhanced monitoring on top of the monitoring that is now being performed would produce no environmental benefit and would be inconsistent with Executive Order 12866's mandate to avoid inconsistent or duplicative regulations. Another commenter noted that the lack of any ambient air quality standards for HAPs made any assumed benefits from monitoring HAP sources questionable. Several commenters opposed applying enhanced monitoring to NESHAP sources because requiring enhanced monitoring will alter the cost of complying with NESHAP standards and upset the cost evaluations that EPA performed in developing the NESHAP standards. One commenter stated that requiring enhanced monitoring for NESHAP sources will not be cost-effective because many HAPs do not have reliable analytical methods and one-time emissions tests for one HAP can cost thousands of dollars per sample. Other commenters also stated that part 64 should not apply to part 61 requirements because those NESHAP standards are scheduled to be reconsidered by 2000 and any monitoring enhancements would be better addressed then on an individual subpart basis.

Response: Based on the importance to public health and welfare of controlling hazardous air pollutants, the final rule retains applicability for pollutant-specific emissions units that rely on control devices to control the applicable HAP and are subject to an existing part 61 NESHAP emission limitation or standard for that pollutant. As the final rule makes clear, the owner or operator can rely at least in part on the existing monitoring under the applicable NESHAP subpart to satisfy part 64.

Letter(s): Allied Signal, Inc. (IV-D-313); American Automobile Manufacturers Association (IV-D-538); American Electronics Association, Clean Air Task Force (IV-D-437); Chemical Manufacturers Association (IV-D-301); Clean Air Implementation Project (IV-D-242); Dow Chemical Company (IV-D-260); El Paso Natural Gas Company (IV-D-271); Exxon Chemical Americas (IV-D-339); Exxon Company, USA (IV-D-310); KBN Engineering and Applied Sciences (IV-D-475); Mobil Oil Corporation (IV-D-285); Monsanto Company (IV-D-273); Motorola Inc. (IV-D-302); National Petroleum Refiners Association (IV-D-276); Occidental Chemical Corporation (IV-D-240); Pharmaceutical Manufacturers Association (IV-D-367); R.R. Donnelley & Sons Co. (IV-D-241); Texas Chemical Council (IV-D-365); Union Carbide Corporation (IV-D-293)

6.1.3: Area Source and Small Emissions Unit Exemption

Comment a: Several commenters suggested that if enhanced monitoring is to apply to HAP sources, it should not apply to area sources required to obtain a permit under part 70. To support this recommendation, commenters argued that EPA has no legislative authority to regulate area sources and has not shown that area sources of HAPs warrant imposition of enhanced monitoring. One commenter stated that if enhanced monitoring is to apply to area sources, it should apply only if it is warranted, such as where there is actual risk posed to the surrounding community and not on the assumption that all HAP sources should be subject to enhanced monitoring. Another commenter stated that many of the NESHAP sources are small businesses without the financial or technical capability to comply.

Response: The final rule applies only to major sources that are required to obtain a part 70 permit. Thus, if a minor (i.e., area) source is required to obtain a part 70 permit solely because of the presence of one or more NESHAP units at the source, the applicable NESHAP unit(s) would not be subject to part 64.

Letter(s): Los Angeles County Sanitation Districts (IV-D-26); Monsanto Company (IV-D-273); Society of the Plastics Industry, Inc. (IV-D-287); Tri-TAC (IV-D-24); Washington Department of Ecology (IV-D-279)

Comment b: Commenters also argued for establishing some small unit exemption for

emissions units subject to 40 CFR part 61 requirements. Commenters noted examples of very small emissions units (such as 55 gallon drums under a benzene NESHAP or small direct contact sludge dryers without mercury emissions that are still subject to the mercury NESHAP) that should not be required to go through the process of establishing enhanced monitoring under part 64. Proposed de minimis thresholds included all units under the major HAP source definition of 10 tons per year, all units with potential emissions under 5 tons per year, and all units under the 30% threshold proposed for non-HAP emissions units.

Response: The final rule applies only to emissions units that rely on a control device and have the potential to emit prior to the control device in an amount that exceeds the applicable major source threshold (generally 10 tons per year for a HAP source). This revision to the proposed rule addresses these comments.

Letter(s): Chemical Manufacturers Association (IV-D-301); Dow Chemical Company (IV-D-260); Eastman Chemical Company (IV-D-347); KBN Engineering and Applied Sciences (IV-D-475); Motorola Inc. (IV-D-302); Pharmaceutical Manufacturers Association (IV-D-367); Tennessee Department of Environment and Conservation (IV-D-399); Texas Chemical Council (IV-D-365); Union Camp (IV-D-359); U.S. Sugar Corporation (IV-D-382)

6.1.4: Particular HAP Exemptions to Consider

Comment a: One commenter stated that section 112(q)(2) of the Act precludes imposing enhanced monitoring for certain radionuclide emissions from phosphogypsum stacks (Subpart R). Commenters also stated that EPA should exempt radionuclide standards under Subpart H because that subpart includes adequate monitoring and that EPA also should investigate whether radionuclide standards in other part 61 subparts should be similarly exempted for the same reason.

Response: EPA disagrees that enhanced monitoring is precluded for any radionuclide emissions from phosphogypsum stacks, because enhanced monitoring will not affect the stringency of existing standards and therefore will not constitute new standards which would be prohibited under section 112(q)(2) of the Act. However, as a practical matter, the part 64 applicability threshold will result in no applicability for radionuclide

emissions from any source unless the Administrator establishes a pollutant-specific "major" source threshold for radionuclide emissions.

Letter(s): Department of Energy (IV-D-358); Fertilizer Institute, The (IV-D-251); Westinghouse Electric Corporation (IV-D-321)

Comment b: One commenter stated that section 112(n)(4) of the Act precludes imposing enhanced monitoring on natural gas transmission and related industries because the only way natural gas compressor engines could be deemed to be major sources of hazardous air pollutants is if the emissions from several stations are aggregated, and section 112(n)(4) prohibits aggregating emissions from natural gas compressor stations in order to designate them as major sources as defined in section 112.

Response: The Agency will follow section 112(n)(4) in establishing which sources may be considered "major sources" under the definition in section 112 of the Act. However, a source may be major for a criteria pollutant and be subject to a NESHAP requirement under 40 CFR part 61. In that circumstance, part 64 could apply with respect to that NESHAP requirement even if the source is not a "major" HAP source (if there was a unit with a control device that exceeded the part 64 applicability threshold). However, because existing part 61 standards do not address natural gas transmission lines, the commenter's concern is not at issue for purposes of part 64.

Letter(s): El Paso Natural Gas Company (IV-D-271)

Comment c: Another commenter stated that part 64 should exempt asbestos landfills regulated under subpart M of part 61 because such sources are designed for no emissions and are subject to requirements that do not allow for the type of monitoring envisioned in part 64.

Response: Asbestos landfills will not be subject to monitoring under the final rule because the landfills do not rely on a control device to achieve compliance with the standard.

Letter(s): Dow Chemical Company (IV-D-260)

Comment d: A commenter suggested that EPA specifically exempt part 61 sources that would soon be subject to new MACT standards (citing subparts F, J, V, Y, BB and FF).

Response: The Agency disagrees that implementation of part 64, if applicable, or other existing monitoring requirements (e.g., part 70) should be delayed until new regulations apply. Owners of emission units with existing emission limitations or standards are subject to compliance certification requirements for those limitations or standards. Part 64 is intended to define minimum monitoring requirements to support valid certifications.

Letter(s): Exxon Chemical Americas (IV-D-339)

6.1.5: MACT Relationship Issues

Comment a: One commenter recommended that EPA state explicitly that monitoring under part 70 would be sufficient for early reduction sources that have delayed the applicability of MACT requirements.

Response: Sources which are not subject to existing NESHAP requirements and for which applicability of MACT standards promulgated under part 63 has been delayed are not subject to monitoring under part 64, because -- with the exception of units subject to part 61 -- the applicability of subpart B requires the existence of an applicable underlying standard other than a section 112 standard. Therefore, the commenter is correct that monitoring under part 70 is sufficient for early reduction sources with respect to HAP requirements to the extent such sources are not subject to existing part 61 requirements.

Letter(s): Union Carbide Corporation (IV-D-293)

Comment b: Some commenters requested clarification of how enhanced monitoring should be implemented where States are imposing case-by-case MACT requirements under sections 112(g) and (j). A commenter requested clarification of whether such State-imposed MACT requirements are considered federally-enforceable and, if so, whether any monitoring requirements developed by the State would also be federally-enforceable. The same commenter requested clarification as to which sources and which emissions units at those sources would be subject to enhanced

monitoring through part 63 MACT standards.

Response: Case-by-case MACT requirements imposed by States are specifically exempt from enhanced monitoring under the final rule because they are emission limitations or standards promulgated under section 112 of the Act after November 15, 1990. However, in establishing case-by-case MACT, the State must establish not only the particular MACT emission limitation or standard, but also the appropriate monitoring, reporting and recordkeeping that would be associated with the MACT emission limitation or standard if it had been promulgated by rule instead of on a case-by-case basis. These State-imposed MACT requirements, including associated monitoring, would be federally-enforceable applicable requirements. Finally, EPA notes that for part 63 MACT requirements it will determine which sources, and which emissions units at those sources, are required to conduct enhanced monitoring in each separate part 63 rulemaking.

Letter(s): California Air Resources Board (IV-D-387); Michigan Department of Natural Resources (IV-D-438)

Comment c: One commenter requested that, when EPA develops future MACT standards with enhanced monitoring, EPA provide the source with the flexibility to submit a request for alternative monitoring.

Response: The MACT general provisions that govern monitoring specifically allow for an owner or operator to submit to EPA a request for alternative monitoring under 40 CFR 63.8.

Letter(s): American Textile Manufacturers Institute (IV-D-440)

6.1.6: Miscellaneous Concerns

Comment a: Some commenters raised concerns over integrating monitoring for HAPs that are also criteria pollutants, such as VOC. Some commenters recommended delaying the applicability of enhanced monitoring to non-HAP pollutants where such pollutants are likely to be regulated in the future as HAPs under the MACT program. Alternatively, commenters suggested that future MACT monitoring requirements allow for flexible monitor selection so that enhanced monitoring adopted for non-HAP requirements can be used for MACT compliance monitoring as well.

Response: As described in section 6.1.4 (Part I) above, the Agency disagrees that implementation of part 64 should be delayed until new regulations apply.

Letter(s): Allied Signal, Inc. (IV-D-313); Fort Howard Corporation (IV-D-233); General Electric Company (IV-D-278); Goodyear Tire and Rubber Company, The (IV-D-292)

Comment b: One commenter requested clarification as to whether EPA intended for speciated monitoring of HAPs.

Response: Part 64 does not envision that owners or operators necessarily will use speciated monitoring of HAPs given that direct emissions monitoring is not required under part 64. In the future, EPA may require speciated monitoring for individual MACT standards under part 63 if considered appropriate in developing such standards.

Letter(s): Motorola Inc. (IV-D-302)

Comment c: A commenter requested that the word "permit" as used in § 64.1(a) of the proposed rule be clarified to refer solely to part 70 operating permits and not other permits that may impose HAP requirements.

Response: The applicability section has been significantly revised and the Agency believes it is now clear that, with respect to HAP requirements, part 64 applies solely to NESHAP requirements under 40 CFR part 61 that were proposed prior to November 15, 1990, and that apply to emissions units located at new, modified or existing sources that are required to obtain an operating permit under title V of the Act.

Letter(s): Department of Energy (IV-D-358)

Section 6.2: Use of a Percent Threshold for Determining Applicability (§ 64.1(b))

6.2.1: Appropriate Threshold for Part 64 Applicability

Comment a: The preamble to the proposed rule detailed five options for establishing a threshold for determining applicability of part 64 to emissions units with

respect to criteria pollutants. Option 1 was no threshold; that is, all emissions units with applicable requirements for the pollutant(s) for which a source is major would be subject to part 64. Option 5 would establish the threshold at the major source level so that only emissions units that are major by themselves would be covered. Options 2, 3, and 4 would establish the thresholds at 10, 30 and 50 percent of the major source threshold, respectively. Of these options, Options 4 and 5 received the most support. Options 1, 2 and 3 received minimal support by commenters. In addition, some commenters proposed alternative percentage thresholds.

Environmental groups and some other commenters supported either Option 1, which would establish the applicability threshold at all units emitting pollutants for which the source is major, or Option 2, which would establish the applicability threshold at 10% of the minimum potential emissions required for the source to be classified as a major source. One commenter noted that CEMS should be required for all such units. It was also argued that small sources excluded by Option 3 could emit highly concentrated pollution amounts over a few hours and needed to be monitored to enforce 24-hour limits. Another commenter noted that the RIA net benefits analysis showed only small differences between net benefits for these options as opposed to Option 3, and that any differences would be within any margin of error of the analysis.

A few commenters supported Option 3, which would establish the applicability threshold at 30% of the minimum potential emissions required for the source to be classified as a major source. Some commenters suggested, however, that implementation for units less than the major source threshold be delayed until permit renewal. One commenter provided data showing that at a typical smaller, older existing source where stack heights range from 20 to 50 meters, a single emissions unit emitting 30 tons per year can cause exceedances of the NAAQS for SO₂.

Many commenters objected to Option 3 and the underlying analysis that led to its selection. Some commenters asserted that Option 3 was not sufficiently justified by the RIA and was unreasonable. Other commenters stated that the RIA demonstrated that either Option 4 or Option 5 would have greater net benefits than Option 3. Many commenters cited the significant increased costs under Option 3, as compared to a higher applicability threshold, with only minimal environmental benefits. Commenters stated that the difference between

tons reduced and increased costs did not support the selection of Option 3.

One commenter stated that the cost of the Enhanced Monitoring Program was proportional to the number of sources subject to enhanced monitoring, while the benefit was determined by the amount of emissions monitored; shifting from Option 5 to Option 3 greatly increases the emissions units covered, but only marginally increases the emissions covered. Similarly, other commenters objected to the selection of Option 3 because the reasons supporting the selection appeared to be based on the number of emissions units covered, rather than the amount of emissions. A study by one commenter concluded that lowering the threshold from 100% (Option 5) to 30% (Option 3) doubled the number of emissions units covered but increased the coverage of pollutant emissions by only 3%. Similar results were found in studies of other emissions. A State agency noted that the 30% threshold would force the agency to spend most of its limited resources on a small fraction of the overall actual emissions. Other commenters provided data showing that a higher threshold would still capture a large percentage of emissions, that the marginal cost of the 30% threshold was too high, or that the emissions units excluded from coverage under higher thresholds would be insignificant. Several commenters said that the marginal cost of each applicability option should be considered in the cost/benefit calculation.

Several commenters stated that an additional cost-benefit analysis was required before the applicability threshold could be reduced to 30%. Many commenters stated that Option 3 would subject many small sources to enhanced monitoring; in some nonattainment areas, for example, the threshold would be only 3 tons per year. Some commenters stated that covering smaller units would have little emissions impact, but substantial economic and regulatory burden impact. One commenter stated that Option 3 would overwhelm the permitting process with case-by-case determinations for relatively insignificant units, thereby increasing the likelihood of errors in permitting major sources, which would adversely affect air quality.

Many commenters supported raising the applicability threshold above 30% generally without necessarily supporting any particular option in the preamble. Some commenters noted that the emissions units not covered by enhanced monitoring if the applicability threshold was raised above the Option 3 or Option 4 levels would still be subject to periodic monitoring

under 40 CFR part 70. Several commenters specifically agreed with EPA's proposed position in the preamble that periodic monitoring will satisfy section 114(a)(3) for small emissions units at major sources, with some arguing that this result favors increasing the threshold and considering more units to be "small" emissions units. One commenter argued that monitoring and control device manufacturers and installers would be unable to meet the demand for those devices that would be generated under low applicability thresholds. Another commenter argued that raising the threshold would allow resources for small units to be better spent on control equipment rather than monitoring.

One commenter thought that the rule should exclude all emissions units emitting less than 15% of a facility's total emissions, and one State agency proposed an emissions unit threshold of 85% of the major source level in order to provide a buffer for inaccuracies in determining potential to emit without significantly reducing benefits.

Many commenters supported Option 4, which would establish the applicability threshold at 50% of the minimum potential emissions required for the source to be classified as a major source. Some commenters noted that the RIA concluded that the 50% threshold would produce the most net benefits to society. Other reasons for using the 50% threshold include reducing the cost of compliance and focusing monitoring efforts on large emissions units and those with control equipment.

Most industry and many State agency commenters supported Option 5 or some higher threshold. Many of those commenters who supported Option 5 generally did so based on their desire that the proposed rule focus on those units whose emissions are most significant. Some commenters stated that the time and resources required to apply enhanced monitoring to sources less than major would result in only minor improvements to air quality. For example, one commenter stated that Option 4 would provide monitoring for 1% more emissions than Option 5, but would require monitoring for 7% more emissions units. Another commenter stated that lower thresholds offered only nominally greater coverage but increased the cost of enhanced monitoring by double or more.

In support of raising the applicability threshold to Options 4 or 5, one commenter suggested that EPA could mitigate the effect of covering fewer sources by encouraging the States to include more smaller sources, on a

case-by-case basis, in their individual enhanced monitoring programs. This approach would provide regulatory agencies with maximum flexibility, and reduce compliance costs by eliminating units currently achieving continuous compliance.

Several commenters stated that Option 5 was consistent with definition of "major source" in section 302 of the Act. Another commenter stated that Option 5 was supportable either by redefining major source consistent with section 302 or by creating a de minimis exception for smaller units. One commenter stated that Option 5 avoided the equity issue where a 90 tons per year synthetic minor source avoided enhanced monitoring while a source with four 30 tons per year emissions units would be required to have four enhanced monitoring protocols, even though the synthetic minor may be a larger potential compliance problem.

Response: After considering all of the comments, revising the preliminary RIA and evaluating the findings from the final RIA, the Agency adopts in the final rule an applicability threshold for monitoring that is consistent with proposed Option 5, except that the reduction efficiency associated with the control device is not taken into account. The major source threshold, based on potential pre-control device emissions, will be used to determine applicability for all pollutant-specific emissions units. See Section II.B. of the preamble to the final rule for further discussion.

Letter(s): ALCOA (IV-D-288); ARCO (IV-D-396); ASARCO (IV-D-327); Air Compliance Total Services (ACTS) (IV-D-19); Alabama Department of Environmental Management (IV-D-453); Alcan Rolled Products Company (IV-D-519); ALCOA (IV-D-288); Allied Signal, Inc. (IV-D-313); Aluminum Association (IV-D-378); Alyeska Pipeline Service Company (IV-D-360); American Automobile Manufacturers Association (IV-D-538); American Cyanamid Company (IV-D-201); 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); Amoco Corporation (IV-D-244); Arizona Public Service Company (IV-D-18); Arkla Energy Resources Company (IV-D-343); Armco Steel Company (IV-D-395); Ash Grove Cement Company (IV-D-311); Atmos Energy Corporation (IV-D-212); BP Oil Company (IV-D-315); Baltimore Gas and Electric Company (IV-D-296); Bay Area Air Quality Management

District (IV-D-402); California Air Resources Board (IV-D-387); Can Manufacturers Institute (IV-D-478); Carolina Power & Light Company (IV-D-297); Centerior Energy Corporation (IV-D-352); Chemical Manufacturers Association (IV-D-301); Chevron (IV-D-397); China Clay Producers Association, Inc. (IV-D-254); Clean Air Implementation Project (IV-D-242); Colorado Association of Commerce and Industry (IV-D-243); Colorado Department of Health (IV-D-209); Columbia Gas System Service Corporation (IV-D-341); Consolidated Natural Gas Company (IV-D-350); Corn Refiners Association, Inc. (IV-D-391); Council of Industrial Boiler Owners (IV-D-319); County Sanitation Districts of Orange County, California (IV-D-235); Delhi Gas Pipeline Corporation (IV-D-351); Department of Energy (IV-D-358); Department of the Navy (IV-D-206); Distilled Spirits Council of the United States (IV-D-300); Dow Chemical Company (IV-D-260); E.I. DuPont de Nemours and Company (IV-D-329); ENRON Operations Corp. (IV-D-390); East Ohio Gas Company, The (IV-D-355); Eastman Chemical Company (IV-D-347); Eastman Kodak Company (IV-D-333); El Paso Natural Gas Company (IV-D-271); Eli Lilly and Company (IV-D-349); ENRON Operations Corp. (IV-D-390); Entergy (IV-D-281); Enviroplan (IV-D-372); Exxon Chemical Americas (IV-D-339); Exxon Company, USA (IV-D-310); Fertilizer Institute, The (IV-D-251); GPM Gas Services Company (IV-D-229); Gas Processors Association (IV-D-227); General Electric Company (IV-D-278); Georgia Department of Natural Resources (IV-D-377); Goodyear Tire and Rubber Company, The (IV-D-292); GPM Gas Services Company (IV-D-229); Greater Cincinnati Chamber of Commerce (IV-D-224); Houston Lighting & Power (IV-D-322); Illinois Environmental Protection Agency (IV-D-518); Independent Liquid Terminals Association (IV-D-468); Institute of Clean Air Companies (IV-D-379); International Business Machines Corporation (IV-D-238); KBN Engineering and Applied Sciences, Inc. (IV-D-475); Kaiser Aluminum & Chemical Corporation (IV-D-295); Kaiser Aluminum & Chemical Corporation, Primary Prod. Div. (IV-D-368); Koch Industries, Inc. (IV-D-332); Large Public Power Council (IV-D-336); Leather Industries of America (IV-D-286); Lone Star Energy Company (IV-D-401); Lone Star Gas Company (IV-D-211); Los Angeles County Sanitation Districts (IV-D-26); Louisiana Mid-Continent Oil and Gas Association (IV-D-454); Lower Colorado River Authority, et al. (IV-D-256); Marathon Oil Company (IV-D-376); Maryland Department of the Environment (IV-D-223); Merck & Co., Inc. (IV-D-443); Mississippi River Transmission Corp. (IV-D-344); Mobil Oil Corporation (IV-D-285); Monsanto Company (IV-D-273); NESCAUM (IV-D-253); National Association of Manufacturers (IV-D-261); National Environmental Development Association (IV-D-334); National

Petroleum Refiners Association (IV-D-276); Natural Resources Defense Council, et al. (IV-D-225); New Mexico Environment Department (IV-D-247); New Mexico Oil and Gas Association (IV-D-228); Niagara Mohawk Power Corporation (IV-D-317); North Dakota Department of Health and Consolidated Laboratories (IV-D-250); Northern Illinois Gas (IV-D-249); Occidental Chemical Corporation (IV-D-240); 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 EPA (IV-D-283); Ohio Edison (IV-D-266); Ohio Electric Utilities Institute (IV-D-323); Oklahoma Department of Environmental Quality (IV-D-463); PQ Corporation, The (IV-D-25); Pacific Engineering Corporation (IV-D-523); Pennsylvania Department of Environmental Resources (IV-D-482); Pharmaceutical Manufacturers Association (IV-D-367); Phillips Petroleum Company (IV-D-380); Proctor & Gamble Company (IV-D-330); Public Service Company of Oklahoma (IV-D-477); Public Service Electric and Gas Company (IV-D-282); Questar Pipeline Company (IV-D-480); Regional Air Pollution Control Agency (IV-D-532); Reynolds Metals Company (IV-D-374); Rubber Manufacturers Association (IV-D-331); Safety-Kleen Corporation (IV-D-22); Shell Oil Company (IV-D-280); Sierra Club, Pennsylvania Chapter (IV-D-23); South Carolina Electric & Gas Company (IV-D-394); South Coast Air Quality Management District (IV-D-524); Southwestern Public Service Company (IV-D-272); Specialty Steel Industry of the United States (IV-D-328); State and Territorial Air Pollution Program Administrators, et al. (IV-D-439); Steel Manufacturers Association (IV-D-326); Sun Company, Inc. (IV-D-231); Tennessee Department of Environment and Conservation (IV-D-399); Texaco Inc. (IV-D-357); Texas Chemical Council (IV-D-365); Texas Natural Resource Conservation Commission (IV-D-371); Total Petroleum, Inc (IV-D-354); Tri-TAC (IV-D-24); United Parcel Service (IV-D-320); United States Sugar Corporation (IV-D-382); Unocal Corporation (IV-D-268); Utah Division of Air Quality, State of (IV-D-487); Washington Department of Ecology (IV-D-279); Waukesha Engine Division, Dresser Industries Inc. (IV-D-342); Whirlpool Corporation (IV-D-493); Williams Natural Gas Company (IV-D-213); Wyoming Department of Environmental Quality (IV-D-462)

6.2.2: Attainment versus Nonattainment Applicability

Comment a: Many commenters also supported applying the various options differently depending on the attainment status of an area. One commenter favored

Option 4 for nonattainment areas and Option 5 for attainment areas. Two commenters that generally favored Option 5 argued that Option 5 should at least be used for all attainment areas. One local agency favored an applicability level in nonattainment areas based on actual emissions that would be established at the greater of 30% of the major source threshold or 8 tpy. Another commenter favored changing the threshold in serious or worse nonattainment areas to 30% of the entire source's potential to emit, because it would not be cost-effective to monitor units that have very low emission levels and because the accuracy and reliability of monitoring equipment at such low emission levels is questionable. Another commenter suggested establishing a major source threshold level for all nonattainment areas in order to avoid covering too many small emissions units in such areas.

In addition to varying the proposed options based on attainment status, numerous commenters stated other approaches to distinguishing applicability based on attainment status. Numerous commenters supported the option of applying the rule only in nonattainment areas. Several commenters indicated that periodic monitoring under part 70 should be sufficiently enhanced for all major sources in attainment areas, with some commenters arguing that EPA's logic for using periodic monitoring for small sources has equal merit for all sources in attainment areas. Other commenters argued that this approach would reduce the costs of the rule to the regulated community, allow States to focus on the most critical air quality concerns, and would be the most cost-effective option if a valid RIA was conducted. One commenter proposed a policy that enhanced monitoring only be required where part 70 monitoring is insufficient to achieve a NAAQS, making enhanced monitoring inappropriate for attainment areas. Finally, several commenters also suggested limiting enhanced monitoring solely to major units in nonattainment areas, while one commenter suggested further limiting enhanced monitoring solely to major units in nonattainment areas that are not in compliance.

Several commenters also suggested as an alternative to completely exempting sources in attainment areas that EPA establish a higher threshold in attainment areas. Commenters from the oil and gas production industry stated that the distinction between attainment and nonattainment areas is particularly important for their facilities, because many are located in remote parts of attainment areas and do not have on-site personnel. Another commenter stated that the applicability

threshold for attainment areas should be less stringent than that for nonattainment areas, because sources in attainment areas meet NAAQS and safety requirements to ensure public health. The commenter also noted that a higher applicability threshold for sources located in attainment areas would reduce the cost burden of enhanced monitoring; focus limited resources on nonattainment area sources; provide a further incentive for nonattainment areas to achieve attainment area status; and further clarify the distinctions among degrees of nonattainment severity. One increased threshold suggested was that for sources in attainment areas the applicability threshold would be equal to the PSD major source definition (100 tpy for specified categories, 250 tpy for all other categories), while the general major source definition would apply in nonattainment areas (or a lower threshold if EPA believes it to be essential).

Two commenters suggested that if EPA does consider enhanced monitoring for attainment areas, enhanced monitoring should apply only in attainment areas that are close to being reclassified as nonattainment. Another commenter recommended allowing relaxation of enhanced monitoring requirements as an attainment area designation changes for sources that previously met the enhanced monitoring applicability threshold but under the new designation fall under the threshold. Another alternative suggested was to defer applicability in attainment areas until nonattainment areas are addressed. Finally, other commenters stated generally that at least some form of reduced criteria should apply in attainment areas.

Finally, certain commenters recommended particular approaches for nonattainment areas. One commenter proposed a special applicability threshold in serious or worse nonattainment areas of 30% of the source's total potential to emit. A federal agency recommended applying enhanced monitoring to smaller sources in nonattainment areas and granting appropriate credit for the reductions demonstrated by these smaller sources.

Response: The Agency believes that the adoption of the modified version of Option 5 in the final rule eliminates the need to establish separate thresholds for attainment and nonattainment areas as suggested by these commenters.

Letter(s): American Petroleum Institute (IV-D-289); American Electronics Association, Clean Air Task Force (IV-D-437); Arkla Energy Resources Company (IV-D-343); Armco Steel Company (IV-D-395); Association of International Automobile Manufacturers (IV-D-264); Class of '85 Regulatory Response Group (IV-D-338); Clean Air Implementation Project

(IV-D-242); Columbia Gas System Service Corporation (IV-D-341); Department of Energy (IV-D-358); Department of the Navy (IV-D-206); Eastman Chemical Company (IV-D-347); El Paso Natural Gas Company (IV-D-271); Enserch Processing, Inc. (IV-D-210); Gas Processors Association (IV-D-227); Goodyear Tire and Rubber Company, The (IV-D-292); GPM Gas Services Company (IV-D-229); Illinois Power Company (IV-D-274); Independent Liquid Terminals Association (IV-D-468); Kerr-McGee Chemical Corp. (IV-D-385); Kerr-McGee Corporation (IV-D-232); Mississippi River Transmission Corp. (IV-D-344); National Grain and Feed Association (IV-D-312); North Dakota Department of Health and Consolidated Laboratories (IV-D-250); People's Natural Gas Company (IV-D-27); Peoples Natural Gas (IV-D-298); PQ Corporation, The (IV-D-25); Questar Pipeline Company (IV-D-480); South Coast Air Quality Management District (IV-D-524); United Parcel Service (IV-D-320); United States Sugar Corporation (IV-D-382)

6.2.3: Flexibility in Threshold Used

Comment a: Many commenters suggested that applicability be determined on a basis other than a fixed emissions threshold. Several commenters stated that a single threshold number does not fit all sources. One of these commenters suggested that rather than having a single applicability threshold, a range of requirements should be set which would depend on the current monitoring scheme, the location of the source, a source's potential to emit and its actual emissions. This would give State or federal permit writers substantial discretion to identify units requiring more than part 70 monitoring. Another commenter stated that the stringency of enhanced monitoring should increase as the size and environmental significance of an emissions unit increases. One commenter suggested that the applicability threshold be determined on a pollutant-by-pollutant basis so that those facilities that have a significant impact are covered. One commenter recommended that the rule should focus on those sources that account for the majority of emissions and that are not already required to have CEMSs. This would allow States to target for enhanced monitoring those major sources that are in nonattainment areas. One commenter found Option 3 to be both over inclusive (for reasons already discussed by other commenters) and under inclusive. For example, it is under inclusive because a major source with a large number of units emitting near or below the 30% threshold could escape enhanced monitoring, even though the source is a locally or regionally significant

contributor to air quality problems.

Response: The Agency has retained the concept of a fixed emissions threshold in order to avoid creating the excessive administrative burdens that would be associated with a flexible threshold. Although any fixed threshold could result in some specific cases of both over inclusive and under inclusive applicability, the Agency believes that applying part 64 requirements only to emissions units with control devices and that have the potential to emit above the major source threshold without taking into account the control device sufficiently addresses concerns about over inclusive applicability. To address specific cases of under inclusive applicability, EPA or the permitting authority may require additional monitoring for particular emissions units that do not meet the part 64 applicability thresholds through general section 114 authority or similar State authority or under part 70.

Letter(s): Hazardous Waste Treatment Council (IV-D-392); International Business Machines Corporation (IV-D-238); NESCAUM (IV-D-253); Ohio EPA (IV-D-283); Texas Natural Resource Conservation Commission (IV-D-371)

6.2.4: General Concerns on Approach to Selecting an Option

Comment a: One industry commenter stated that reliance on cost/benefit analysis to determine applicability, as opposed to relying on the elements of enhanced monitoring, was questionable in light of the Alabama Power case which invalidated a prevention of significant deterioration (PSD) applicability threshold selected on the basis of cost/benefit analysis. A State and local agency association stated that the preliminary RIA data may be insufficient to make an informed decision as to the proper threshold.

Response: The EPA continues to believe that the findings of the preliminary RIA and the revisions to those findings embodied in the final RIA properly serve as a basis for selecting both an applicability threshold as to units at major sources and a determination generally of the degree of monitoring to require. The applicability criteria for part 64 are not readily comparable to the situation in Alabama Power for several reasons. First, the applicability criteria in part 64 pertain to which units at major sources are covered and do not define the term "major source" as was the case in Alabama Power. Second, part 64 is just one piece of the enhanced monitoring requirements. The monitoring requirements in part 70 serve

to insure that any major sources not covered by part 64 are required to have enhanced monitoring.

Letter(s): Chemical Manufacturers Association (IV-D-301); State and Territorial Air Pollution Program Administrators, et al. (IV-D-439)

Comment b: Some commenters also objected to EPA's statement in the preamble that it could choose among applicability options based on an undefined mandate as to how much monitoring enhancement is enough to fulfill the purpose of section 114(a)(3).

Response: The Agency is required to establish enhanced monitoring for all major sources under section 114(a)(3). In order to satisfy the statutory obligation that all major stationary sources conduct enhanced monitoring, the final rule relies on part 70 periodic monitoring, reporting and recordkeeping requirements as enhanced monitoring for certain emissions units and applicable requirements. Part 70 periodic monitoring requirements will constitute enhanced monitoring for all emissions units and applicable requirements that do not meet the applicability thresholds for the specific monitoring, reporting and recordkeeping required in part 64. However, EPA does not believe that the part 70 periodic monitoring requirements are appropriate to provide a reasonable assurance of compliance for emissions units that rely on control devices to achieve compliance, because such units generally require much more frequent assessments of control performance than other control options.

Letter(s): Chemical Manufacturers Association (IV-D-301); Shell Oil Company (IV-D-280)

Comment c: Certain industry commenters suggested that applicability should be determined on a stack, not an emissions unit, basis. These commenters noted that the preliminary RIA was conducted on a stack-by-stack, rather than emissions unit, basis. One of these commenters noted that switching to a stack-based approach would eliminate the confusion over the term "emissions unit."

Response: See earlier response to comments under Comment d Section 4.1.3 (Part I), above.

Letter(s): ASARCO (IV-D-327); Coalition for Clean Air Implementation (IV-D-304)

6.2.5: Applicability Only for Major Pollutants

Comment a: Most comments received on applicability to pollutants supported the proposed rule's application only to pollutants that caused the source to be major, although there were a few comments that opposed this approach. One commenter specifically suggested that applicability be expanded to include emissions units emitting more than 30% of any pollutant emitted at the source. The same commenter stated that, in the alternative, the rule should at least apply to all pollutants emitted by an emissions unit if the enhanced monitoring protocol employed can monitor more than one pollutant.

Response: In the final rule, EPA does not retain this limitation because it is inconsistent with the means for selecting the applicability threshold in part 64. See the discussion of this issue in the preamble to the final rule in Section II.B.

Letter(s): American Automobile Manufacturers Association (IV-D-538); California Air Resources Board (IV-D-387); Chemical Manufacturers Association (IV-D-301); Colorado Department of Health (IV-D-209); Department of Energy (IV-D-358); Eastman Chemical Company (IV-D-347); Natural Resources Defense Council, et al. (IV-D-225); Union Carbide Corporation (IV-D-293)

6.2.6: Miscellaneous Issues

Comment a: One commenter suggested that the rule should state that once a source is subject to part 64, it remains so until it is modified or renovated in such a manner that new source review permitting criteria are met and the resulting emissions fall below the applicability threshold.

Response: The monitoring requirements in part 64 will remain applicable to an emissions unit until it is modified in such a manner that it no longer meets the relevant applicability thresholds. The modification that results in lower emissions may or may not trigger applicable new source review permitting requirements.

Letter(s): Washington Department of Ecology (IV-D-279)

Section 6.3: Necessity for an Underlying Standard (§ 64.1 Generally)

Comment a: Numerous commenters supported EPA's position that enhanced monitoring should apply only if an underlying applicable requirement applies, but many suggested that the final rule contain explicit language concerning the necessity for an underlying standard to trigger part 64 applicability. These commenters noted that EPA's intent appeared to be that if an emissions unit had no federally-enforceable emission limitation or standard that applied to the pollutant for which the source was classified as a major source, then part 64 does not apply. According to the commenters, the proposed rule indicated this point clearly for hazardous air pollutants but less explicitly for criteria pollutants. The commenters indicated that their concern was heightened because a part 70 operating permit will be required to cover units without applicable requirements, and even sources without any applicable requirements (so-called hollow permits). Commenters also believed that the proposed terms "emission limitation or standard" and "applicable emission limitation or standard" are unclear as to whether they are limited to "applicable requirements" as defined under part 70. Several commenters suggested specific regulatory changes to address their concerns about these issues. Other commenters also requested that EPA clarify what is meant by a federally-enforceable requirement in determining whether enhanced monitoring is required. Finally, one commenter suggested that part 64 only apply to those emissions units that were subject to monitoring requirements within underlying applicable requirements.

Response: The EPA agrees, and the final rule clearly states that part 64 applies only to the extent a federally-enforceable emission limitation or standard applies to a pollutant-specific emissions unit. The EPA has also clarified how the definition of "emission limitation or standard" relates to the part 70 term "applicable requirement" (see the response for section 7.5.2 (Part I), below). The EPA has consistently considered enhanced monitoring to be a derivative rule, *i.e.*, one that is required only for the purpose of showing compliance with another requirement, and continues to interpret part 64 in that manner. However, EPA disagrees with the commenter that suggested limiting part 64 to only those emissions units subject to monitoring requirements in underlying requirements. The purpose of part 64 is not only to enhance current monitoring provisions but to assure that

monitoring is required in instances where it may not have been required in the past.

With respect to the issue of which underlying requirements are federally-enforceable requirements, the permitting authority has an obligation under part 70 to clearly distinguish federally-required permit conditions from State-only requirements. The part 64 rule will follow this distinction and thus enhanced monitoring will only be required for emission limitations or standards listed as federally-enforceable in the operating permit. Federally-enforceable requirements generally include: all NSPS or NESHAP standards; requirements in permits for new or modified sources issued pursuant to part C or D of title I of the Act; and requirements included as part of an approved SIP (or Federal Implementation Plan where applicable). The question of which requirements in a State operating permit issued prior to implementation of the part 70 permit programs are included within an approved SIP, and thereby federally-enforceable, will be specific to the permit and the State permit program. Such permit conditions will be federally-enforceable only where a State permit is adopted specifically into a SIP, or under certain cases issued pursuant to a State permit program approved into a SIP that meets the appropriate tests for federal enforceability (see 54 FR 27274, June 28, 1989). (See also the responses for section 7.5, below.)

Letter(s): Alabama Department of Environmental Management (IV-D-453); American Gas Association (IV-D-265); Arkla Energy Resources Company (IV-D-343); Atmos Energy Corporation (IV-D-212); Chemical Manufacturers Association (IV-D-301); Distilled Spirits Council of the United States (IV-D-300); East Ohio Gas Company, The (IV-D-355); Eastman Chemical Company (IV-D-347); El Paso Natural Gas Company (IV-D-271); Gas Processors Association (IV-D-227); General Electric Company (IV-D-278); Great Lakes Gas Transmission Company (IV-D-474); Houston Lighting & Power (IV-D-322); Kerr-McGee Chemical Corp. (IV-D-385); Lower Colorado River Authority, et al. (IV-D-256); Mississippi River Transmission Corp. (IV-D-344); Mobil Oil Corporation (IV-D-285); Monsanto Company (IV-D-273); Natural Gas Pipeline Company of America (IV-D-248); Northern Illinois Gas (IV-D-249); Occidental Chemical Corporation (IV-D-240); PQ Corporation, The (IV-D-25); Pacific Gas Transmission Co. (IV-D-234); People's Natural Gas Company (IV-D-27); Questar Pipeline Company (IV-D-480); Reynolds Metals Company (IV-D-374); Southwestern Public Service Company (IV-D-272); Tenneco Gas (IV-D-263); Texaco Inc. (IV-D-357); Texas

Intrastate Natural Gas Pipelines (IV-D-221); Texas Natural Resource Conservation Commission (IV-D-371); Texas Utilities Services, Inc. (IV-D-257); Total Petroleum, Inc (IV-D-354); Union Carbide Corporation (IV-D-293)

Section 6.4: Alternative Applicability Strategies (§ 64.1 Generally)

6.4.1: State-Determined Applicability

Comment a: A few commenters favored allowing permitting authorities to determine applicability of enhanced monitoring requirements. One reason given is that States would be more cost-effective and practical in determining the applicability of enhanced monitoring requirements to individual emissions units at major sources than the federal government would be. One commenter noted that establishing any set percentage will result in a rule that is both over inclusive and under inclusive when applied to particular sources. Other commenters argued that permitting authorities would be able to adjust the thresholds to take into account the nature of underlying programs, such as the RECLAIM program in California's South Coast Air Quality Management District.

Response: The EPA has rejected the option of allowing permitting authorities to determine part 64 applicability thresholds. While the Agency acknowledges that this option would increase flexibility, it would also allow for inconsistent treatment of similar sources and greatly complicate EPA oversight. However, permitting authorities retain their authority to be more stringent and require monitoring for more emissions units and applicable requirements than required under the final part 64 rule.

Letter(s): Arizona Public Service Company (IV-D-18); Arkansas Department of Pollution Control and Technology (IV-D-3); Armco Steel Company (IV-D-395); Hazardous Waste Treatment Council (IV-D-392); Southern California Gas Co. (IV-D-290)

6.4.2: Use of Uncontrolled versus Potential Emissions to Determine Applicability

Comment a: In response to a specific request for comment in the preamble, two commenters expressed support for the concept of using uncontrolled emissions rather than potential to emit while numerous commenters

opposed the use of uncontrolled emissions.

One State agency supported the concept of using uncontrolled emissions together with a 100 tons per year threshold because that approach would focus efforts on larger, controlled sources most likely to have large excess emissions. A public sanitation district noted some support for the use of uncontrolled emissions, but noted that the publicly-owned treatment works (POT.) industry is currently working with EPA on a definition of potential to emit. The commenter stated that the use of uncontrolled emissions would be acceptable only if the rule allows for the use of appropriate emission factors that consider multiple deposition pathways for HAPs at POTS.

The vast majority of industry and State agency comments received in response to the preamble request for comment opposed the use of uncontrolled emissions. Several commenters objected that using uncontrolled emissions would not allow sources to recognize emission reductions that have already taken place due to emission control measures taken at the source, thereby penalizing sources that have taken steps to reduce emissions. Other commenters stated that this approach would be inconsistent with the operating permits program and other air regulatory programs, and would cause a great deal of confusion. Several commenters argued that existing case law (including decisions in the Alabama Power, Wisconsin Electric Power Co., and Louisiana Pacific Corp. cases) requires EPA to use a potential to emit definition that takes into account controls, and there is no special policy reason to justify use of uncontrolled emissions. Commenters noted that if Congress had intended to expand the universe of sources subject to enhanced monitoring beyond the traditional basis of potential to emit, it would have specified that EPA was to consider uncontrolled emissions. Commenters stated that eliminating the need for EPA to oversee proper implementation of the potential to emit guidance on a permit-specific basis (as discussed in the preamble) is not a sufficient justification for basing applicability on uncontrolled emissions. Many air programs are implemented by States and require EPA oversight; however, EPA has not claimed to need to oversee implementation of these programs on a permit-specific basis.

One commenter stated that potential to emit has been used in all SIP attainment demonstrations for short term NAAQS based on air quality modeling using potential to emit emission rates in accordance with the Guideline on Air Quality Models. If something other than potential to emit

were used to define the universe of sources subject to enhanced monitoring, there would be less assurance of continuous compliance and continuous attainment of the short term NAAQS.

Other commenters stated that there was no evidence that using uncontrolled emissions would apply the rule to sources posing the biggest risk any better than using standard potential to emit procedures. One commenter stated that the largest sources are typically the most controlled, so basing applicability of enhanced monitoring on uncontrolled emissions would not address environmental risk more effectively than basing applicability on potential to emit. Another commenter also noted that actual emissions may vary from year to year and are more difficult to quantify than potential emissions. Finally, several commenters also opposed the use of uncontrolled emissions because it would expand the applicability and the costs of the rule.

Response: After considering the comments received and the determination to focus part 64 solely on emissions units that rely on control devices, EPA has decided that the appropriate threshold for part 64 applicability should be based on the major source threshold but without taking into account the emission reduction efficiency of the control device. Other limits on potential to emit such as throughout limitations or operating hour restrictions could still be considered. See Section II.B. of the preamble to the final rule for further discussion.

Letter(s): American Cyanamid Company (IV-D-201); American Automobile Manufacturers Association (IV-D-538); American Portland Cement Alliance (IV-D-284); American Electronics Association, Clean Air Task Force (IV-D-437); Arkansas Department of Pollution Control and Technology (IV-D-3); Can Manufacturers Institute (IV-D-478); Chemical Manufacturers Association (IV-D-301); Clean Air Implementation Project (IV-D-242); Council of Industrial Boiler Owners (IV-D-319); County Sanitation Districts of Orange County, California (IV-D-235); Department of Energy (IV-D-358); Eastman Chemical Company (IV-D-347); Entergy (IV-D-281); Enviroplan (IV-D-372); General Electric Company (IV-D-278); Goodyear Tire and Rubber Company, The (IV-D-292); Houston Lighting & Power (IV-D-322); Los Angeles County Sanitation Districts (IV-D-26); Merck & Co., Inc. (IV-D-443); Monsanto Company (IV-D-273); Occidental Chemical Corporation (IV-D-240); Ohio Manufacturers Association (IV-D-348); Ohio Edison (IV-D-266); Pacific Gas Transmission Co. (IV-D-234); Questar Pipeline Company (IV-D-480); Rubber Manufacturers Association (IV-D-331); Shell Oil Company (IV-D-280); Synthetic Organic

Chemical Manufacturers Association (IV-D-362); Tennessee Valley Authority (IV-D-389); Texas Intrastate Natural Gas Pipelines (IV-D-221); Tri-TAC (IV-D-24); Utility Air Regulatory Group (IV-D-489); Westinghouse Electric Corporation (IV-D-321)

6.4.3: Use of Alternatives to Potential to Emit

Comment a: Numerous commenters favored the use of actual and/or allowable emissions as an alternative to determining applicability based on potential to emit. Commenters noted that the potential to emit definition is not realistic and results in emissions estimates that are much greater than actual emissions. Several commenters provided detailed data from State and facility-specific databases to show the significant difference between the impacts of the rule using potential emissions versus actual emissions. Numerous commenters stated that basing applicability on actual emissions would be more accurate than basing applicability on potential to emit, and that many units that would meet the threshold in the proposed rule, but that actually emit far less than the threshold, would not be required to install enhanced monitoring. Commenters noted that since emission reductions relate to actual emissions, the reduced applicability using actual emissions would result in significant cost decreases and negligible benefit decreases. An industry commenter argued that using actual emissions would simplify the administrative burden in determining applicability, because sources are already required to report actual emissions in their permits. One local air agency cautioned that use of the 30% threshold on a basis other than actual emissions would be far beyond the resources of permitting authorities to implement, while another suggested that the use of actual emissions should be accompanied by a "once in always in" requirement.

A State agency association and certain industry commenters suggested the use of actual or allowable emissions. The State agency organization argued that this basis for applicability would provide a meaningful nexus to actual air quality and threats to the public health, and that basing applicability on actual or allowable emissions would allow air agencies and industry to allocate their resources to address the most serious air pollution problems.

Commenters raised several concerns that sources be able to limit potential to emit in a simple manner. The commenters in favor of using

actual or allowable emissions expressed the concern that EPA has failed to provide adequate means for limiting potential emissions. One commenter argued that allowing the use of realistic actual emission projections instead of potential to emit will address the concern of being able to limit a source's potential to emit, given that EPA acknowledged

that the monitoring requirements needed to make potential to emit limits enforceable are, in practice, similar to enhanced monitoring requirements.

Another commenter wanted to clarify that EPA would allow a source subject to enhanced monitoring requirements to become exempt by voluntarily committing to reduce emissions below applicable thresholds as part of the source's part 70 permit application. Several commenters noted that where sources have operational restrictions that greatly limit their actual emissions, they should be able to demonstrate that their actual emissions are far below the major source threshold, and that the operating permits could provide the necessary vehicle to provide information on actual emissions. These commenters suggested that even where no definite operational restrictions exist, a source should be able to show that because of seasonal or standby usage rates, its actual emissions are far below potential emissions. That type of showing should be permissible without having to develop permit limits for all such units. Other commenters concurred that EPA should allow a source with actual emissions far below potential emissions (such as utility standby generators) to make a showing in that respect and base its applicability determination on the actual emissions.

Response: The Agency disagrees with these options because they all would allow the owner or operator to assume a degree of control device efficiency without conducting the monitoring to document that control device performance continued to remain as expected.

Letter(s): American Gas Association (IV-D-265); American Cyanamid Company (IV-D-201); Arkla Energy Resources Company (IV-D-343); Armco Steel Company (IV-D-395); Baltimore Gas and Electric Company (IV-D-296); Bay Area Air Quality Management District (IV-D-402); Burnham Foundry (IV-D-446); California Air Resources Board (IV-D-387); East Ohio Gas Company, The (IV-D-355); Eli Lilly and Company (IV-D-349); ENRON Operations Corp. (IV-D-390); Fort Howard Corporation (IV-D-233); International Business Machines Corporation (IV-D-238); Kaiser Aluminum & Chemical Corporation, Primary Prod. Div. (IV-D-368); Leather Industries

of America (IV-D-286); Maryland Department of the Environment (IV-D-223); Mississippi River Transmission Corp. (IV-D-344); Mobil Oil Corporation (IV-D-285); National Environmental Development Association (IV-D-334); Ohio EPA (IV-D-283); Ohio Electric Utilities Institute (IV-D-323); Ohio Edison (IV-D-266); Regional Air Pollution Control Agency (IV-D-532); Southern California Gas Co. (IV-D-290); Southwestern Public Service Company (IV-D-272); Specialty Steel Industry of the United States (IV-D-328); State and Territorial Air Pollution Program Administrators, et al. (IV-D-439); Steel Manufacturers Association (IV-D-326); Synthetic Organic Chemical Manufacturers Association (IV-D-362); Tennessee Valley Authority (IV-D-389); United Parcel Service (IV-D-320)

6.4.4: Monitoring of Multiple Emission Limits

Comment a: Certain commenters recommended allowing permitting authorities to determine that a source's proposed enhanced monitoring protocol meets criteria respecting the "ultimate" emissions limitation for a unit, where a unit is subject to overlapping emission standards that assure compliance with such "ultimate" emission limitation. The commenters argued that this approach would restrict the burdens of part 64 so that sources do not have to develop separate enhanced monitoring protocols for each emission standard or limitation that may apply to control the emissions of a single pollutant from a single emissions unit. Other commenters also recommended specifying that only one enhanced monitoring protocol is required to show compliance with all emissions limitations or standards applicable to a pollutant for each affected emissions point or pollutant. Commenters discussed sulfur emissions monitoring and volatile organic liquid storage tank requirements as examples of multiple emissions standards applying to a single emissions unit. Commenters recommended adding language to the rule and/or the preamble to clarify the requirements for emissions units subject to overlapping emissions standards.

Natural gas industry commenters noted that for gas-fired engines, a source often will be subject to both a mass/unit of time standard and a rate per unit output standard. Because the latter form of standard generally is based on manufacturer-supplied emission rates at full load, the commenters argued that it is not a standard that should be monitored for continuous compliance under all operating loads. The commenters stated that even though mass emissions will decrease as engine load decreases, in some situations emission rates per unit output may increase slightly. They added that it would be absurd to find a source in violation

when actual emissions are decreasing merely because the initial standard was based on limited operating conditions. Even where only an emission rate per unit output standard may apply, these commenters argue that a source should be able to certify compliance with a surrogate standard expressed as a mass emission limit or to limit the standard to be applicable only under certain load/speed conditions.

Response: The final rule focuses on monitoring to document the ongoing good operation and maintenance of control devices so as to provide a reasonable assurance of compliance with all applicable requirements that may apply to a pollutant-specific emissions unit. The number of standards or the form they take generally will not be relevant to selecting the monitoring used to document acceptable control device operation and maintenance. The Agency does not anticipate that multiple limits for the same pollutant at an emissions unit will result in different monitoring under part 64.

Letter(s): American Gas Association (IV-D-265); Arkla Energy Resources Company (IV-D-343); Chemical Manufacturers Association (IV-D-301); Exxon Chemical Americas (IV-D-339); Gas Research Institute (IV-D-303); Mississippi River Transmission Corp. (IV-D-344); Pharmaceutical Manufacturers Association (IV-D-367)

6.4.5: Applicability to CO Sources

Comment a: Two commenters objected to applying part 64 to CO requirements. One commenter noted that CO is primarily a mobile source problem (except in two areas identified by EPA), and that there are no generally mandated requirements for CO.

Response: The final rule continues to apply monitoring to CO requirements if the CO emissions from a particular emissions unit are controlled by means of a control device. As documented in the RIA, there are relatively few emissions units that would meet this criterion for CO emissions.

Letter(s): Armco Steel Company (IV-D-395); Kerr-McGee Corporation (IV-D-232)

6.4.6: Applicability Only if Monitoring Lacking

Comment a: One commenter suggested that part 64 apply only upon a determination that the underlying requirements lack appropriate monitoring. For example, enhanced monitoring protocols should be included in new title I part C or D preconstruction permit applications. New title I permits invoke new emission limitations and standards and, therefore, new monitoring standards can be appropriately addressed.

Response: The final rule will continue to apply monitoring to emissions units which are subject to underlying requirements and which fulfill the other applicability requirements in § 64.2. Where underlying requirements are sufficient for part 64 purposes, an owner or operator may simply include the current requirements in the proposed monitoring submitted for approval by the permitting authority.

Letter(s): Pennzoil Company (IV-D-373)

6.4.7: Applicability Only if Not in Compliance Using Existing Monitoring

Comment a: One commenter suggested that, in addition to limiting applicability to major sources, the rule should apply only to those sources that have not adequately demonstrated compliance using existing monitoring.

Response: In fulfilling the statutory mandate of section 114(a)(3) of the Act, owners or operators have a new obligation to determine and certify whether compliance is continuous or intermittent. The EPA believes that it would be inappropriate to apply enhanced monitoring to only those sources which have not adequately demonstrated compliance using existing monitoring. Effectively exempting from enhanced monitoring sources which have adequately demonstrated compliance under existing monitoring provisions would be counter to the purpose of the rule to analyze, and where necessary improve upon, the current means of determining compliance.

Letter(s): Mobil Oil Corporation (IV-D-285)

6.4.8: Major Source Applicability Clarifications

Comment a: One commenter requested specific clarification that only major sources with permits as opposed to all permitted facilities are required to comply

with part 64. The commenter also argued that States should not have the leeway to possibly require enhanced monitoring for all permitted sources.

- Response: The EPA agrees with the first comment and the final rule clearly applies only to major sources that are required to obtain a title V operating permit. For the second comment, the Agency notes that the rule specifically retains the authority of the permitting authority to be more stringent than EPA pursuant to independent State or local law.
- Letter(s): Society of the Plastics Industry, Inc. (IV-D-287)

6.4.9: Applicability Considerations for Particular Industries

Comment a: One commenter requested that EPA provide some means in the rule to allow for considering the unique circumstances of certain industries in determining the appropriate applicability of the rule. As examples, the commenter pointed to certain types of flares used in the petroleum industry that may not be able to be monitored feasibly, certain solvent storage tanks at petroleum distribution and storage facilities that may not be amenable to any kind of continuous monitoring, and certain types of industries that operate seasonally.

Response: The EPA believes that the final rule affords sources sufficient flexibility to propose appropriate monitoring which takes into account the unique circumstances of certain industries and sources, while at the same time assuring the quality of the data from the protocol generally is sufficient to provide a reasonable assurance that a unit remains in compliance. With respect to flares, the preamble to the final rule states that the use of monitoring which meets § 60.18 presumptively satisfies part 64. Solvent storage tanks would only be covered if they rely on control devices to achieve compliance. If they do, then the owner or operator will have to propose adequate monitoring of the operation and maintenance of that control device, similarly to NSPS requirements for such units. Seasonal operations do not appear to raise any novel issues concerning appropriate monitoring under part 64.

Letter(s): KBN Engineering and Applied Sciences, Inc. (IV-D-475)

Section 6.5: Groups of Emissions Units/Fugitives (§ 64.1(b)(2))

6.5.1: Applying Enhanced Monitoring to Units Involved in Facility-Wide Emissions Trading, Aggregating or Averaging Programs

Comment a: Proposed § 64.1(b)(2) would aggregate the potential emissions from all units participating in an internal facility emissions trading, cap or averaging program in order to determine if the applicability threshold in part 64 is met for such units. Many commenters opposed this provision and raised several objections. Many considered it unfair to treat facilities that use these options differently from those sources that do not participate in such programs. Commenters also stated that applying part 64 to all units engaged in such programs was inconsistent with the determination that it was not cost-effective to apply part 64 to emissions units below the 30% threshold. Many commenters objected to this provision because it would create a substantial disincentive to participate in such programs, even though EPA's policy outside the part 64 context is to strongly encourage such programs. Commenters noted that the result would be increased cost of achieving emission reductions in nonattainment areas that are trying to promote the use of market-based and similar approaches as a means of least-cost compliance planning. Others noted that the appropriate emission tracking and compliance protocols would already be in place under the existing requirements that allow for such trading or similar programs.

The comments that opposed this provision offered revisions to either delete the provision altogether or reduce the adverse consequences of the provision if EPA determines to retain some form of the provision. The primary emphasis of the proposed revisions was to reduce the number of emissions units that participate in an emissions trading, aggregating or similar program that would have to comply with part 64. Potential revisions included applying part 64 only to units that participate in such programs that also meet one or more of the following criteria: are subject to add-on control requirements; have potential emissions greater than 5 tons per year; comprise collectively a significant percentage of the overall emissions from all units in the group; are found to warrant part 64 enhanced monitoring on a case-by-case determination by the permitting authority; or have potential emissions collectively in excess of the major source threshold.

Finally, certain commenters suggested limiting the type of enhanced monitoring protocol required for units covered within a group situation. One commenter noted that using a single enhanced monitoring protocol

for all or several of the units in a group be allowed. Another commenter requested that sniffer-type technology not be required for fugitive monitoring where potential emissions from a group of fugitive emission points can be shown to be below a certain threshold based on design elements or work practices.

Response: After considering the comments, EPA has decided not to include in the final rule provisions that would determine the applicability of part 64 monitoring on this basis. See Section II.B. in the preamble to the final rule for further discussion.

Letter(s): ALCOA (IV-D-288); American Automobile Manufacturers Association (IV-D-538); American Electronics Association, Clean Air Task Force (IV-D-437); American Petroleum Institute (IV-D-289); American Textile Manufacturers Institute (IV-D-440); Amoco Corporation (IV-D-244); ARCO (IV-D-396); ASARCO (IV-D-327); Bay Area Air Quality Management District (IV-D-402); Can Manufacturers Institute (IV-D-478); Chemical Manufacturers Association (IV-D-301); Chevron (IV-D-397); Clean Air Implementation Project (IV-D-242); Council of Industrial Boiler Owners (IV-D-319); Department of Energy (IV-D-358); Dow Chemical Company (IV-D-260); Eastman Chemical Company (IV-D-347); Eli Lilly and Company (IV-D-349); Exxon Chemical Americas (IV-D-339); Exxon Company, USA (IV-D-310); Gas Processors Association (IV-D-227); General Electric Company (IV-D-278); Kerr-McGee Chemical Corp. (IV-D-385); Lubrizol Corporation, The (IV-D-306); Merck & Co., Inc. (IV-D-443); Mobil Oil Corporation (IV-D-285); Monsanto Company (IV-D-273); National Environmental Development Association (IV-D-334); Occidental Chemical Corporation (IV-D-240); Pacific Engineering Corporation (IV-D-523); Pharmaceutical Manufacturers Association (IV-D-367); Phillips Petroleum Company (IV-D-380); R.R. Donnelley & Sons Co. (IV-D-241); Texaco Inc. (IV-D-357); Texas Chemical Council (IV-D-365); Tosco Refining Company (IV-D-316); Unocal Corporation (IV-D-268)

6.5.2: Applicability of Part 64 to Fugitive Emissions

Comment a: Several commenters opposed the applicability of part 64 to fugitive emissions. Some noted that fugitive emissions were already subject to sufficient monitoring where appropriate (e.g., leak detection and repair programs), while others noted that it was often infeasible or not

cost-effective to monitor fugitive emissions. A few commenters stated that it would not be appropriate to require enhanced monitoring of fugitive emissions that are subject only to generic opacity or particulate standards found in many State regulations. Certain steel industry commenters argued for a specific exception in the case of steel melt shops on the basis that it would be impossible to determine whether the applicability threshold would be reached for such fugitive emissions or to subsequently monitor such emissions. Finally, commenters stated that in no event should part 64 apply to fugitive emissions that are not subject to regulation.

Response: EPA continues to believe that where fugitive emissions are captured and routed to a control device, they should be subject to part 64 monitoring to the same extent as emissions that are routed directly through a process to a control device. Where fugitive emissions not subject to regulation or are not associated with an emissions unit that meets the control device or other applicability criteria, then part 64 does not apply.

Letter(s): American Petroleum Institute (IV-D-289); American Portland Cement Alliance (IV-D-284); Ash Grove Cement Company (IV-D-311); Coalition for Clean Air Implementation (IV-D-304); Colorado Association of Commerce and Industry (IV-D-243); Dow Chemical Company (IV-D-260); Monsanto Company (IV-D-273); National Oilseed Processors Association (IV-D-267); Rubber Manufacturers Association (IV-D-331); Specialty Steel Industry of the United States (IV-D-328); Steel Manufacturers Association (IV-D-326)

Comment b: Other commenters requested clarification of how EPA intended part 64 to apply to fugitive emissions. Certain commenters believed that EPA should clarify that, in determining whether an emissions unit meets the part 64 applicability threshold, fugitive emissions associated with a process unit that are subject to different regulatory requirements from stack emissions at the same process unit should be considered separately in quantifying potential emissions. Other commenters recommended considering fugitive emissions separately from stack emissions in determining applicability of part 64 to bubbled or other aggregated emissions units. Another commenter argued that EPA should clarify that only regulated fugitive emissions should be considered in determining whether an emissions unit meets the part 64 applicability threshold. Yet another commenter recommended excluding all fugitive emissions from the calculation of potential to emit in determining part 64 applicability. A

commenter also requested that EPA make clear that fugitive emissions at a source not subject to part 70 permitting that is collocated with a source that is subject to permitting would not be subject to part 64. Finally, certain commenters requested generally that EPA provide a better explanation of how part 64 applies to fugitive emissions.

Response: The owner or operator will follow the same procedures for calculating the potential to emit of emissions units, including fugitive emissions associated with an emissions unit, as the owner or operator uses for calculating potential to emit for part 70 applicability purposes. Where fugitive emissions that are associated with an emissions unit are subject to applicable requirements, the fugitive emissions must be included in the calculation of potential to emit. Whether unregulated fugitive emissions are to be included in making potential to emit calculations will depend on the circumstances. See the responses to comments in Section 7.12.4 (Part I), below, concerning the circumstances when unregulated fugitive emissions are to be considered in making potential to emit determinations. If a source is not subject to the requirement to obtain a title V permit, then part 64 does not apply to that source, even if it is collocated with a source that is subject to title V permitting. Finally, the Agency notes that the final rule deletes the proposed provisions concerning aggregated, bubbled or similar emissions units as discussed above in Section 6.5.1 (Part I).

Letter(s): ARCO (IV-D-396); Colorado Association of Commerce and Industry (IV-D-243); Dow Chemical Company (IV-D-260); Eastman Chemical Company (IV-D-347); Eli Lilly and Company (IV-D-349); National Environmental Development Association (IV-D-334); Rubber Manufacturers Association (IV-D-331)

6.5.3: Applicability to Multiple Point Situations

Comment a: There were a few comments received that requested clarification of how part 64 would apply to certain situations involving multiple units with common controls or single units with multiple vents or stacks. Two industry trade group commenters recommended clarifying that enhanced monitoring could be performed at a common control device, not only at individual emissions units. One of these commenters recommended retaining the option of enhanced monitoring at individual emissions units, rather than at common control devices, as an option that could be suggested by the owner or operator to allow for cost-efficient compliance

determinations or by the permit writer when it is clear that monitoring of a common control device cannot demonstrate compliance. The commenter believed that it was important to clarify EPA policy on this issue in this rule because many new emissions standards will be promulgated after the enhanced monitoring rule is finalized and the enhanced monitoring rule will become a template for future rule development. The commenter noted that requiring monitoring at each emissions unit would be expensive and redundant in common control device situations and that monitoring for compliance is normally only appropriate at or after control devices (the proposed HON NESHAP is one such example of this type of monitoring). The commenter proposed an addition to § 64.1(d) stating that, unless explicitly stated otherwise, monitoring of individual emissions units is not required but is allowed.

Another commenter argued that where a source had voluntarily vented emissions from minor points to a control device used at a significant emissions unit, enhanced monitoring should only be required at the control device and not at each of the minor emissions units. The commenter noted that part 64 should also not apply during any periods in which the significant emissions unit is not operating, even if the minor units are still venting emissions to the control equipment.

Response: The final rule contains specific provisions for situations involving multiple units with common controls or single units with multiple control devices. Because the focus of part 64 is on assuring that a control device is operated and maintained properly, § 64.4(f) states that the monitoring may be conducted at the common control device, provided that the monitoring also provide for any specific process and/or capture system conditions that must be maintained or monitored under the general criteria in § 64.3(a). If a single emissions unit has multiple, similar control devices (such as a fuel handling unit with multiple baghouses), § 64.4(g) allows the owner or operator to submit a monitoring approach that applies to all of the control devices rather than separate descriptions for each control device.

Letter(s): Monsanto Company (IV-D-273); Synthetic Organic Chemical Manufacturers Association (IV-D-362)

Comment b: An industry trade group requested clarification of how part 64 would apply where a single emissions unit was vented or ducted to several vents or

stacks. In those circumstances, this commenter argued that part 64 (like the underlying emission limit) should apply only to the emissions unit itself and not each of the separate stacks or vents. Another group argued that part 64 applicability should be based on the potential to emit of each separate vent or fugitive emissions point for those types of emissions units.

Response: See the previous response with respect to monitoring for situations involving a single emissions unit which is vented or ducted to several control devices. If emissions after the control device are emitted through multiple stacks or vents, that issue is not a concern given the focus of part 64 on assuring that the control devices (and capture system/process conditions, if applicable) are operated and maintained properly. The Agency also notes that applicability determinations under § 64.2 will be based on the potential to emit of the "emissions unit" as defined under part 70. Whether the "unit" is an individual vent or all vents associated with a particular piece of equipment or a particular process will depend on the nature of the underlying applicable requirements, as clarified through the part 70 permit application and review.

Letter(s): American Automobile Manufacturers Association (IV-D-538); National Oilseed Processors Association (IV-D-267)

6.5.4: Emissions Units and Sources Involved in PSD Netting

Comment a: Two commenters requested clarification that part 64 does not apply to emissions units or sources that have netted out of PSD review.

Response: Insofar as emissions units which net out of PSD review continue to be subject to federally-enforceable emission limitations or standards that are not exempt under part 64, and fulfill the other applicability requirements of part 64, such units will be subject to part 64. Thus, an emissions unit that has adopted a federally-enforceable limitation on its maximum physical capacity to emit a pollutant in order to avoid PSD permit requirements, but that still has (pre-control device) potential to emit that pollutant at or above the part 70 major source threshold (no more than 100 tons per year), will be required to conduct monitoring to provide a reasonable assurance of compliance with applicable requirements.

Letter(s): Exxon Chemical Americas (IV-D-339); Pharmaceutical Manufacturers Association (IV-D-367)

Section 6.6: Exemptions - Acid Rain Requirements

Comment a: Several commenters requested that EPA expand upon the exemption granted with respect to the Acid Rain Program. Some commenters argued that sources exempt from the Acid Rain Program should also be exempt from the enhanced monitoring requirements (such as simple gas turbines or certain units under 25 MWe). Commenters expressed various reasons for applying this same exemption to part 64, including that: Congress explicitly exempted such units from the similar title IV monitoring requirements; such units account for only a small portion of SO₂ emissions from utility boilers; such units are small and usually infrequently operated; the costs would be astronomical; and such units have low actual emissions, but cannot take on enforceable operating restrictions because they are used to supply power in emergencies. Commenters also indicated that for sources conducting Acid Rain Program monitoring, the exemption should apply to those sources' SIP and NSPS limits as well as their Acid Rain Program limits.

Response: The EPA disagrees that sources exempt from the Acid Rain Program should also be exempt categorically from part 64. Title IV of the Act contains explicit language exempting certain sources from the allowance trading and associated monitoring requirements of the Acid Rain Program, such as simple gas turbines and existing units under 25 MWe. The EPA also exempted new units under 25 MWe burning very low sulfur fuels because of their de minimis impact on national SO₂ emissions, the principal concern of the Acid Rain Program. Section 114(a)(3) contains no such explicit exemption from the enhanced monitoring requirements, and contribution to national SO₂ emissions is not the primary issue in determining the appropriateness of enhanced monitoring.

However, it should be noted that many of these small units or simple gas turbines may have no control devices or may not be subject to applicable requirements. In either case, they would not be subject to part 64. Furthermore, the final rule does include a specific exemption for certain small emissions units owned or operated by municipal utilities. See Section II.B. of the preamble to the final rule for further discussion of this exemption.

The EPA also believes that it would be inappropriate to exempt sources

conducting Acid Rain Program monitoring from having to conduct part 64 monitoring for purposes of determining compliance with other applicable requirements such as NSPS and SIP limitations. Such sources should be in a good position to use the Acid Rain Program monitoring to provide data in terms of the applicable NSPS or SIP emission limit at only marginal additional cost. Moreover, the Acid Rain Program's use of annual compliance based on total emissions is designed to address long range transport of SO₂ responsible for acid deposition -- it is not designed to assure attainment of ambient air quality standards or compliance with new source standards. Compliance with SIP and NSPS requirements remains an important air pollution control requirement for sources within the Acid Rain Program, and such emission limits are still appropriately subject to part 64 monitoring requirements.

Letter(s): Arizona Public Service Company (IV-D-18); Braintree Electric Light Department (IV-D-178); Class of '85 Regulatory Response Group (IV-D-338); Connecticut Municipal Electric Energy Cooperative (IV-D-226); Public Systems (IV-D-345); South Norwalk Electric Works, The (IV-D-457); Southwestern Public Service Company (IV-D-272); Texas Utilities Services, Inc. (IV-D-257); Town of Wallingford, Connecticut (IV-D-275)

Comment b: Some commenters indicated that proposed part 64 failed to explain how monitoring certified under the Acid Rain Program would be evaluated for purposes of enhanced monitoring. These commenters felt that such monitoring should automatically qualify as enhanced monitoring and be exempt from the performance and operating requirements under part 64. One specific concern was that the excepted methods or alternative monitoring allowed under 40 CFR part 75 (including appendices D and E) should not be required to undergo the separate and different correlation requirements in part 64.

Response: Any CEMS, COMS or PEMS certified under the Acid Rain Program is considered to meet the basic performance requirements under part 64, subject to the requirements in § 64.3(d)(3) that such systems allow for reporting of exceedances or excursions from underlying requirements and include an indicator range where a COMS is used to assure compliance with a particulate matter standard. Similarly, § 64.4(b) states explicitly that no justification is required to rely on the excepted methods in Appendices D and E of part 75 for satisfying part 64 for emissions units

subject to those requirements. The Agency notes that generally those methods will not be applicable to the emissions units subject to part 64

because those methods generally do not cover pollutant-specific emissions units with control devices.

Letter(s): Arizona Public Service Company (IV-D-18); Class of '85 Regulatory Response Group (IV-D-338); Entergy (IV-D-281); Houston Lighting & Power (IV-D-322); Large Public Power Council (IV-D-336); Lower Colorado River Authority, et al. (IV-D-256); Niagara Mohawk Power Corporation (IV-D-317); Public Service Company of Oklahoma (IV-D-477)

Comment c: Some commenters requested clarification as to whether the exemption in § 64.1 was intended to apply solely to NO_x and SO₂, or to opacity, CO and any other pollutants with monitoring requirements under part 75.

Response: The exemption applies only to the annual emission limitations or standards in title IV of the Act, which are for SO₂ and NO_x only. Therefore, the exemption does not apply to opacity or CO monitoring requirements. However, see the response above with respect to EPA's expectation that part 75 monitoring requirements should generally satisfy all part 64 requirements.

Letter(s): Class of '85 Regulatory Response Group (IV-D-338); Public Service Electric and Gas Company (IV-D-282)

Section 6.7: Other Exemptions to Consider

6.7.1: Creating a De Minimis Exemption for Part 64

Comment a: Numerous commenters supported a de minimis exemption for part 64. Reasons for supporting this approach included focusing the rule on units where the potential benefits are greatest, allowing the operating permits program to remain flexible, and not wasting capital resources for units with little environmental or compliance program impact.

One commenter argued that section 114(a)(3) already created a de minimis threshold by requiring enhanced monitoring only at emissions units that are major stationary sources. Others suggested a range of

options, including any hazardous air pollutant emissions unit with less than 10 tons per year of a hazardous air pollutant and from 10 to 25 tons per year for any criteria pollutant emissions unit. One commenter argued that emissions units with extremely low emission rates, as opposed to just low total emissions, should be exempt; one commenter suggested exempting units with emission rate concentrations that are below twice the reference method detection level. Other commenters suggested exempting units with low capacity factors, or other units with low actual emissions compared to potential emissions, because the actual emissions from such units would be small. Others generally supported the concept of using actual historical emissions to determine the applicability of a de minimis exemption.

One commenter suggested a specific approach for exempting units that have low actual emissions in relation to permitted emissions. If a source could demonstrate, based on engineering calculations, that its actual emissions from a production campaign would be less than some specified percentage of permitted emission levels, no additional enhanced monitoring would be required. The actual emissions would be confirmed by engineering calculations at the end of the year, and if the annual actual emissions exceeded the specified percentage threshold, the source would be required to institute an enhanced monitoring protocol within a specific period of time.

A few commenters proposed basing a de minimis exemption on a unit's potential impacts, as determined by air quality modeling. The suggestion would be to set the threshold for exemption as impact equal to or greater than 10% of the ambient air quality standard (or, for one commenter, the reference air concentration as specified in the regulations governing the burning of hazardous waste in industrial furnaces).

One State commenter argued that the use of facility-wide monitoring, similar to what may be allowed for fugitive emissions, could be used for units exempted under the de minimis option.

Some commenters asked for clarification on the de minimis exemption approach. One State agency noted that the discussion in the preamble of assuming that part 70 should be considered sufficient for all small emissions units and the discussion of possibly including a de minimis exemption should be clarified.

Response: The Agency believes that a de minimis exemption theory is unsupported based on the thresholds established for applicability in part 64. Under the thresholds adopted in the final rule, many major stationary sources will not be required to implement enhanced monitoring under part 64, even though those sources are subject to regulation and are considered important in the overall context of air pollution control programs. Defining all these major stationary sources as de minimis is not an appropriate use of de minimis exemption authority as articulated in Alabama Power. However, as explained in the preamble to the final rule, EPA is relying explicitly on the part 70 periodic monitoring requirements as the appropriate enhanced monitoring for the generally less environmentally significant emissions units and applicable requirements for which the specific monitoring requirements in part 64 are inapplicable.

Letter(s): California Air Resources Board (IV-D-387); Department of Energy (IV-D-358); Department of the Navy (IV-D-206); Engine Manufacturers Association (IV-D-490); Hazardous Waste Treatment Council (IV-D-392); KBN Engineering and Applied Sciences, Inc. (IV-D-475); Large Public Power Council (IV-D-336); Monsanto Company (IV-D-273); Niagara Mohawk Power Corporation (IV-D-317); Safety-Kleen Corporation (IV-D-22); Southwestern Public Service Company (IV-D-272); Synthetic Organic Chemical Manufacturers Association (IV-D-362); Tosco Refining Company (IV-D-316); United Parcel Service (IV-D-320); United States Sugar Corporation (IV-D-382)

6.7.2: Exemptions if State Finds No Benefit from Applying Rule

Comment a: A few commenters urged that States be granted the discretion to exempt units if the State determines that there is no potential benefit to applying the rule to a particular emissions unit. Gasoline refueling islands are one potential example source category that would often qualify for this exemption, according to an industry commenter. Emissions units that are subject to permit conditions developed under minor new source review programs were another example provided in the comments. Commenters urged that the practicality of applying enhanced monitoring to a particular type of source be part of the State's evaluation in determining whether there are benefits of applying the rule to a source.

Response: EPA has rejected the option of allowing permitting authorities to exempt particular emissions units from part 64 for the same reason the Agency

rejected the option of allowing permitting authorities to determine enhanced monitoring applicability thresholds: in both cases the resultant flexibility achieved would be outweighed by the inconsistent treatment afforded similar sources and the increased complexity of EPA oversight. See the response to Section 6.4.1 (Part I), above.

Letter(s): American Gas Association (IV-D-265); Arkla Energy Resources Company (IV-D-343); Chevron (IV-D-397); East Ohio Gas Company, The (IV-D-355); Mississippi River Transmission Corp. (IV-D-344); New Mexico Oil and Gas Association (IV-D-228); United Parcel Service (IV-D-320)

6.7.3: Exemptions if Existing Programs Already Contain Enhanced Monitoring

Comment a: Several commenters proposed exempting emissions units that are already subject to enhanced monitoring under an existing program. An industry coalition group noted that for these existing programs with sufficient existing monitoring, title V compliance certification and reporting requirements will already provide any necessary enhancements. As discussed above in section 6.1 (Applicability for Hazardous Air Pollutants), existing NESHAP requirements were one set of standards that commenters believed should be exempt on this basis. Commenters also considered NSPS sources to be subject to enhanced monitoring already, as well as arguing that NSPS requirements should be exempt because EPA lacks legal authority to establish additional NSPS requirements outside the context of a source category NSPS rulemaking. Commenters also believed that fugitive emissions sources are already subject to enhanced monitoring requirements, such as leak detection and repair programs. One Federal agency proposed exempting radiological emissions units that are subject to Federal Facilities Compliance Agreements. Another commenter proposed exempting sources with established monitoring from part 64 until permit renewal.

Commenters also suggested exempting sources of NO_x and SO₂ subject to the RECLAIM program on the basis that, as with the Acid Rain Program, RECLAIM establishes monitoring requirements for purposes of determining emissions for trading purposes. There is therefore no need for any different monitoring under part 64. One commenter also noted a concern that, because RECLAIM eliminates operating hour restrictions previously used to limit potential to emit, part 64 would unnecessarily apply to peaking units, standby generators, and similar limited use

emissions units covered by the RECLAIM program if this exemption was not included in the final rule.

Response: The EPA believes that categorical exemptions should not be used except in a few special cases such as the Acid Rain Program. However, where an existing applicable requirement establishes a method for determining continuous compliance, which is the case in some existing NSPS and NESHAP standards, that prior regulatory action should serve as the basis for satisfying part 64 monitoring without the need to take any further action. This exemption is thus contained in § 64.2(b). A similar rationale applies for all NSPS and NESHAP standards proposed after the 1990 Amendments to the Act. Finally, §§ 64.3(d) and 64.4(b) both list several types of monitoring approaches for which the owner or operator will not have to justify the proposed monitoring because the monitoring is considered presumptively acceptable.

For the RECLAIM exemption, EPA notes first that the final rule does not base applicability of part 64 requirements on the potential to emit from a group of emissions units for which compliance is determined on the basis of the group as a whole. (See Section 6.5.1 (Part I), above.) In addition, the continuous compliance determination method exemption should apply to emission limitations or standards developed under the RECLAIM program.

Letter(s): Allied Signal, Inc. (IV-D-313); American Electronics Association, Clean Air Task Force (IV-D-437); Clean Air Implementation Project (IV-D-242); Coalition for Clean Air Implementation (IV-D-304); Colorado Association of Commerce and Industry (IV-D-243); Department of Energy (IV-D-358); ENRON Operations Corp. (IV-D-390); Exxon Company, USA (IV-D-310); Los Angeles Water and Power Department (IV-D-245); Monsanto Company (IV-D-273); Occidental Chemical Corporation (IV-D-240); Southern California Gas Co. (IV-D-290)

6.7.4: Exempting Fugitive Emissions

Comment a: In addition to the rationale for exempting fugitive emissions because they are generally subject to existing enhanced monitoring (see discussion immediately above), commenters noted that for other forms of fugitive emissions that are not already subject to such enhanced monitoring, there are no practical means to monitor fugitive emissions, and emission factors are too inaccurate to be used. One commenter pointed to fugitive

emissions from storage tanks as an example where emission factors are too inaccurate and pointed to fugitive emissions from rubber vulcanizers as an example where there is no practical means of monitoring. At the November 19, 1993 public hearing, a commenter suggested that many sources of potential fugitive emissions in fact have little or no actual emissions and therefore should not be subject to part 64. The commenter cited as examples marine vessel loading installations (where vapors are recovered back into the tanks), "no emission" pumps, and atmospheric tanks.

Response: The EPA disagrees that a blanket exemption for all fugitive emissions is appropriate. See section 6.5.2 (Part I), above, for further discussion.

Letter(s): Colorado Association of Commerce and Industry (IV-D-243); ENRON Operations Corp. (IV-D-390); Independent Liquid Terminals Association (IV-F-4); Monsanto Company (IV-D-273); Occidental Chemical Corporation (IV-D-240)

6.7.5: Exemptions for Non-Numeric Emission Limitations and Standards

Comment a: Several industry commenters proposed limiting the applicability of part 64 to numerical emission limitations or standards. Commenters noted that the protocol requirements of the proposed rule are best suited to numeric limitations or standards, while others noted that the nature of non-numeric standards makes them difficult to monitor for continuous or intermittent compliance. One commenter noted that applying the rule to non-numeric emission limits would be especially burdensome on small businesses. Others noted that the types of standards that do not lend themselves to the type of monitoring included in part 64, such as work practice, engineering, and inspection, are already subject to requirements that demonstrate compliance, and subjecting these standards to part 64 would have no environmental benefit. One example provided are NESHAP construction and engineering standards, that should not be subject to enhanced monitoring because monitoring these standards would not affect emissions.

One industry trade group urged EPA to clarify at least that it is not asking sources to create new monitoring systems to measure compliance with standards that themselves involve monitoring or recordkeeping. The VOC leak detection and repair requirements under 40 CFR part 60,

subpart VV were cited as an example of standards for which recordkeeping would be used to demonstrate compliance. Others noted that if a work practice or similar requirement must be changed, EPA should amend the underlying standard rather than enhance a non-monitoring requirement through part 64.

A chemical industry trade group also recommended that, if EPA cannot restrict the application of part 64 to numerical emissions standards, the final rule and appendices should be divided into separate sections that clearly define the applicability of part 64 to each type of emissions limitation or standard. The commenters recommended five types of categories to address: emissions monitors, parameter monitors, fugitive monitoring programs, engineering and inspection standards, and other work practice requirements.

Response: Because the final rule focuses solely on emissions units that rely on control devices to achieve compliance, the majority of these concerns no longer apply. If, however, a pollutant-specific emissions unit is subject to this type of non-numeric standard and achieves compliance by means of a control device, the form of the standard is immaterial to the issue of assuring that the control device, once installed, continues to function properly so that the device continues to achieve the required emission reductions and the source remains in compliance.

Letter(s): Amoco Corporation (IV-D-244); Chemical Manufacturers Association (IV-D-301); Corn Refiners Association, Inc. (IV-D-391); Dow Chemical Company (IV-D-260); Eastman Chemical Company (IV-D-347); Monsanto Company (IV-D-273); Occidental Chemical Corporation (IV-D-240); Synthetic Organic Chemical Manufacturers Association (IV-D-362); Texaco Inc. (IV-D-357); Union Carbide Corporation (IV-D-293)

Comment b: Commenters also proposed at least exempting notification and negative reporting standards that are established for a source to exempt itself from the more detailed standards required of most sources. For example, one commenter noted that some regulations exempt certain points from emission limitations or standards but establish other requirements for these points, such as requiring negative reporting or reporting of process changes. The emission limitation exemptions are usually based on low emissions and would not trigger the major source standard. However, in nonattainment areas, the major source trigger might be reached. Commenters cited NSPS subpart NNN and NESHAP subparts BB and FF

as specific examples of regulations that include these types of situations.

Response: The Agency does not believe that these types of applicable requirements constitute emission limitations or standards within the meaning of part 64 or the Act. Therefore, no exemption for these types of applicable requirements that do not constitute emission limitations or standards is necessary. The NESHAP subpart BB example illustrates this type of requirement. 40 CFR 61.300(b) specifically exempts certain benzene waste operations from the standards in subpart BB but requires compliance with the applicable reporting and recordkeeping provisions in subpart BB. In this example, subpart BB does not require compliance with the applicable emission limitations or standards in subpart BB for such operations. The NESHAP subpart FF and portions of the NSPS subpart NNN examples similarly illustrate this point.

In the subpart NNN example, however, the exemption provided in § 60.600(c)(4) is to excuse the owner or operator of an affected facility that maintains a TRE index value of greater than 8.0 from the monitoring requirements in one section of subpart NNN. The owner or operator must comply with the emission limitations or standards in subpart NNN, as well as the testing, reporting and recordkeeping provisions. In this example, the margin of compliance (the standard requires maintenance of a TRE index greater than 1.0) will make instrumental monitoring unnecessary. Instead, the existing duty in subpart NNN to maintain records on changes to facility operations and to reperform a performance test if operations change significantly serves as a form of "monitoring" for these types of situations. Therefore, although worded as if the owner or operator is exempt from monitoring under subpart NNN, in fact the example cited by the commenters reflects a regulatory requirement to conduct recordkeeping as a form of "monitoring" (with a performance test trigger).

Letter(s): Monsanto Company (IV-D-273); Union Carbide Corporation (IV-D-293)

Comment c: One commenter recommended revisions to § 64.1(b) that would clarify that part 64 does not require monitoring of the fabrication or erection of control equipment for design, equipment, or similar emission standards.

Response: The EPA disagrees with this suggestion. Where an emission standard is to install a particular type of control equipment, then the owner or operator would have to document compliance with that requirement. Whether

documenting compliance would require monitoring the fabrication or erection of the control equipment would depend on the particular requirement in question.

Letter(s): Exxon Company, USA (IV-D-310)

6.7.6: Miscellaneous Types of Standards to Exempt

Comment a: One commenter proposed exempting emission standards established on the basis of AP-42 emission factors. (See related comments on these types of standards in section 9.1.1 (Part I), below.)

Response: The EPA disagrees that the rule should include an exemption for such standards. If the owner or operator achieves compliance with such a requirement by installing a control device, the requirement to conduct monitoring under part 64 is still appropriate to assure that the control device continues to function properly.

Letter(s): Phillips Petroleum Company (IV-D-380)

Comment b: One commenter proposed exempting existing standards that are based on installation and operation of specified control equipment. The commenter argued that the use of a control device that meets specific requirements is assumed to meet emission standards. EPA should not change the compliance requirements of the underlying standards by requiring new monitoring, new performance tests, requiring additional tests, or requiring development of new parametric correlations.

Response: With regard to standards based on installation and operation of specified control equipment, EPA believes that it is important to monitor whether such controls are actually operated in a manner that satisfies the underlying applicable requirement. Where compliance with an underlying applicable requirement is purely a duty to install and then operate certain equipment without any required efficiency (such as the use of a boiler or process heater with heat input design capacity of 44 MW or greater for VOC emissions control), the appropriate monitoring would be to document that the control device is installed and thereafter operated at all times that operation is required.

Letter(s): Union Carbide Corporation (IV-D-293)

Comment c: One commenter urged that the rule exempt emission limits and standards established in State new source review permits for new or modified sources in attainment areas that did not trigger PSD permitting.

Response: If the emissions unit affected by the State new source review permit condition uses a control device to achieve compliance and has potential pre-control device emissions for the applicable pollutant in an amount greater than the applicable major source threshold for the pollutant, then part 64 would apply to the State new source review permit condition. This situation may occur for those emissions units subject to emission limits established pursuant to minor new source review programs that are part of a State's SIP and that emit or have the potential to emit at or above 100 tons per year but less than a PSD threshold of 250 tons per year.

Letter(s): Chevron (IV-D-397)

6.7.7: Exemptions for Small, Intermittent and/or Experimental Sources

Comment a: Several commenters requested that EPA exempt various categories of small, intermittent or experimental categories. Some of the types of emissions units included in this general category include standby generators, intermittently used specialty production equipment, research and development (R&D) facilities, laboratories, and equipment regulated under the Occupational, Safety and Health Act (OSHA) with emissions vented through roof vents.

For laboratories and R&D facilities, commenters argued that the activities of these facilities vary so widely over time that it would be very difficult to prepare an enhanced monitoring protocol that would take into account all possible conditions. Others noted that R&D facilities, even when they qualify as major sources, typically include numerous small emissions units and involve rapidly varying quantities of relatively small-scale emissions. Because of the small scale of many R&D emissions units, commenters argued that any emissions reductions achieved by enhanced monitoring would be extraordinarily expensive and would not provide any meaningful benefit. One commenter argued that enhanced monitoring would limit the operational flexibility that is crucial in R&D projects and also that the limits

to flexibility and the expense of enhanced monitoring would limit or preclude R&D projects, while others noted that EPA (in part 70) and Congress (in section 112 of the Act) have recognized that R&D facilities require special treatment. (See 57 FR 32264-65 (July 21, 1992)). Finally, one commenter proposed a special exemption for combustion research facilities where emissions are small and intermittent, and the benefits of spurring new, lower emitting combustion technology are clear.

Another category of emissions units that received comment were utility peaking units, standby generators and emergency equipment facilities. Commenters argued that requiring enhanced monitoring at such units would be costly with little, if any, environmental benefit.

Another class of intermittent emissions units that commenters proposed exempting from part 64 are emergency vents and pressure relief points. One commenter argued that these emissions points are already exempted during start-up, shut-down and malfunction under the NSPS, but that in some cases, emergency vents are identified in permits and may exceed the proposed 30 tons per year threshold.

Another intermittent category proposed for exemption are batch processes. One commenter argued that this exemption is necessary because processes are not steady state and the concept of continuous or intermittent compliance does not apply well to batch operations. The only effective, practical approach is to use engineering calculations coupled with process parameter data to determine emissions on a fairly long-term basis (e.g., monthly or annually). The commenter also noted that operational flexibility is critical for batch processors and enhanced monitoring would interfere substantially with necessary business operations. The commenter stated that batch processes by their nature have multiple parameters for different batches which would require multiple monitoring equipment installations to handle the different batches.

Finally, one commenter argued that gasoline refueling islands should be exempt because the intermittent use of such facilities makes their actual emissions far less than their potential emissions. The commenter noted that there is still an issue as to whether such sources are subject to title V permitting because of the complexity in calculating potential to emit for such sources; actual emissions from such sources are typically less than 6 tons per year but potential emissions could be calculated at 20 to 25 times that amount. Thus, a part 64 exemption is warranted and could be

justified either under the administrative necessity or de minimis impact prongs of the Alabama Power case. In addition, under that case, EPA also retains the authority to allow case-by-case exemptions from enhanced monitoring, which would seem appropriate given the wide variety of sources covered by part 64. The commenter also argued that requiring enhanced monitoring for refueling stations could push sources to break up centralized refueling stations to avoid applicability and rely instead on third-party refueling stations. This effect would result in losing the potential benefits of the Clean Fuel Fleet Program or the commenter's natural gas demonstration projects.

Response: Many of the small, intermittent or experimental sources discussed by commenters will not be subject to monitoring under part 64 because of the focus on emissions units that rely on control devices to achieve compliance. If such sources do use a control device and satisfy the applicability threshold included in the final rule, then EPA believes that applying part 64 monitoring to such units is appropriate.

Letter(s): Allied Signal, Inc. (IV-D-313); Babcock & Wilcox (IV-D-398); Chemical Manufacturers Association (IV-D-301); Class of '85 Regulatory Response Group (IV-D-338); Colorado Association of Commerce and Industry (IV-D-243); Department of Energy (IV-D-358); Eastman Chemical Company (IV-D-347); Lubrizol Corporation, The (IV-D-306); Monsanto Company (IV-D-273); Pharmaceutical Manufacturers Association (IV-D-367); Texaco Inc. (IV-D-357); Union Camp (IV-D-359); United Parcel Service (IV-D-320)

6.7.8: Applicability to Superfund Sites

Comment a: A Federal agency recommended that EPA clarify how proposed part 64 interrelates with the hazardous waste cleanup program under the Comprehensive Emergency Response, Compensation and Liability Act (CERCLA), commonly referred to as "Superfund." This commenter recommended exempting from the administrative requirements of part 64 sources that are components of on-site remedies carried out under CERCLA section 121. The commenter noted that the substantive requirements of part 64 may be considered "applicable or relevant and appropriate requirements" (ARARs) under CERCLA, but CERCLA and its applicable regulations exempt removal and remedial actions from any permit requirement. The commenter recommended that enhanced

monitoring compliance at Superfund sites should be ensured through existing CERCLA mechanisms rather than through mechanisms applicable to air emissions sources subject to air permits.

Response: The EPA agrees that part 64 monitoring may be an ARAR under CERCLA and that CERCLA specifically preempts the permitting and other procedural aspects of regulations under the Clean Air Act. Because of this CERCLA exemption and the provision of § 64.2(a) of the final rule that limits the applicability of part 64 solely to those sources required to obtain part 70 permits, part 64 technically is not an "applicable" requirement for Superfund purposes. However, the Agency believes that the substantive requirements of part 64 are "relevant and appropriate" requirements for Superfund sites and thus are still considered as ARARs for Superfund actions.

In this respect, the requirements of part 64 that would apply to a Superfund site as ARARs would be the duty to conduct monitoring to assure that any control devices are operated and maintained properly in order to provide a reasonable assurance of compliance with any Clean Air Act applicable emission limitations or standards adopted as ARARs at a Superfund site, and the duty to meet any applicable part 64 monitor performance and operating standards. The process for selecting monitoring, submitting reports, and enforcing the requirements of part 64, as well as the provisions used to integrate part 64 with Clean Air Act permitting processes, will not apply. However, because the remedy selection process at a Superfund site is substantially similar to a permitting process (including public notice and opportunity to comment), EPA believes that the Superfund process already has a process through which the enhanced monitoring appropriate for a particular site may be selected.

The EPA does not believe that any specific language in part 64 is necessary to clarify this relationship, but if necessary will issue guidance through its Air/Superfund Coordination Program to assist in the proper implementation of part 64 monitoring requirements as ARARs at Superfund sites.

Letter(s): Department of Energy (IV-D-358)

6.7.9: Miscellaneous Specific Areas Warranting Exemptions

Comment a: One commenter noted that the NSPS for calciners and dryers in the

mineral industry exempts certain processes from monitoring that also should be exempt from enhanced monitoring.

Response: Certain units that are subject to NSPS subpart UUU (certain calciners and dryers in the mineral industry) are exempt from the subpart UUU COMS requirements. Because the monitoring under part 64 will not necessarily require such extensive monitoring, EPA believes that such units, if they meet the applicability criteria in part 64 should remain subject to part 64. In that case, monitoring approaches less resource intensive than a COMS (such as control device parameter monitoring or visible emission checks) could be used to satisfy part 64.

Letter(s): China Clay Producers Associations, Inc. (IV-D-254)

Comment b: A State agency proposed adding a specific exemption for all agricultural emissions units.

Response: The EPA disagrees. Where emission limitations or standards have been applied to certain types of agricultural activities (such as grain elevators), there is no reason to exempt those activities from part 64. However, the Agency notes that many agricultural sources are in fact not subject to any applicable requirements or do not have emissions units that meet the applicability criteria (including the use of control devices), and thus will not be subject to part 64. See the response to Section 6.9 (Part I), below, for further discussion.

Letter(s): Texas Natural Resources Conservation Commission (IV-D-371)

Comment c: One commenter proposed exempting flares used to vent pressurized barges because requiring small business to perform enhanced monitoring on such flares would provide no environmental benefit, especially given that such flares are already being monitored in accordance with State regulations.

Response: The Agency does not believe that any specific exemption is warranted. Even assuming such emissions units had sufficient emissions to trigger the applicability of monitoring under part 64, the preamble to the final rule clarifies that the flare monitoring requirements in § 60.18 are presumptively acceptable for part 64 purposes. This designation will

streamline implementation of flare monitoring under part 64.

Letter(s): Southwestern Barge Fleet Service, Inc. (IV-D-476)

Comment d: Another commenter proposed exempting internal combustion engines below a certain threshold horsepower (a 3000 horsepower threshold was suggested) if the engine is equipped with BACT technology, while another commenter proposed exemption of all natural gas engines located in attainment areas. Similarly, one commenter suggested exempting small boilers.

Response: The EPA disagrees with this suggested exemption. The Agency believes that the applicability criteria in the final rule appropriately limit the units that will be subject to part 64.

Letter(s): Davis Gas Processing, Inc. (IV-D-28); National Oilseed Processors Association (IV-D-267); Waukesha Engine Division, Dresser Industries Inc. (IV-D-342)

Comment e: One commenter proposed exempting uncontrolled SIP combustion sources or units that are major only for SO₂ where the SIP prohibits the purchase and use of a given fuel unless it meets SIP sulfur content requirements and also prohibits the sale of fuel with a sulfur content that exceeds the SIP. The commenter noted that EPA has allowed States to relax on-site inspection requirements for fossil fuel-fired units that are major for only SO₂ and that comply without add-on controls to once every three years. Thus, to require enhanced monitoring for these types of units would contradict EPA's own determination that additional monitoring efforts for such sources is unwarranted.

Response: This comment is addressed by the fact that the final rule does not apply to such uncontrolled units.

Letter(s): Niagara Mohawk Power Corporation (IV-D-317)

Comment f: One commenter proposed exempting oil and gas production facilities because many of these facilities are located in remote areas and do not have on-site personnel. The commenter suggested that if no exemption

is provided for, then the rule should explicitly state that oil and gas production facilities will not be aggregated for purposes of determining major source status.

Response: The EPA does not believe that an exemption is appropriate for such units on the basis cited by the commenter. See discussion of additional comments on remote, unmanned sites in Section 9.1.5 (Part I), below. The Agency also notes that the issue of whether aggregation of facilities will occur to determine major source status is a part 70 permitting issue. As discussed above in section 6.5.1 (Part 1), the final rule deletes the proposed provisions in part 64 that would treat a group of emissions units as a single unit for applicability purposes where such units are involved in emissions trading, bubbling or similar compliance approaches.

Letter(s): Exxon Company, USA (IV-D-310)

6.7.10: Exemption Issues Related to Part 70 Permitting

Comment a: A Federal agency proposed allowing owners or operators to request in permit applications a federally-enforceable emission limit, restriction on hours of operation, or use of emission control equipment, so that enhanced monitoring is not necessary for low emitting sources. As an example, the commenter suggested that an emissions unit with a 99% emission control device and maximum annual emissions of 0.3 tpy would not be subject to enhanced monitoring if it had some form of federally-enforceable condition on emissions or the emission control device.

Response: The definition of potential to emit allows for these types of federally-enforceable restrictions to be taken into account in establishing the potential to emit of an emissions unit, although the part 64 applicability provisions exclude the use of control device efficiency in calculating potential to emit. If a unit's potential to emit is reduced below the major source threshold due to operating hour or similar restrictions, then the unit will not be subject to part 64 monitoring. See the preamble to the proposed rule for a discussion of the requirements for establishing federally-enforceable restrictions for potential to emit purposes (58 FR 54663-64), as well as the response to section 7.13 (Part I), below, for EPA's response to comments on the discussion in the proposed preamble.

Letter(s): Department of Energy (IV-D-358)

Comment b: Certain commenters also requested that the rule specifically exempt sources that are exempt from the requirement to obtain a title V permit. Commenters noted that if a source is able to restrict its potential to emit in a manner that is sufficient to avoid part 70 applicability, it should not be subject to part 64, but the proposed rule is unclear as to whether a source that is not required to obtain an operating permit is also not required to comply with part 64. This appears to be the intent and should be made explicit.

Response: The Agency notes that the proposed rule would not have been applicable to sources that are not required to obtain a title V operating permit. To clarify this position, § 64.2(a) of the final rule explicitly establishes the requirement to obtain a title V operating permit as a prerequisite to part 64 applicability.

Letter(s): Armco Steel Company (IV-D-395); Monsanto Company (IV-D-273); Peoples Natural Gas (IV-D-298); United Parcel Service (IV-D-320)

Comment c: Another commenter proposed exempting sources from the duty to conduct enhanced monitoring at any time an "emergency" occurs as allowed in 40 CFR 70.6(g).

Response: The Agency disagrees. Generally, if the emergency does not affect the operation of the monitoring, data should continue to be provided. The existence of the data will in no way affect the affirmative defense from compliance with the emission limitation or standard provided in 40 CFR 70.6(g).

Letter(s): Alyeska Pipeline Service Company (IV-D-360)

6.7.11: Requests for Clarification Related to Exemptions

Comment a: A Federal agency requested that EPA clarify whether all chemical storage facilities are subject to part 64. The commenter proposed allowing risk-based analysis of the design and construction of a chemical storage facility and its designed capacity, to determine the facility's potential to

emit and whether the storage facility is subject to enhanced monitoring regulations. Another commenter requested clarification as to whether the duty to conduct enhanced monitoring applies for for-hire storage terminals when product is not being stored. The commenter noted that in such circumstances there are no emissions to detect, and thus no environmental benefit is realized. However, EPA in the past has erroneously required this type of monitoring under a poor interpretation of the benzene NESHAP.

Response: The final rule applies to any pollutant-specific emissions unit that relies on a control device to achieve compliance with an applicable requirement and that meets the specified potential pre-control device emissions threshold. For many storage tanks, the rule will not apply because the tanks achieve compliance by passive means (such as roofs, lids, seals, etc.) rather than by use of control devices. Also, the final rule requires monitoring whenever the emissions unit is operating. The extent to which a storage facility that is subject to part 64 may be considered "operating" even when no product is being actively stored will depend on the specific regulations that apply.

Letter(s): Department of Energy (IV-D-358); Independent Liquid Terminals Association (IV-D-468)

Section 6.8: Relationship to Other Monitoring (§ 64.1(d))

6.8.1: Preemption of Existing Monitoring Requirements

Comment a: Several chemical and other industry commenters argued that enhanced monitoring should preempt all other applicable monitoring, reporting, and recordkeeping requirements, except for reference test methods. They stated that allowing enhanced monitoring to preempt other similar requirements is both necessary to prevent inefficient dual monitoring, recordkeeping, and reporting of emissions limitations or standards, and appropriate if EPA continues to insist that enhanced monitoring is a sufficient means for determining whether compliance is continuous or intermittent. In those circumstances, it also should be sufficient to meet all monitoring needs. Some commenters noted that allowing enhanced monitoring to preempt other monitoring except reference test methods would reduce small business concerns. Suggested revisions to § 64.1(d) were provided to specify the preemption of existing requirements and that

duplicative monitoring is not required. One commenter recommended amending § 64.1(d) to indicate that while States may require more stringent monitoring, the monitoring developed under an enhanced monitoring program replaces all monitoring under the applicable federal standard. (The commenter cited as precedent for this approach 40 CFR 61.240(c), which provides that a source subject to part 60 and 61 requirements need only comply with the part 61 requirements.)

One industry trade group noted that the Title V approach to implementation of enhanced monitoring would complicate the implementation of NSPS, because States would be adding monitoring provisions to NSPS, but would have no authority to delete currently applicable part 60 provisions, thereby creating two inconsistent sets of monitoring provisions. Another commenter suggested that EPA should clarify that where there are existing requirements, enhanced monitoring does not add to those existing requirements, while other commenters recommended modifying § 64.1(d)(1) to clarify that duplicative monitoring is not required. Finally, a local agency proposed establishing a conflict resolution process in part 64 so that where a source is subject to monitoring for the same requirements under part 64 and existing monitoring programs, such conflicts may be addressed and potential duplicative requirements removed.

Response: In response to these comments, the Agency has retained the basic savings provision in proposed § 64.1(d), which is now included in the savings provision section of the final rule (§ 64.10). However, the Agency notes that the final rule includes revisions to § 70.6(a)(3) to clarify that a part 70 permit may streamline multiple monitoring requirements into a single set of requirements in certain circumstances. The Agency believes that this provision addresses the concerns raised in the comments.

Letter(s): American Bakers Association (IV-D-465); Amoco Corporation (IV-D-244); Bay Area Air Quality Management District (IV-D-402); Chemical Manufacturers Association (IV-D-301); Eastman Chemical Company (IV-D-347); Exxon Chemical Americas (IV-D-339); Gas Processors Association (IV-D- 227); Monsanto Company (IV-D-273); Occidental Chemical Corporation (IV-D-240); Union Carbide Corporation (IV-D-293); Utility Air Regulatory Group (IV-D-489)

6.8.2: Amendments to Existing Regulations

Comment a: A State agency recommended amending parts 60 and 61 to allow for adjusting reporting schedules under those regulations to allow consolidation of all reports required under all provisions of the Act. The agency argued that consolidation would enable the regulated community and the permitting authorities to submit, receive, and review reporting data in a timely and efficient manner.

Response: The final rule does not include the recommended revisions to parts 60 and 61. The rule relies on the general reporting requirements in part 70. In addition, the rule is based on the existing reporting requirements in § 60.7(d) which should allow for consolidating reporting requirements through the title V process.

Letter(s): Texas Natural Resources Conservation Commission (IV-D-371)

6.8.3: Appropriate Stringency of Enhanced Monitoring

Comment a: One commenter argued that, because § 64.1(d) acknowledges that States and EPA can impose even more stringent monitoring under other authority, the part 64 requirements should be the bare minimum necessary to implement section 114 of the Act, with any further enhancements accomplished for particularly poor sources under the separate State authority.

Response: The EPA believes that the structure of the final rule mirrors this suggestion to a large extent.

Letter(s): American Textile Manufacturers Institute (IV-D-440)

Section 6.9: Agricultural Irrigation/Small Gas-fired Engines

Comment a: Hundreds of commenters involved in agricultural production, including many individual farmers, and certain other commenters representing a State agency, local agencies, and the gas industry, opposed the applicability of enhanced monitoring to small gas-fired engines used for agricultural and other purposes. Many of these commenters opposed the use of potential to emit because it vastly overestimates actual emissions from these types of engines, most of which operate only seasonally or intermittently. The primary concern was that the cost of compliance

would prohibit the use of small point sources such as natural gas-fueled reciprocating engines, and drive farmers out of business, without any environmental justification. Some commenters assumed that the only enhanced monitoring options for this source type would be costly CEMS or predictive/parameter systems. Others argued that use of engine retrofits to reduce emissions below the enhanced monitoring threshold would not be economically feasible.

Other commenters argued that EPA is effectively limiting shaft horsepower alternatives to electricity and, therefore, an overall increase in pollution may result. Similarly, one commenter said that the rule would force small natural gas facilities to shut down and, as a result, oil producers who sell to those facilities will instead flare off their small quantities of natural gas, thereby worsening air quality.

Some commenters proposed reasonable monitoring alternatives, including manufacturer emission factors, combustion efficiency readings, operating hour records, and filing yearly reports limited to hand-held readings and total yearly run-hours. Commenters noted that the emission characteristics of these engines is so well known that CEMS or its equivalent is completely unnecessary.

Many commenters favored an explicit exemption for irrigation engines and some argued that an exemption is supported by the Alabama Power case using either the administrative necessity or de minimis impact theory. In this regard, some commenters pointed out that most small engines are located in attainment areas, away from population centers, and therefore pose little health or environmental threat.

One local agency was concerned that applicability to these types of engines could interfere with a small municipal electric load management program. Another commenter argued that the rule would drive small natural-gas engines from the marketplace in contravention of the Clinton/Gore Climate Action Plan.

Response: Because the final rule applies only to pollutant-specific emissions units with control devices (which specifically exclude the types of combustion control modifications that could potentially apply to these agricultural irrigation engines), these comments are no longer applicable. The Agency notes that in evaluating these comments, the Agency determined that few, if any, such engines are actually subject to regulation and/or are

subject to title V permitting. Thus, the engines would not have been subject to the rule as originally proposed and for the same reason, are not likely to be subject to part 70 monitoring requirements either.

Letter(s): See Appendix I-A. All comment letters marked with an asterisk (*) commented on this issue.

Section 7: Definitions (§ 64.2)

Section 7.1: Applicable Emission Limitation or Standard

Comment a: Several commenters requested that the rule clearly indicate which types of emission limitations or standards are considered "applicable emission limitations or standards" (e.g., NSPS, PSD, RACT, NESHAP). Some commenters proposed that the definition clarify that only "applicable requirements" as included in the part 70 regulations are included within the scope of this definition. Two other commenters requested that the definition state clearly that an "applicable emission limitation or standard" must actually apply to a source. Certain commenters proposed text revisions to accomplish these clarifications.

Response: The final rule deletes the term "applicable emission limitation or standard." EPA agrees that the proposed definitions of "applicable emission limitation or standard" and "emission limitation or standard" could be confusing, especially when interpreted in conjunction with the term "applicable requirement" in part 70. In the final rule, EPA has defined "applicable requirement" consistent with part 70 and then clarified that "emission limitations or standards" are a subset of applicable requirements. Thus, State-only requirements are not subject to part 64.

Letter(s): American Gas Association (IV-D-265); Arkla Energy Resources Company (IV-D-343); Clean Air Implementation Project (IV-D-242); Dow Chemical Company (IV-D-260); East Ohio Gas Company, The (IV-D-355); Mississippi River Transmission Corp. (IV-D-344); Natural Gas Pipeline Company of America (IV-D-248); Northern Illinois Gas (IV-D-249); Union Carbide Corporation (IV-D-293)

Section 7.2: Continuous Compliance

7.2.1: Generally

Comment a: Some commenters suggested that EPA delete the definition of continuous compliance. One of the commenters said that, if enhanced monitoring data were separated from the process of certifying compliance, a definition of continuous compliance would be unnecessary. Another commenter suggested that 40 CFR 70.6 permit content requirements be relied upon to

explain compliance certification requirements. Some commenters favored simplifying the definition of continuous compliance to state that a source complied with an emission limitation or standard throughout the reporting period.

Response: The Agency disagrees with the recommendation that enhanced monitoring data should be separated from the process of compliance certification. Congress linked enhanced monitoring and compliance certification in the 1990 Clean Air Act Amendments, and separating them would be contrary to congressional intent. See also the response to comments in section 2.1.7. However, EPA agrees with the comments that stated that a definition of continuous compliance is unnecessary. The EPA believes that the concept of continuous compliance is sufficiently clear as expressed in the underlying applicable requirements. In the final rule, EPA has moved the elements related to proof of compliance that had been included in the proposed definition of continuous compliance to the compliance certification provisions in § 70.6(c). See Sections I.C.5. and II.K. of the preamble to the final rule for further discussion of the meaning of continuous compliance and the compliance certification provisions.

Letter(s): Chemical Manufacturers Association (IV-D-301); Clean Air Implementation Project (IV-D-242); Dow Chemical Company (IV-D-260); Monsanto Company (IV-D-273); Union Carbide Corporation (IV-D-293)

Comment b: A commenter said that EPA's logic was flawed where the Agency concluded that enhanced monitoring must be able to assess compliance continuously because facilities will have to certify continuous compliance for all permit terms, not just those subject to enhanced monitoring. The commenter added that, if a source can certify continuous compliance for requirements not subject to enhanced monitoring (i.e., based solely on existing or title V periodic monitoring), EPA cannot justify that enhanced monitoring must provide a determination of compliance that covers all averaging periods.

Response: The Agency disagrees with the commenter's assertions. Where an owner or operator is unable to account for all averaging periods during the certification period because of the method used to determine compliance, then the owner or operator must certify intermittent compliance, not continuous compliance. The EPA's position on this issue is discussed in detail in Sections I.C.5. and II.K. of the preamble to the final rule.

Letter(s): Kaiser Aluminum & Chemical Corporation, Primary Prod. Div. (IV-D-368)

Comment c: A commenter proposed basing continuous compliance on a statistical approach, which would allow a certain amount of emission levels over an emission limit, which is more appropriate than expecting 100% compliance to be achieved at an emissions unit at all times. The commenter added that basing continuous compliance on a statistical approach would be consistent with air quality standards because almost all allow one exceedance of the standard per year, or allow an average number of exceedances over a three-year period. Another commenter recommended that the definition include an automatic allowance for a de minimis level of deviation (1%) without affecting continuous compliance status.

Response: The Agency disagrees with the suggestions that part 64 include allowable periods of exceedance. Underlying regulations establish the compliance obligations of an emission limitation or standard, including any specific excused periods such as startup, shutdown, and malfunction.

Letter(s): KBN Engineering and Applied Sciences, Inc. (IV-D-475); Mobil Oil Corporation (IV-D-285)

7.2.2: Data for All Periods

Comment a: Some commenters said that not having data from an enhanced monitoring protocol should not be presumed to mean that a source violated the underlying emission limitation or standard because such a presumption would reflect a "guilty until proven innocent" posture. One of the

commenters said that the current definition combines two concepts: continuous compliance and continuous demonstration of compliance.

Response: The proposed definitions of continuous compliance and intermittent compliance potentially could have confused the concepts of being in continuous compliance and demonstrating continuous compliance. The final rule, therefore, deletes these definitions. The Agency notes that under both the proposed and final rule, not having data from part 64 monitoring does not imply that a source violated the underlying emission

limitation or standard.

Letter(s): Dow Chemical Company (IV-D-260); Union Carbide Corporation (IV-D-293)

Comment b: Several commenters said that data capture should be less than 100% of the time. A commenter said that the definition requires 100% data capture in order to certify continuous compliance, and that this requirement is unrealistic since even the most sophisticated techniques do not achieve 100% data capture. Some commenters proposed that the definition be revised to provide that a downtime of 5% or less does not affect an owner/operator's "continuous compliance" status. Commenters said that the 5% downtime would be consistent with the requirement for continuous opacity monitoring and would be consistent with Texas ACB guidance.

Response: These comments are no longer applicable because the definition is not included in the final rule, although the commenters misread the requirements in the definition of the proposed rule, which required only that the data availability requirement for the protocol was achieved in order to certify continuous compliance.

Letter(s): Amoco Corporation (IV-D-244); Department of Energy (IV-D-358); Mobil Oil Corporation (IV-D-285); National Environmental Development Association (IV-D-334)

Comment c: Other commenters said that the definition of "continuous compliance" in § 64.2 was inconsistent with the definition in section 2.1 of appendix A. A commenter said that section 2.1 of appendix A recognizes that continuous compliance can be shown with less than continuous sampling, and recommended that the phrase "all monitored periods" in the definition of continuous compliance be changed to "representative monitored periods."

Response: These comments are no longer applicable because neither of these provisions are included in the final rule.

Letter(s): ENRON Operations Corp. (IV-D-390); Gas Processors Association (IV-D-227); Texas Intrastate Natural Gas Pipelines (IV-D-221)

7.2.3: Use of Other Monitoring Data for Compliance Certifications

Comment a: Some commenters recommended deleting the third part of the proposed definition requiring a source to disclose any additional monitoring data collected for the purpose of determining compliance. A commenter said that this requirement will discourage sources from seeking out and correcting errors and will also discourage sources from experimenting with new innovative monitoring technologies. Another commenter said that the compliance certification provisions seem to give equal weight to data developed in any way, while insisting on tremendous QA/QC and protocol requirements for enhanced monitoring protocols. This commenter added that, if any data is acceptable for compliance certification, an enhanced monitoring program is unnecessary. Another commenter proposed that non-enhanced monitoring data be limited solely to reference test method data or data from an approved enhanced monitoring protocol. Another commenter suggested inserting "credible" between "other" and "data." Other commenters said that other data should be used only to indicate the appropriateness of reopening the permit to address any inadequacy of an approved enhanced monitoring protocol.

Commenters added that the current provision would discourage sources from undertaking voluntary compliance measures and could impair the attorney/client privilege. A commenter recommended clarifying the definition to provide that sources are only required to disclose factual data. The commenter was concerned about internal communications discussing or interpreting data, especially since these communications may be protected under the attorney/client privilege.

However, many other commenters favored the use of non-enhanced monitoring data to demonstrate or certify continuous compliance. These commenters stated that this approach was necessary to avoid inequitable results. First, the commenters noted that if a source's enhanced monitoring system did not produce the required records to show continuous compliance, the source would have to report its compliance status as intermittent, even if it had other records to show that it was actually in continuous compliance. Second, a facility also would have to certify intermittent compliance if it did obtain all required enhanced monitoring data and the enhanced monitoring data demonstrated continuous compliance, but other data showed noncompliance. The commenters concluded that it would be inappropriate to use the other data only in a negative fashion (i.e., to show noncompliance when such other

data conflict with enhanced monitoring data) but not to use it in a positive fashion (i.e., to show compliance when enhanced monitoring data are unavailable). Another commenter argued that a facility should not be stigmatized by being forced to certify that it is in intermittent compliance when it can demonstrate compliance by means other than quality-assured enhanced monitoring data. Lastly, another commenter added that, where data availability is not routinely at an acceptable level for a particular emissions unit, the proper response is to reopen the permit for cause under 40 CFR 70.7(f)(1)(iv), not to deny the source the ability to certify compliance with the emission limit.

Response: In the final rule, revisions to § 70.6(c) state that the certification must be based on the monitoring and testing required by the permit. In addition, the owner or operator must also consider any other material information to the extent necessary to avoid submitting an incomplete, inaccurate or false certification. These provisions are consistent with those comments that argued that other information should be considered to document compliance as well as to document possible exceptions to compliance. See Section II.K. of the preamble to the final rule for further discussion.

Letter(s): Council of Industrial Boiler Owners (IV-D-319); Dow Chemical Company (IV-D-260); Eastman Chemical Company (IV-D-347); Eastman Kodak Company (IV-D-333); Eli Lilly and Company (IV-D-349); Exxon Chemical Americas (IV-D-339); Exxon Company, USA (IV-D-310); Monsanto Company (IV-D-273); Union Carbide Corporation (IV-D-293)

Comment b: Several commenters said that other monitoring data that are collected under different circumstances often conflict and that either the compliance certification should be based on only enhanced monitoring, or the intermittent compliance definition should be modified to handle conflicting data situations.

Response: The Agency acknowledges that conflicting data situations may arise. As discussed in the preamble to the final rule, an owner or operator is free to add details to a compliance certification that describe why the owner or operator believes that a specific documented possible exception to compliance in fact represents a period of compliance. However, to avoid burdens to the certification process, such details are not required to be included, but could be raised subsequently in response to any compliance follow up to the certification.

Letter(s): American Automobile Manufacturers Association (IV-D-538); Amoco Corporation (IV-D-244); Eli Lilly and Company (IV-D-349); Leather Industries of America (IV-D-286); Mississippi Chemical Corp. (IV-D-179); Specialty Steel Industry of the United States (IV-D-328); Steel Manufacturers Association (IV-D-326)

Section 7.3: Demonstrated Compliance Parameter Level

Comment a: Some commenters argued that the definition of demonstrated compliance parameter level (DCPL) should be expanded to recognize current parameter monitoring approaches deemed acceptable. One commenter proposed text revisions that would provide that parametric monitoring approaches that have been approved in the past as providing an acceptable evaluation of compliance will continue to be authorized. Another commenter recommended expanding the definition of DCPL to recognize that DCPLs may be contained in an underlying emissions standard; the commenter noted that many NSPS standards include establishing a parameter level for purposes of exceedance reporting that are equivalent to the DCPL concept.

Response: The DCPL definition is not included in the final rule. Instead, the final rule relies on indicator ranges or designated conditions with substantive design criteria for how such ranges or conditions are to be established. The Agency believes that the procedures in the final rule are consistent with many existing approaches to establishing parameter levels for the purposes of documenting compliance with emission limits through verifying proper operation and maintenance of control equipment.

Letter(s): Amoco Corporation (IV-D-244); Clean Air Implementation Project (IV-D-242); Union Carbide Corporation (IV-D-293)

Comment b: Some commenters proposed text revisions to modify the DCPL definition to show that, if several parameters are considered together, the relationship among those parameters and not the value of each parameter individually should determine compliance. These commenters noted that with currently available parameter monitoring systems, it is often impossible to determine compliance by examining the range of values for any single parameter. It is the combined empirical output of all monitored parameters that matters.

Response: The EPA agrees in general with the comment concerning relational parameters and has clarified this point in the criteria for establishing indicator ranges or designated conditions in § 64.3(a)(3) of the final rule. The EPA notes, however, that in some situations a source may use more than one parameter without attempting to develop a full relationship between all parameters that results in dependent values or a combined empirical output. In such circumstances, an excursion from any one such indicator range or designated condition would have to be reported as an excursion under part 64 and included as a possible exception to compliance in a compliance certification.

Letter(s): Dow Chemical Company (IV-D-260); Mobil Oil Corporation (IV-D-285); Texas Chemical Council (IV-D-365)

Comment c: Finally, one commenter that strongly supported the DCPL concept recommended changing the definition to clearly indicate that DCPLs are established in the enhanced monitoring protocol and not in the permit as conditions independent of the parametric correlation established.

Response: The final rule does not include the DCPL definition. However, for part 64 indicator ranges and designated conditions, the permit will have to identify the range or condition, or the means for establishing that value, so that the responsibility for when an excursion must be reported is clearly defined. See Section II.F. of the preamble to the final rule for further discussion of including these values in a part 70 permit.

Letter(s): Amoco Corporation (IV-D-244)

Section 7.4: Deviation

Comment a: A few commenters said that the definition of "deviation" is too broad. One of the commenters added that the proposed definition assumes EPA will micromanage source operations in response to any change in operating conditions that could affect emissions. For instance, the commenter said, use of the phrase "any condition which indicates" that a unit has failed to meet an applicable limitation or standard is so broad as to include numerous normal operating conditions at a source that should not have to be reported as deviations. Another commenter added that the definition was excessive and technologically unjustifiable.

Response: The final rule does not use the term deviation and thus the proposed definition is not included in the final rule.

Letter(s): Colorado Association of Commerce and Industry (IV-D-243); Southwestern Public Service Company (IV-D-272); Total Petroleum, Inc (IV-D-354)

Comment b: Several commenters said that the current definition is also too closely tied to the violation of an emission limitation or standard and that a deviation is not synonymous with exceeding an emissions limit, and one commenter requested that the definition be revised to explicitly state that a deviation is not a violation. In addition, commenters were concerned about the ability of non-enhanced monitoring data to detect deviations. One commenter recommended inserting "credible" between "other" and "data." Some commenters recommended revising the definition to allow the use of non-enhanced monitoring data to demonstrate that a source was in compliance. (See related comments in section 7.2 (Part I), above, Continuous Compliance.)

Response: The Agency agrees that an excursion or exceedance identified by part 64 monitoring may not necessarily constitute a violation. Because commenters argued that the term "deviation" is considered synonymous with violation by some permitting authorities, the final rule does not rely on the use of this term.

Letter(s): Chemical Manufacturers Association (IV-D-301); Dow Chemical Company (IV-D-260); Eastman Chemical Company (IV-D-347); Lower Colorado River Authority, et al. (IV-D-256); Southwestern Public Service Company (IV-D-272); Texas Utilities Services, Inc. (IV-D-257); Union Carbide Corporation (IV-D-293)

Comment c: One commenter disagreed that a deviation should automatically occur if non-enhanced monitoring, credible data shows that an applicable limitation or standard has not been met. Another commenter stated that a source should be able to investigate conflicting enhanced monitoring data to determine if a deviation occurred; the current language creates a strong disincentive to companies' voluntary efforts to gather data.

Response: As discussed above, this term is not used in part 64 and thus these comments are no longer applicable. With respect to conflicting data, see the response under Comment b, section 7.2.3 (Part I), above.

Letter(s): Dow Chemical Company (IV-D-260)

Comment d: Commenters proposed that EPA clarify that "emission exceedance" excludes certain operating scenarios which are exempt from emission limits, e.g., NSPS exemptions for startups, shutdowns and maintenance activities and the startup/shutdown provisions that have been developed for specific SIP sources through permit conditions. Another commenter suggested that the reference to "federally-enforceable," with respect to emission limit exemptions, be deleted because the exemption should apply regardless of whether EPA considers it federally enforceable.

Response: The final rule defines "exceedance" as any monitoring data that document emissions that exceed an emission limitation or standard, in accordance with the appropriate averaging period. Whether such exceedances may be excused for various reasons under existing requirements does not change the fact that they are "exceedances." This approach is consistent with underlying rules such as the NSPS provisions.

Letter(s): Dow Chemical Company (IV-D-260); Lower Colorado River Authority, et al. (IV-D-256); Tennessee Department of Environment and Conservation (IV-D-399)

Comment e: A commenter suggested clarifying that values measured by an enhanced monitoring protocol may indicate a deviation without a deviation actually occurring. For instance, the commenter said, monitor equipment or software problems may cause a reported value that is in error. The commenter proposed to separate the definition into "substantive" and "technical" deviations, the latter being related to inaccurate measured values which may not be used for purposes of compliance certification.

Response: Section 64.7(a) of the final rule clarifies that, consistent with monitoring required under other programs such as NSPS or NESHAP, where monitor equipment or software problems result in data that are invalid, such data are inappropriate for use in assessing compliance and are not to be included in reported data averages. In addition, where a reported

exceedance only slightly exceeds an applicable requirement, the precision and accuracy of the method used to report the exceedance would be one element in evaluating what, if any, action should be taken by the agency in response to the reported exceedance.

Letter(s): Mobil Oil Corporation (IV-D-285)

Comment f: Some commenters said that the example in the preamble relating to the failure to wet down a surface area does not prove that an hourly emission limit is exceeded. The area may have been properly wetted by rain, there may be no winds to cause particulate emissions, or the process which causes the emissions may not be in operation.

Response: The final rule does not include the term "deviation" and thus the example in the proposed preamble is no longer relevant. The Agency notes, however, that this example was intended to demonstrate that a deviation can relate to non-numeric work practice requirements as well as to numeric emission limits and was not intended to provide a full assessment of what is required under a particular wet-down work practice standard. The Agency continues to believe that the example appropriately acknowledges that deviations of work practice standards can occur in the same manner as deviations of numeric emission limits.

Letter(s): Lower Colorado River Authority, et al. (IV-D-256); Southwestern Public Service Company (IV-D-272)

Section 7.5: Emission Limitation or Standard

7.5.1: Meaning of Federally-enforceable

Comment a: Certain commenters requested clarification on the meaning of federally-enforceable in the context of determining what emission limitations or standards require enhanced monitoring. One commenter noted that some States have indicated that all State construction permits are also subject to enhanced monitoring. Another commenter recommended defining "federal standards or limitations" in detail, so that the term will be clear to the regulated community, regulators, and the public.

Response: The final rule clarifies that the rule applies only to those emissions units

that are subject to an emission limitation or standard that constitutes an applicable requirement under the Act. Emission limitations or standards that are applicable requirements as defined in the part 70 rule and that are included as federally-enforceable permit conditions in an operating

permit pursuant to 40 CFR 70.6(b) are considered subject to part 64 requirements.

Letter(s): El Paso Natural Gas Company (IV-D-271); New Mexico Oil and Gas Association (IV-D-228)

7.5.2: Relationship to Part 70 Definitions

Comment a: Some commenters requested clarification on how this term related to the terms "emissions allowable under the permit" or "applicable requirement" in part 70. One State agency commenter was unsure if "emission limitation or standard" was intended to expand upon those part 70 definitions. An industry commenter recommended revising the definition to reflect only the "emissions allowed under the permit" definition as codified through federal operating permits under 40 CFR part 70 and the approved state operating permits program.

Response: As noted above in Section 7.1 (Part I), the final rule has made changes to reflect how the term "emission limitation or standard" relates to the definition of "applicable requirement" in part 70. The term is actually a subset of "applicable requirements" because applicable requirements include all requirements associated with limits and standards designed to limit the emissions of pollutants to the atmosphere, such as monitoring, reporting and recordkeeping requirements. With respect to the part 70 term "emissions allowable under the permit," the part 64 term "emission limitation or standard" reflects the underlying federally-enforceable permit terms and conditions that establish restrictions on emissions whereas the part 70 term reflects the quantified emissions allowable pursuant to all such applicable requirements for purposes of establishing limits on the extent of intra-facility emission trades allowed under the operational flexibility provisions of part 70. Therefore, EPA has not referenced this part 70 term in part 64 but has rather referenced the underlying definition of "applicable requirement" in part 70.

Letter(s): Mobil Oil Corporation (IV-D-285); Texas Natural Resource Conservation

Commission (IV-D-371)

7.5.3: Need for General Clarification

Comment a: Certain commenters requested general clarification of which requirements were intended to be subject to enhanced monitoring. One commenter illustrated the importance of clarifying what types of requirements enhanced monitoring applies to with a step-by-step analysis of complying with the NESHAP for benzene storage vessels (subpart Y). For instance, a tank with a fixed roof control with a closed vent system and a flare control device must comply with flare requirements under 40 CFR 60.18, closed vent system requirements set forth in 40 CFR 61.245(c) and the standards and work practices required under Method 21 in appendix B of 40 CFR part 60. The commenter concludes that subpart Y of 40 CFR part 61 potentially requires 75 to 100 "standards" for a fixed roof tank with a closed vent system and flare. If all of these "standards" are subject to enhanced monitoring protocols, a facility would have to write 75 to 100 enhanced monitoring protocols for a single tank. This commenter noted that without clarification, industry and permitting agencies will waste enormous amounts of time and money attempting to develop unnecessary enhanced monitoring protocols and attempting to clarify on a case-by-case basis which emissions standards actually require enhanced monitoring protocols.

Response: The Agency believes the clarifications discussed above provide adequate clarification that part 64 applies only to emission limitations or standards that constitute applicable requirements as defined in part 70. With respect to the specific examples included by one commenter, EPA notes that the commenter has improperly equated the term "emission limitation or standard" with the term "applicable requirement" in this example. Many of the requirements referred to by the commenter are not included in the sections that specify the "standards" that apply to the commenter's example, but rather are included in the sections that specify the testing provisions associated with such standards. The Agency acknowledges that distinguishing "emission limitations or standards" (as such terms are defined under the Act) from associated "applicable requirements" may be complicated in some situations. However, because the focus of the final rule is on whether control devices are properly operated and maintained in order to provide a reasonable assurance of compliance with underlying limits, these types of situations should not unduly complicate

implementation of part 64. So long as one non-exempt emission limitation or standard applies to a pollutant-specific emissions unit and the unit relies on a control device to achieve compliance with that limit, the extent to which other limits and requirements may apply is generally not important to determining applicability of part 64 or designing monitoring to achieve the criteria in § 64.3.

Letter(s): ARCO (IV-D-396); Dow Chemical Company (IV-D-260); Illinois Environmental Protection Agency (IV-D-518); Texas Natural Resource Conservation Commission (IV-D-371)

Comment b: Commenters requested clarification of how part 64 would apply to general, catch-all standards in State regulations. One State agency stated that its regulations include such "back-stop" regulations that apply to all sources over a certain size for several pollutants (cites as an example a CO rule applicable to large boilers). The agency stated that these standards were not established with the expectation that emission reductions would be achieved from sources covered, nor were they a product of an attainment demonstration. The agency argued that these types of limits should not be subject to enhanced monitoring or at the least should be subject to much less onerous types of monitoring such as engineering calculations. An industry commenter stated that some States have general opacity regulations covering all combustion units but without specific particulate matter limits applicable to all such units. This commenter requested that the final rule exempt particulate matter sources above the applicability threshold that are subject to such general opacity requirements without being subject to a mass particulate standard.

Response: The types of standards described by the commenters appear to be older regulations that would apply to existing, grandfathered sources not subject to NSPS or NESHAP requirements. One threshold issue in these circumstances will be whether such regulations have been adopted into the SIP for the State. If such standards are SIP requirements or any other type of "applicable requirement" as defined by part 70, then, assuming that such standards apply at major sources that are subject to part 70 permitting, pollutant-specific emissions units that rely on a control device to achieve compliance with such requirements will be subject to part 64. However, as noted by the commenter, the standards were not necessarily established with the expectation that emission reductions would be achieved, so it is unlikely that control devices would be required

to achieve compliance with such standards.

Letter(s): ARCO (IV-D-396); Illinois Environmental Protection Agency (IV-D-518)

Comment c: One industry commenter stated that the term "emission limitation or standard" includes both capture efficiency and control efficiency where applicable. The commenter recommended that the appropriate capture efficiency must be left to a process specific determination.

Response: The EPA agrees that the term "emission limitation or standard" may include one or both of capture and control efficiency. Part 64 does not establish a required capture efficiency, but does require monitoring of capture system equipment to assure that it is operated and maintained in a manner designed to provide the required capture efficiency for remaining in compliance with applicable requirements.

Letter(s): American Textile Manufacturers Institute (IV-D-440)

7.5.4: Definition and Other Rule Revisions to Reflect Proposed Exemptions

Comment a: As discussed in detail in sections 6.1 and 6.7 (Part I), above, many commenters proposed specific exemptions for many types of emission limitations or standards, especially NESHAP subparts and work practice and other non-numeric standards. A number of those commenters also proposed specific revisions to the definition of "emission limitation or standard" to reflect those proposed exemptions. One commenter also proposed a new § 64.10 to explicitly provide for the limited types of emission limits that would be subject to part 64. The commenter also proposed adding to part 64 a complete list of the potentially applicable requirements for which enhanced monitoring protocols would be required. For NESHAP or NSPS, the list would include each specific limitation that would be subject to part 64. This would remove the ambiguity that would remain even after limiting emission limitations or standards to numerical standards.

Response: The Agency did not agree with the other types of exemptions proposed by commenters, and therefore has not changed the definition of "emission limitation or standard" to reflect those exemptions. The Agency believes that any ambiguities with what applicable requirements constitute

"emission limitations or standards" under the Act can best be addressed through appropriate guidance as opposed to additional regulatory sections.

Letter(s): Dow Chemical Company (IV-D-260); Exxon Chemical Americas (IV-D-339); Monsanto Company (IV-D-273)

Section 7.6: Emissions Unit

Comment a: One commenter recommended retaining for enhanced monitoring purposes the same definition of "emissions unit" used in part 70. Another commenter suggested that the definition and use of the term should be deleted and a stack-based approach used instead.

Several commenters expressed concern over the use of the phrase "any part or activity" in the definition. One Federal agency found the phrase to be too vague, leaving unclear the question of whether an emissions unit is a single piece of equipment or a group of multiple units located together within a source. Some commenters recommended specifying exactly what must be monitored, some providing specific suggestions. One commenter argued that the rule should clearly state that an emissions unit would be each vent from a particular process, where applicable. Another commenter suggested applying enhanced monitoring to the same parts or activities that are defined or regulated by the underlying standard. Where the underlying standard is not clear in this regard, another commenter suggested allowing the source and the permitting authority determine the scope of "emissions unit." Another recommendation was to limit the definition of "emissions unit" to those units subject to numeric standards or limitations.

One commenter argued that the proposed definition undermines the cost-effectiveness of the enhanced monitoring program because it requires emission units with multiple points to monitor each point. Another commenter felt that the definition, together with the duty to report deviations, could compromise market-based incentives like emissions trading. Specifically, the commenter believed that requiring the total duration of deviations from each emissions point to be less than 5% of the emissions unit operating time (according to the commenter's understanding of the proposed rule) would compromise operational flexibility.

Response: In response to the above comments, the definition of "emissions unit" has been modified in the final rule so that it is the same term as used in part 70. This approach will further coordinate part 64 implementation with the part 70 process.

Letter(s): ASARCO (IV-D-327); American Cyanamid Company (IV-D-201); Association of International Automobile Manufacturers (IV-D-264); Chemical Manufacturers Association (IV-D-301); E.I. DuPont de Nemours and Company (IV-D-329); Mobil Oil Corporation (IV-D-285); Monsanto Company (IV-D-273); National Environmental Development Association (IV-D-334); National Oilseed Processors Association (IV-D-267); Synthetic Organic Chemical Manufacturers Association (IV-D-362); Texaco Inc. (IV-D-357); Texas Natural Resources Conservation Commission (IV-D-371); United States Department of the Interior (IV-D-537)

Section 7.7: Enhanced Monitoring

7.7.1: Enhanced Monitoring Criteria

Comment a: A number of commenters objected or proposed revisions to the six enhanced monitoring criteria. Some suggested deleting particular criteria, with several commenters specifically in favor of using "sufficiently reliable and timely" as the only criteria. Others complained that the criteria are not defined and, therefore, sources and permitting authorities would be unable to determine how to satisfy them. Additional comments stated that the criteria are impractical, costly, and unnecessary. One commenter argued that the criteria lead to a bias in favor of choosing CEMS as the most readily approvable monitoring methodology. Lastly, a commenter suggested that the definition merely require the establishment of "reasonably available monitoring" that would merely indicate potential noncompliance.

Many commenters also opposed the aspect of the definition related to determining continuous compliance, with some suggesting that enhanced monitoring should be defined as "reasonably available" and able to provide "representative data requesting compliance." The goal of determining continuous compliance was seen as lacking a sufficient justification and exceeding the intent of Congress. Furthermore, to some commenters the language represented an illegal attempt to obtain perfect

monitoring knowledge or monitoring equivalent to that required by units participating in the Acid Rain Program, as opposed to reasonable improvements in monitoring.

Response: The proposed definition is not included in the final rule. Instead, the substantive criteria for monitoring under part 64 is set forth in § 64.3 of the final rule. Consistent with many of these comments, the final rule focuses on providing a reasonable assurance of compliance with applicable requirements by assuring that control devices (and associated capture systems and key process variables, as necessary) used to achieve compliance are operated and maintained properly.

Letter(s): Chemical Manufacturers Association (IV-D-301); Clean Air Implementation Project (IV-D-242); E.I. DuPont de Nemours and Company (IV-D-329); ENRON Operations Corp. (IV-D-390); Eastman Chemical Company (IV-D-347); Eastman Kodak Company (IV-D-333); Exxon Company, USA (IV-D-310); Gas Processors Association (IV-D-227); Mobil Oil Corporation (IV-D-285); Monsanto Company (IV-D-273); Shell Oil Company (IV-D-280); Texas Chemical Council (IV-D-365); Texas Intrastate Natural Gas Pipelines (IV-D-221)

7.7.2: Alternative Approaches

Comment a: One commenter proposed changing the definition to require the same level of monitoring required under part 70. One State agency proposed that the definition of enhanced monitoring be modified to mirror the definition of BACT. The reasoning was that the permitting authority is the entity that has the ability to assess what is the most appropriate monitoring on a case-by-case basis, and the BACT definition provides the permitting authority with the proper authority to do so. Another State agency argued that the definition should place more emphasis on the function of ensuring accurate emissions measurements, because future air quality planning depends upon accurate emission inventories. This commenter argued that enhanced monitoring will improve the quality of emission inventories and therefore allow more accurate planning. Lastly, an industry commenter suggested that the definition focus on control system performance rather than on detecting deviations.

Response: The Agency first notes that, as discussed above, the final rule relies on part 70 monitoring provisions as enhanced monitoring under the Act for

many emissions units and applicable requirements. See Section I.C. of the preamble to the final rule for further discussion. Second, EPA does not believe adopting the BACT definition would be appropriate for part 64. See Section 9.5 5 (Part I), below, for comments strongly opposed to the possible use of a BACT top-down selection process. Third, the Agency does not believe that increasing the accuracy of emission inventories is the purpose of part 64, which is focused on providing a reasonable assurance of compliance with applicable requirements. Finally, with respect to the suggestion that the definition focus on control system performance, EPA notes that the CAM approach adopted in the final rule reflects this position.

Letter(s): Alabama Department of Environmental Management (IV-D-453); American Textile Manufacturers Institute (IV-D-440); Independent Liquid Terminals Association (IV-D-468); Texas Natural Resource Conservation Commission (IV-D-371)

Section 7.8: Enhanced Monitoring Protocol

Comment a: One commenter suggested that an enhanced monitoring protocol should only include all "relevant" installation, equipment, performance, operation, and quality assurance requirements, and what is relevant should be decided between the permitting authority and the source.

Response: The final rule does not include this proposed definition. The substantive requirements for designing part 64 monitoring, submitting proposed monitoring, and incorporating appropriate monitoring requirements into part 70 permits are set forth in §§ 64.3, 64.4 and 64.6 of the final rule.

Letter(s): Amoco Corporation (IV-D-244)

Section 7.9: Established Monitoring

Comment a: Environmental groups suggested that the definition of "established monitoring" include only the most stringent method relevant to the particular source. At the November 19, 1993 public hearing, one of those groups also said that "established monitoring" should not include monitoring authorized in an old NSR permit or a CTG, neither of which meet congressional intent since they are not enhanced monitoring.

Another commenter suggested deleting "feasible" from the definition of established monitoring. The commenter added that, by implying that any feasible method that a specific emissions unit may employ is to be deemed "established," the rule could be interpreted to allow the use of monitoring methodologies that are unproved and not widely used.

Several commenters opposed excluding from the definition such factors as the age or date of construction of an emissions unit in defining what is established monitoring for a particular piece of equipment. Some commenters feared that the definition could be read erroneously to require retrofitting and/or modification of emissions units just to allow for installation of established monitoring designed for new units. Another commenter said that the definition in the proposed rule contradicts the factors listed in § 64.4(e) for determining the best established monitoring. In that provision, design and operating circumstances are allowed to be taken into account.

A commenter said that this definition and other similar provisions in the rule, reflect a misconception that the monitoring and testing requirements that are included as part of a standard can be separated from the emission limit without affecting the stringency of that limit.

Response: The Agency has deleted the definition of established monitoring in the final rule. This deletion is consistent with the changes adopted in the final rule concerning the monitoring selection process, which are discussed in Section 9.5 (Part I), below.

Letter(s): ALCOA (IV-D-288); American Textile Manufacturers Institute (IV-D-440); Eastman Chemical Company (IV-D-347); Exxon Chemical Americas (IV-D-339); Kaiser Aluminum & Chemical Corporation, Primary Prod. Div. (IV-D-368); Motorola Inc. (IV-D-302); National Environmental Development Association (IV-D-334); Natural Resources Defense Council, et al. (IV-D-225); Natural Resources Defense Council (IV-F-5)

Section 7.10: Fugitive Emissions

Comment a: One commenter proposed deleting the definition of "fugitive emissions" altogether, arguing that they should not be subject to the rule. Another commenter proposed revising the definition to indicate the sources of fugitive emissions that would be subject to part 64, rather than framing the

definition negatively. There was one recommendation to exclude particulate emissions from the definition, because they are impossible to measure accurately and any controls or associated monitoring for fugitive particulates could be handled directly through the underlying requirements. Another commenter proposed limiting fugitives to equipment leaks with fugitives summed for each process unit as required by § 64.1(b)(1).

Response: The final rule does not include specific provisions related to fugitive emissions and thus does not include the proposed definition.

Letter(s): Koch Industries, Inc. (IV-D-332); Mobil Oil Corporation (IV-D-285); Monsanto Company (IV-D-273); Texas Chemical Council (IV-D-365)

Comment b: One commenter sought clarification that dividing fugitive emission sources into many small areas to appear de minimis would be a circumvention of part 64.

Response: Because the final rule does not include the use of this term, these comments are no longer applicable.

Letter(s): Texas Chemical Council (IV-D-365)

Section 7.11: Intermittent Compliance

7.11.1: Generally

Comment a: Some commenters suggested that the definitions of "continuous" and "intermittent" compliance be deleted or, alternatively, revised to authorize the use of data other than enhanced monitoring results in making continuous compliance determinations. Commenters said that if the enhanced monitoring rule were separated from the process of certifying compliance, a definition of intermittent compliance would be unnecessary. One commenter said that the definition needed to be clarified to explain how to certify when data conflict.

Response: The proposed definition of intermittent compliance is not included in the final rule. Instead, the revisions to § 70.6(c) and the accompanying discussion in Sections I.C.5. and II.K. of the preamble to the final rule fully

describe EPA's position as to the meaning of intermittent compliance.

Letter(s): Chemical Manufacturers Association (IV-D-301); Clean Air Implementation Project (IV-D-242); Mississippi Chemical Corp. (IV-D-179); Monsanto Company (IV-D-273)

7.11.2: Deviations

Comment a: Another commenter asked what a source must certify, if it is asserting the malfunction exemption for a deviation of the monitor or a standard, but the applicability of the exemption has not been determined as may often happen. The commenter also asked whether the source must amend its monitoring report, once the issue is finally determined.

Response: Under the revised provisions of § 70.6(c), this type of event would be reported as a possible exception to compliance. The owner or operator would be free to add details to the certification to document its position that the event was an excused malfunction, but such details are not required to be submitted. The owner or operator also has the ability to provide such details in response to any follow-up actions taken in response to the possible exception(s) identified in the compliance certification.

Letter(s): National Environmental Development Association (IV-D-334)

7.11.3: Inadequate Data

Comment a: Some commenters proposed that the definition be revised so that monitoring downtime does not require a source to certify intermittent compliance. As drafted, the commenters said, the definition trivializes actual emission violations and presents the possibility that excused monitor downtime could result in intermittent compliance. Several commenters proposed deleting this part of the definition because this deletion would help to separate the concepts of compliance and proof of compliance. Another commenter recommended that the definition of "intermittent compliance" be revised to exclude minor deviations from quality assurance procedures that do not compromise the ability to demonstrate continuous compliance. Other commenters said that, at the least, EPA should provide a mechanism for distinguishing compliance with

a substantive standard and with a data availability requirement, or should allow a source to use other available information for certifying compliance if an enhanced monitoring protocol fails to meet a data availability requirement. Another commenter recommended allowing sources to certify continuous compliance where quality assured data are not available for all monitored periods if the owner or operator has complied with the applicable limitations or standards and the available quality-assured data demonstrates compliance. This commenter did not believe inadequate data should be a reason to certify intermittent compliance.

Response: The Agency agrees that the proposed definitions of continuous compliance and intermittent compliance would have confused the concepts of being in continuous compliance and demonstrating continuous compliance, and thus the proposed definitions are not included in the final rule. The Agency notes that under both the proposed and final rule, not having data from an enhanced monitoring protocol does not imply that a source violated the underlying emission limitation or standard.

Letter(s): Alabama Department of Environmental Management (IV-D-453); American Textile Manufacturers Institute (IV-D-440); Amoco Corporation (IV-D-244); Council of Industrial Boiler Owners (IV-D-319); Department of Energy (IV-D-358); Dow Chemical Company (IV-D-260); Eastman Chemical Company (IV-D-347); Eastman Kodak Company (IV-D-333); Louisiana Mid-Continent Oil and Gas Association (IV-D-454); Questar Pipeline Company (IV-D-480); Union Carbide Corporation (IV-D-293)

Section 7.12: Major Source

7.12.1: Limiting Definition to Single Emissions Units

Comment a: Many commenters objected to defining the term "major stationary source" as used in section 114(a)(3) of the Act in a manner consistent with the part 70 definition of "major source." Commenters noted that case law, including the Alabama Power and Chevron cases, grants EPA the discretion to define major stationary source or major source as either an entire facility or as a single source of emissions. These commenters believe that it would be correct policy to interpret the term as used in section 114(a)(3) as a single source of emissions because monitoring will generally be specific to an emissions unit not an entire facility, and the benefits of monitoring smaller emissions units do not justify the costs.

Commenters also noted that defining major stationary source as applying to a single source of emissions would be consistent with the general section 302(j) definition, with the use of the term for NSPS purposes in section 111(a)(3) of the Act, and with recent regulatory interpretations in the early reductions program and proposed hazardous organic NESHAP rule. Some commenters noted that the use of the term "major stationary source" in section 114(a)(3) instead of the title V term "major source" evidences congressional intent to apply enhanced monitoring more narrowly than the applicability of the operating permits program. Other commenters argued that it was illegal to interpret section 114(a)(3) in any manner other than as requiring monitoring at emissions units that are by themselves major stationary sources. Finally, commenters requested clarification as to whether the definition was to apply on a facility-wide or single emissions unit basis.

Response: The Agency disagrees with these comments as a matter of statutory interpretation and also believes that the comments are inappropriate for policy reasons. See Section II.A. of the preamble to the final rule for further discussion.

Letter(s): American Automobile Manufacturers Association (IV-D-538); American Electronics Association, Clean Air Task Force (IV-D-437); American Gas Association (IV-D-265); Arkla Energy Resources Company (IV-D-343); California Air Resources Board (IV-D-387); Chemical Manufacturers Association (IV-D-301); Clean Air Implementation Project (IV-D-242); ENRON Operations Corp. (IV-D-390); East Ohio Gas Company, The (IV-D-355); Eastman Chemical Company (IV-D-347); Mississippi River Transmission Corp. (IV-D-344); Monsanto Company (IV-D-273); Occidental Chemical Corporation (IV-D-240); Shell Oil Company (IV-D-280)

Comment b: One commenter argued that the term major stationary source should be limited not only to single emissions units but also to the general definition of major stationary source applicable for attainment areas. This approach would avoid requiring monitoring for small emissions units in nonattainment areas subject to the lower tons per year thresholds established for major sources in title I of the 1990 Amendments to the Act.

Response: The Agency disagrees with this approach for the same reason that it rejects the use of a single emissions unit approach to defining a major source. The Agency believes that there is no reason to adopt a different

definition of major source for part 64 than the definition already established in part 70.

Letter(s): ENRON Operations Corp. (IV-D-390)

7.12.2: Limiting Definition to Stationary Sources

Comment a: One commenter requested explicit clarification that enhanced monitoring applies solely to stationary sources as opposed to mobile sources.

Response: The EPA confirms that only stationary sources are covered under the enhanced monitoring rule, consistent with the definition of major source under part 70 which specifically refers to "stationary sources." The only potential exceptions to this clarification is that vessels servicing or associated with Outer Continental Shelf sources are required to be considered as direct emissions of a stationary source pursuant to section 328(a)(4)(C) of the Act, and temporary sources required to obtain permits under part 70 may in some instances involve sources that could be considered both as a mobile and stationary source. (For further discussion, see Technical Support Document for Title V Operating Permits Program, sections 2.13 and 3.2.1 (May 1992), EPA Air Docket No. A-90-33.)

Letter(s): Engine Manufacturers Association (IV-D-490)

7.12.3: Exclusion of Major Hazardous Air Pollutant Sources from Definition

Comment a: One commenter requested clarification of why the definition of major source under part 64 excluded major hazardous air pollutant (HAP) sources included in the major source definition under part 70. That commenter also requested confirmation that States would be able to require enhanced monitoring for such sources even if a MACT standard was not yet developed.

Response: The proposed regulations excluded HAP sources from the definition of major sources because the term "major source" was used only in the context of determining the applicability of part 64 for non-HAP requirements. For HAP requirements, the proposed part 64 would have applied to any source (either major or area source) required to obtain a

part 70 operating permit or a preconstruction permit under part C or part D of title I of the Act. In the final rule, EPA has removed the language from the definition of major source that excluded HAP sources and instead has relied solely on the applicability provisions of § 64.2 to clarify which HAP sources are required to meet part 64 requirements (see Section 6.1 (Part I) for a discussion of HAP source applicability). With respect to a State's ability to require enhanced monitoring at HAP sources prior to promulgation of MACT standards, EPA confirms that nothing in part 64 precludes a State from using independent State authority to require monitoring of any air pollution source.

Letter(s): Michigan Department of Natural Resources (IV-D-438)

7.12.4: Including Fugitive Emissions in Calculation of Potential Emissions and Major Source

Comment a: Commenters requested that EPA clarify that the definition of major source excludes certain fugitive emissions in determining the potential to emit of a source (and, therefore, individual emissions units at the source as well). One commenter said that EPA should not consider fugitive emissions from mining operations near beneficiation facilities for which an operating permit may be required. Commenters also stated that fugitive emissions should be included in determining potential to emit only for those sources (or emissions units) for which a rulemaking under section 302(j) of the Act has been conducted, including for sources that are major pursuant to the definition of a major source for nonattainment areas included in title I of the 1990 Amendments to the Act.

Response: Part 64 relies on the definition of major source found in part 70 and will therefore follow the provisions in that rule for determining when fugitive emissions should be counted toward determining potential emissions and what qualifies as a major source. Generally, for sources that are major stationary sources pursuant to the definition in section 302 of the Act, fugitive emissions will be counted toward determining potential emissions only where a section 302(j) rulemaking has been conducted. The Agency originally took the position in the response to comment document for the part 70 regulations that there is no similar exclusion of fugitive emissions for sources that are major sources pursuant to the nonattainment provisions in part D of title I of the Act or pursuant to the air toxics provisions in title III of the Act. (For further discussion, see section 3.5 of the Technical Support Document for Title V Operating Permits Program

(May 1992), EPA Air Docket No. A-90-33.) In addition, the promulgated definition of "major source" in part 70 requires fugitive emissions to be counted, inter alia, for source categories regulated by an NSPS or NESHAP promulgated after August 7, 1980. The Agency has since reconsidered these positions, and takes the position that fugitive emissions do not need to be counted for source categories covered by post-August 7, 1980 NSPS or NESHAP standards, or for sources that are major sources pursuant to the definitions for nonattainment areas in title I of the 1990 Amendments. However, the policy expressed with respect to the air toxic provisions in title III of the Act remains in effect. For further detail on EPA's position, see Memorandum, Consideration of Fugitive Emissions in Major Source Determinations, from Lydia Wegman, Deputy Director, Office of Air Quality Planning and Standards, dated March 8, 1994 (available in EPA Air Docket A-93-50). With respect to the issue of sources of fugitive emissions collocated with other sources, see the response in Section 6.5.2 (Part I), above.

Letter(s): ASARCO (IV-D-327); Coalition for Clean Air Implementation (IV-D-304); Kennecott Corporation (IV-D-262)

7.12.5: Miscellaneous Comments

Comment a: One commenter noted that because the definition of major source relies on potential to emit, many more small businesses will be impacted than EPA has estimated. A second commenter requested that the cross-reference to the part 70 definition of major source be included in § 64.1(b) rather than merely in the definitions in § 64.2. Finally, a third commenter requested that the PSD major source definition be applied to sources that would not be subject to any applicable requirements except for PSD.

Response: With respect to underestimating small business impacts because of the reliance on potential to emit in the major source definition, EPA notes that it must use potential to emit in determining major sources pursuant to the Act. (For further discussion, see Section 3.2.2 of the Technical Support Document for Title V Operating Permits Program (May 1992), EPA Air Docket No. A-90-33.) On the second issue, EPA believes that the final rule adequately references part 70 in the use of the term major source. Finally, EPA disagrees with the concept of using the PSD major source threshold; EPA also notes that for sources that qualify as major sources

under the lower thresholds elsewhere in the Act, but are subject to no applicable requirements because the PSD threshold is not reached, there is no duty to conduct monitoring under part 64.

Letter(s): Dow Chemical Company (IV-D-260); Pacific Engineering Corporation (IV-D-523); Printing Industries of America, Inc. (IV-D-473)

Section 7.13: Potential to Emit

Comment a: Several commenters stated that they supported the proposed definition of potential to emit. Numerous commenters, however, indicated that they disagreed with EPA's definition of potential to emit. Many commenters believed that the definition resulted in unrealistically high emission numbers because the definition assumes that a unit operates 8760 hours per year and at full capacity. Others noted that while the definition does take into account operating hour restrictions and/or control system efficiencies, the requirement that federally-enforceable restrictions apply in order to take advantage of such restrictions on potential emissions is too restrictive. Commenters indicated that this issue is currently subject to litigation under the operating permits program. They also pointed out that State-only requirements are still legally binding on a source and that a source should be able to take credit for such legally binding requirements. Other commenters noted that EPA does not yet have in place any simple means for establishing federally-enforceable limitations.

Some commenters requested specific changes to the definition, including: providing specific exceptions for agricultural operations; recognizing seasonal operations process changes, and operating restrictions as means of limiting emissions; making the definition consistent with the NESHAP definition; and allowing to be taken into account the likelihood and degree of exceedances from reductions in control system efficiency. One commenter requested clarification on how the definition applies to batch processors.

Response: The Agency has retained the definition of potential to emit in the final rule and provides a response to these comments in Section II.A. of the preamble to the final rule.

Letter(s): See Appendix I-A. All comment letters marked with one (*) or two asterisks (**) included comments on this issue.

Comment b: Other commenters objected to the discussion in the preamble to the proposed rule which referred to EPA's June 1989 guidance on limiting potential to emit (58 FR 54663-64). The 1989 guidance requires that such limits be enforceable as a matter of law and as a practical matter, and includes several examples of how a requirement can be made enforceable as a practical matter. The preamble indicated that a source would likely have to perform some form of monitoring akin to enhanced monitoring in order to make restrictions on potential emissions enforceable as a practical matter. Commenters objected that this was too severe an interpretation of the 1989 guidance and went beyond previous EPA interpretations of this issue.

Response: In response to these comments, EPA clarifies that the purpose of the discussion in the preamble to the proposed rule was merely to indicate EPA's view that in order for a source to have a restriction that is enforceable as a practical matter, the restriction should meet the criteria in the 1989 guidance and the source should have a means to document that the restriction actually takes effect (see 58 FR 54663-64, October 22, 1993). Thus, as stated in the 1989 guidance, a source must have monitoring that can be used directly to show compliance with the restriction on its potential to emit. It is important to note, however, that unless the federally-enforceable restriction is an applicable requirement that is subject to part 64, the monitoring required for limiting potential to emit will not be subject directly to the requirements of part 64, such as performance and operating requirements.

Letter(s): ASARCO (IV-D-327); Armco Steel Company (IV-D-395); Association of International Automobile Manufacturers (IV-D-264); Chemical Manufacturers Association (IV-D-301); Chevron (IV-D-397); Clean Air Implementation Project (IV-D-242); Eastman Chemical Company (IV-D-347); Los Angeles County Sanitation Districts (IV-D-26); Monsanto Company (IV-D-273); Rubber Manufacturers Association (IV-D-331); United Parcel Service (IV-D-320)

Section 7.14: Regulated Air Pollutant

Comment a: One commenter proposed that the definition be revised to add that in the case of particulate matter, only PM-10 should be included in determining

the emissions at a facility. The commenter argued that this would help the grain handling industry where very little of total suspended particulate is PM-10. Another commenter recommended revising the definition to exclude section 112(r) materials and section 112(b) hazardous air pollutants.

Response: The Agency disagrees with these comments. The definition of "regulated air pollutant" has been established in 40 CFR part 70 and there is no justification for establishing a separate term in part 64. The Agency notes that only where an emission limitation or standard applies to a regulated air pollutant will part 64 apply to that pollutant, and that any emission limitations or standards adopted pursuant to section 112 subsequent to the 1990 Amendments to the Act are specifically exempted from part 64 pursuant to § 64.2(b).

Letter(s): Agribusiness Association of Iowa (IV-D-529); National Grain and Feed Association (IV-D-312); Union Carbide Corporation (IV-D-293)

Section 7.15: Other Definitions to Consider

7.15.1: Definitions Related to the Definition of Sources Subject to Part 64

Comment a: One commenter proposed a new definition of "source" to include only those emissions units at a facility for which a compliance problem has been proven by EPA and for which prior established monitoring has been proven inadequate. Another commenter proposed a definition of "research and development facility" which the commenter proposed be exempt from part 64.

Response: The Agency has disagreed in response to comments under the relevant applicability issue areas that the rule should focus on only sources with proven compliance problems or should provide special exemptions for research and development facilities, and thus likewise rejects these suggested definitions.

Letter(s): Kerr-McGee Corporation (IV-D-232); Monsanto Company (IV-D-273)

7.15.2: New Definitions Related to Monitor Types

Comment a: Two commenters proposed a new definition of "predictive emissions monitoring systems." One commenter's proposal would state that predictive emissions monitoring systems shall be equivalent to parametric or process variable based systems. Another commenter proposed that the terms "continuous emission monitoring system" and "continuous emission rate monitoring system" be defined.

Response: The Agency agrees with the proposal to include a definition of predictive emission monitoring system and has done so in the final rule. With respect to continuous emission rate monitoring system, the final rule does not include this term and thus no definition is warranted. For CEMS, the Agency believes that the term is well-understood and does not need a specific definition in the context of a broadly applicable rule such as part 64. For instance, if one jurisdiction relies on a definition of CEMS which is basically the same as one that could be adopted in part 64, the slight difference in terminology could be relied on by some to argue that their CEMS is not a "CEMS" as defined by part 64. The Agency wants to avoid this type of result and thus has left the term undefined so that CEMS is interpreted consistent with the accepted understanding of what constitutes a CEMS.

Letter(s): Department of Energy (IV-D-358); Kerr-McGee Corporation (IV-D-232); Pavilion Technologies, Inc. (IV-D-309)

Comment b: One commenter recommended adding the term "general enhanced monitoring protocol" to allow sources and trade associations to develop enhanced monitoring protocols that could be used for sources with similar operating characteristics, emissions, and parameters. The commenter added that § 64.7 could then include a streamlined application procedure for such general enhanced monitoring protocols.

Response: Because the term "enhanced monitoring protocol" is not used in the final rule, this suggestion is not appropriate. However, the submittal requirements in § 64.4 allow for the owner or operator to rely on various types of monitoring approaches without having to justify the proposed monitoring. In addition, this section also allows the owner or operator to propose a general approach to monitoring multiple, similar control device installations at a particular source. These provisions are consistent with this proposed definition.

Letter(s): ALCOA (IV-D-288)

Comment c: One commenter recommended defining "sufficient" as used in the definition of "enhanced monitoring" because if the definition relies on this qualifying term, then it must be defined.

Response: This comment is no longer applicable because the final rule does not contain the applicable definition.

Letter(s): Department of Energy (IV-D-358)

7.15.3: Definitions Related to Monitor Selection

Comment a: Certain commenters proposed a new definition for the term "best established monitoring." One commenter's proposal would: clearly indicate cost-effectiveness as a criterion; specify no top-down analysis; presume parametric monitoring acceptable; require statistical verification of short-term limits; and exempt sources from enhanced monitoring during short-term malfunctions. Another commenter recommended including in the rule the explanation at 58 FR 54650 of the preamble to the proposed rule, which clarifies that "best" means assurance of continuing compliance, and not the technological elements of the monitoring. Another commenter recommended substituting and defining a different word than "best" as used in the proposed monitoring selection process. A definition of "sufficient," "adequate," or "optimal" should restate the language from the preamble that a top-down process that focuses on monitoring that is technically and economically feasible is not required.

Response The Agency has deleted the term "best" in the final rule and thus these suggestions are no longer applicable.

Letter(s): Colorado Association of Commerce and Industry (IV-D-243); Phillips Petroleum Company (IV-D-380); Union Carbide Corporation (IV-D-293)

7.15.4: Definitions Related to Monitor Frequency Issues

Comment a: One commenter proposed adding a definition of "margin of compliance" as used in the context of determining the appropriate monitoring frequency.

The term would be defined to mean the difference between actual emissions and the emissions that would be allowable under an applicable requirement. The commenter also proposed a definition for the related term "potential variability" of emissions. This term would be defined to mean the variation seen in a measured parameter or emission rate over time. Another commenter recommended clarifying whether frequent emissions measurement is necessary and, if it is, defining "frequency" and "extremely frequent."

Response: The final rule recognizes that the appropriate monitoring for a particular pollutant-specific emissions unit may vary depending upon the margin of compliance and the potential variability of emissions. However, the Agency does not believe that any specific test for margin of compliance or potential variability of emissions can be articulated in a manner that is applicable to all potential circumstances and therefore has not included such a test in the final rule. Therefore, the definitions suggested by the commenter have not been included in the final rule. The Agency has also moved the requirements for frequency of measurements from the proposed appendices to § 64.3(b) of the final rule. The Agency believes this section adequately specifies how the appropriate frequency of monitoring is to be determined. First, for the largest emissions units, continuous monitoring is presumptively required, with an exception based on availability of data collection mechanisms for a particular parameter; for smaller emissions units, no frequency is presumptively established, except that data collection less frequent than daily for at least some parameter is presumed inappropriate. As discussed in the preamble to the final rule, because the final rule focuses on emissions units with control devices, frequent, often continuous monitoring will often be necessary because of the possibility of upset conditions that could greatly influence emission rates. The frequency provisions in the final rule reflect this concept.

Letter(s): Department of Energy (IV-D-358); Dow Chemical Company (IV-D-260)

Section 8: Implementation Requirements (§ 64.3)

Section 8.1: Implementation Through Operating Permits (§ 64.3)

In Section 3.2 (Part I), above, EPA has summarized and responded to many general comments on whether the enhanced monitoring provisions of the statute should be implemented through a general rule and then individual permits, as proposed, or through individual rulemakings for particular source categories and applicable requirements. The following comments include some additional general comments on the implementation process as set forth in proposed § 64.3, as well as specific comments on proposed § 64.3 provisions.

8.1.1: General Comments on Implementation Through Operating Permits

Comment a: Some commenters supported the proposed language in § 64.3 that would implement enhanced monitoring through the permitting process. A commenter requested regulatory or preamble confirmation that State rules need only have general authority to implement enhanced monitoring and do not need to adopt part 64 by reference or to promulgate equivalent State regulations.

Response: A permitting authority is not required to adopt part 64 by reference or to promulgate equivalent State regulations. The part 64 monitoring program is implemented through part 70 and the State's operating permits program should include a provision granting general authority to implement part 64.

Letter(s): Alabama Department of Environmental Management (IV-D-453); Arkansas Department of Pollution Control and Technology (IV-D-3); Hazardous Waste Treatment Council (IV-D-392); Ohio Manufacturers Association (IV-D-348)

Comment b: Commenters stated that enhanced monitoring is inconsistent with the operating permits rule. Many commenters said that although the title V operating permits program was not intended to be used to establish additional emission limits, standards or requirements, the proposed rule will have that effect. One commenter said that part 64 will require changes to permit rules for preparing and processing applications.

Response: The EPA disagrees with these arguments. The part 64 requirements are independently applicable, substantive requirements that must be achieved

by a source. The substantive duty to conduct monitoring in order to provide a reasonable assurance of compliance is established by part 64. Only the specifics of how the owner or operator will achieve that substantive duty will be implemented through the operating permits program. In this respect, part 64 will operate similarly to the creation of other types of applicable requirements under the Act, such as case-by-case MACT standards under section 112(g).

Letter(s): Baltimore Gas and Electric Company (IV-D-296); Carolina Power & Light Company (IV-D-297); Coalition for Clean Air Implementation (IV-D-304); Duquesne Light (IV-D-375); Fertilizer Institute, The (IV-D-251); Gas Processors Association (IV-D-227); Illinois Power Company (IV-D-274); Kerr-McGee Corporation (IV-D-232); Large Public Power Council (IV-D-336); Utility Air Regulatory Group (IV-D-489); Williams Natural Gas Company (IV-D-213)

Comment c: An industry association argued that the proposed rule will be inconsistent with provisions in section 502 of the Act and 40 CFR 70.4(i) allowing States to correct permit program inadequacies for a two-year period before EPA may promulgate regulations of its own.

Response: The EPA disagrees with these comments. It is unclear to EPA how section 502(d)(3) of the Act and 40 CFR 70.4(i) are relevant to this rulemaking. Section 502(d)(3) pertains to the authority of the Administrator to promulgate, administer and enforce an operating permits program for a State that fails to submit a program two years after the date required for submission. Section 70.4(i) authorizes inadequate permit programs to be revised. Part 64 should not lead to inadequate permit programs. Part 64 creates new, substantive applicable requirements that must be incorporated into title V operating permits just like any other new requirement.

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

Comment d: An industry association stated that the rule will be an unlawful adoption of Federal rules by a State without required notice and comment.

Response: The EPA disagrees with this comment. As noted above, part 64 creates new, substantive applicable requirements that must be complied with and incorporated into title V operating permits just like other new applicable

requirements promulgated under the Act.

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

Comment e: Several commenters added that it was impractical to implement enhanced monitoring without first determining what periodic monitoring requirements for an operating permits program are acceptable.

Response: The EPA disagrees. The criteria for monitoring under part 64 are specified in § 64.3. These criteria apply without the need to evaluate them in conjunction with part 70 permitting requirements. Under part 70, permitting authorities are granted increased discretion to determine the appropriate degree of monitoring to require to assure compliance with a permit.

Letter(s): American Gas Association (IV-D-265); Arkla Energy Resources Company (IV-D-343); East Ohio Gas Company, The (IV-D-355); Mississippi River Transmission Corp. (IV-D-344)

Comment f: Another commenter said that, as under part 70, no new monitoring should be required where a standard already has a current monitoring requirement.

Response: The EPA notes that for some sources, the existing monitoring will be enhanced monitoring. The EPA believes that requiring other sources to either implement new enhanced monitoring or to upgrade existing monitoring so that it is enhanced is consistent with congressional intent to require enhanced monitoring for all major stationary sources. The Agency also notes that 40 CFR 70.6(a)(3) may require monitoring in addition to current monitoring where that monitoring is inadequate for purposes of certifying compliance as required by § 70.6(c).

Letter(s): Gas Processors Association (IV-D-227)

8.1.2: Timing of Part 64 Promulgation in Context of Operating Permits Program

Comment a: Several commenters encouraged EPA to promulgate part 64 as soon as possible so that State permits programs are not undermined.

Response: No response is necessary.

Letter(s): Arkansas Department of Pollution Control and Technology (IV-D-3); Fort Howard Corporation (IV-D-233); Tennessee Department of Environment and Conservation (IV-D-399); Texas Natural Resource Conservation Commission (IV-D-371)

Comment b: Many commenters objected to the proposed rule's publication shortly before States were required to submit their operating programs for EPA review. Some commenters were concerned that the submitted program will be deemed incomplete or in conflict with the proposed rule. A commenter also stated that it was unfair to be placed in the same position as those States that did not meet the submittal deadline.

Several commenters noted that some permit applications will be due before the enhanced monitoring rule is final, and others argued that it is unreasonable for a source to have to propose an enhanced monitoring protocol based on the proposed rule. Other commenters said that such a result will further burden the States since permit modifications will then be required when the enhanced monitoring rule becomes final. One commenter said that EPA needs to acknowledge that the delay in promulgation causes problems and should deal with the implementation problem in a different manner than is proposed. Other commenters opposed reopening part 70 permits approved prior to the part 64 effective date and suggested that enhanced monitoring requirements be incorporated into any such permits at the time of permit renewal.

Response: For emissions units and applicable requirements subject to the new monitoring requirements in part 64, EPA has revised the final rule to provide for an extended implementation schedule that effectively addresses these concerns. See Section I.C.2. of the preamble to the final rule for further discussion.

Letter(s): Amoco Corporation (IV-D-244); Arkansas Department of Pollution Control and Technology (IV-D-3); El Paso Natural Gas Company (IV-D-271); ENRON Operations Corp. (IV-D-390); Enserch Development Corp. (IV-D-239); Goodyear Tire and Rubber Company, The (IV-D-292); GPM Gas Services Company (IV-D-229); Iowa Department of Natural Resources (IV-D-4); Kerr-McGee Corporation (IV-D-232); Lone Star

Energy Company (IV-D-401); Louisiana Mid-Continent Oil and Gas Association (IV-D-454); Mississippi Department of Environmental Quality, State of (IV-D-472); Natural Gas Pipeline Company of America (IV-D-248); Ohio EPA (IV-D-283); United States Sugar Corporation (IV-D-382)

8.1.3: Burdens and Delays to the Operating Permits Process

Comment a: Many commenters said that implementation of enhanced monitoring through the permitting process will overburden sources, permitting authorities, and EPA, will cause delays, and will potentially overwhelm the operating permits program. commenters stated that this concern was intensified because of the low applicability threshold for part 64 and the complexity of many monitoring applications. Other reasons provided for why the burdens would be excessive and potentially destroy the permits program include: inadequate personnel resources at State agencies to review proposed protocols; sources having to invest significant amounts of money without being guaranteed that their proposed enhanced monitoring protocol will be approved; the requirement for case-by-case determinations, especially without sufficient lead time for permitting authorities to develop enhanced monitoring rules or implementation policies; and an inability to submit a complete permit application because the ultimate monitoring requirements envisioned by a permitting authority will not be known as a permit application is prepared. One commenter was also concerned that once the application is revised, it will be re-reviewed and only when the application is approved may the applicant object to the permit conditions; this protracted process could force a source to operate without a permit. Still another commenter raised procedural concerns relative to determining whether an operating permits application is timely submitted and whether the application is complete.

Response: To address the concerns of the commenters, EPA has incorporated significant revisions in the final rule to provide for: an extended implementation schedule that will focus initial implementation only the largest emissions units; revised applicability provisions to focus the rule on emissions units with control devices; simplified monitor selection and permit application procedures; reorganized and simplified performance criteria as specified in § 64.3; and other modifications designed to reduce the burdens of the rule on the permits process. See Section I.C.2. of the preamble to the final rule for further discussion.

Letter(s): Allied Signal, Inc. (IV-D-313); American Automobile Manufacturers Association (IV-D-538); American Electronics Association, Clean Air Task Force (IV-D-437); American Gas Association (IV-D-265); American Petroleum Institute (IV-D-289); Amoco Corporation (IV-D-244); Arkla Energy Resources Company (IV-D-343); Armco Steel Company (IV-D-395); AT&T (IV-D-361); Baltimore Gas and Electric Company (IV-D-296); Boeing Company, The (IV-D-337); BP Oil Company (IV-D-315); Carolina Power & Light Company (IV-D-297); Chemical Manufacturers Association (IV-D-301); Chevron (IV-D-397); Cincinnati Gas & Electric Company (IV-D-259); Class of '85 Regulatory Response Group (IV-D-338); Clean Air Implementation Project (IV-D-242); Coalition for Clean Air Implementation (IV-D-304); Colorado Association of Commerce and Industry (IV-D-243); Colorado Department of Health (IV-D-209); Duquesne Light (IV-D-375); East Ohio Gas Company, The (IV-D-355); Exxon Company, USA (IV-D-310); General Electric Company (IV-D-278); GPM Gas Services Company (IV-D-229); Greater Cincinnati Chamber of Commerce (IV-D-224); Large Public Power Council (IV-D-336); Leather Industries of America (IV-D-286); Louisiana Mid-Continent Oil and Gas Association (IV-D-454); Mississippi River Transmission Corp. (IV-D-344); Mobil Oil Corporation (IV-D-285); National Environmental Development Association (IV-D-334); National Oilseed Processors Association (IV-D-267); Natural Gas Pipeline Company of America (IV-D-248); Natural Resources Defense Council, et al. (IV-D-225); NESCAUM (IV-D-253); North Dakota Department of Health and Consolidated Laboratories (IV-D-250); Occidental Chemical Corporation (IV-D-240); Ohio Cast Metals Association (IV-D-324); Ohio Edison (IV-D-266); Questar Pipeline Company (IV-D-480); Society of the Plastics Industry, Inc. (IV-D-287); South Carolina Electric & Gas Company (IV-D-394); Specialty Steel Industry of the United States (IV-D-328); Steel Manufacturers Association (IV-D-326); Tennessee Valley Authority (IV-D-389); Texaco Inc. (IV-D-357); Texas Chemical Council (IV-D-365); Union Camp (IV-D-359); United States Sugar Corporation (IV-D-382); U.S. Steel Group, The (IV-D-340); Utility Air Regulatory Group (IV-D-489); Whirlpool Corporation (IV-D-493)

8.1.4: Permit Shield

Comment a: Some commenters were concerned that if part 64 becomes effective after submittal of a permit application or after permit issuance, a source will lose the protection of the permit application shield or permit shield, as

applicable. Other commenters asserted that linking the enhanced monitoring program to the permitting process will unnecessarily hamper the timely processing of permits and in some cases result in the loss of the permit application shield.

Response: The implementation provisions in the final rule address these issues. For smaller emissions unit, § 64.5 establishes that part 64 is not effective until the source is required to submit an application for permit renewal. For larger emissions units, the same approach applies if the initial permit has already been issued. Where an application has been submitted but not yet determined complete within 180 days after part 64 is promulgated, part 64 will be effective for those larger emissions units. The Agency believes that this extended implementation schedule will address the commenters' concerns about timely issuance of permits and the impact of part 64 on the permit or permit application shields in part 70.

Letter(s): American Textile Manufacturers Institute (IV-D-440); Arkla Energy Resources Company (IV-D-343); East Ohio Gas Company, The (IV-D-355); ENRON Operations Corp. (IV-D-390); Mississippi River Transmission Corp. (IV-D-344); Public Service Electric and Gas Company (IV-D-282)

8.1.5: Improper and Inconsistent Application of Part 64 in Permits

Comment a: Many commenters feared that sources will agree to submit to improper enhanced monitoring requirements because States will have such wide latitude to reject a permit application as incomplete on the grounds that the enhanced monitoring is insufficient. commenters also were concerned that permit writers will be tempted to make simple decisions and require CEMS, thereby avoiding EPA and citizens' challenges, and that sources will in turn be forced to agree so that they can continue production. Others expressed concerns that the case-by-case process will lead to permitting disputes and arbitrary and non-uniform application of standards.

Response: In response to these concerns, the final rules incorporate numerous clarifying changes to reduce uncertainty regarding the part 64 requirements. In addition, the extended implementation schedule will allow EPA to make available guidance on example monitoring for particular process/pollutant combinations, and for States to issue

programmatic rules for common situations. These efforts will assist in clarifying the appropriate types of monitoring for particular circumstances while still allowing owners or operators to propose the monitoring approach that is most appropriate for their particular facility.

Letter(s): American Foundrymen's Society, Inc. (IV-D-294); American Gas Association (IV-D-265); Arkansas Department of Pollution Control and Technology (IV-D-3); Arkla Energy Resources Company (IV-D-343); Armco Steel Company (IV-D-395); Boeing Company, The (IV-D-337); Buffalo Color Corporation (IV-D-466); Burnham Foundry (IV-D-446); Coalition for Clean Air Implementation (IV-D-304); East Ohio Gas Company, The (IV-D-355); Enserch Development Corp. (IV-D-239); International Business Machines Corporation (IV-D-238); Lone Star Energy Company (IV-D-401); Mississippi River Transmission Corp. (IV-D-344); National Petroleum Refiners Association (IV-D-276); Ohio Cast Metals Association (IV-D-324); Ohio Edison (IV-D-266); Ohio Chamber of Commerce (IV-D-370); Texas Intrastate Natural Gas Pipelines (IV-D-221); Utility Air Regulatory Group (IV-D-489)

8.1.6: Structural Recommendations for Reducing Implementation Burdens

Comment a: Although concerned as to how enhanced monitoring would be implemented through the operating permits program, many commenters made suggestions to facilitate implementation. The three main areas of suggestions were: extend the effective date of the rule; phase in the applicability of the rule; and separate enhanced monitoring protocol approval from permit approval. The following discussion outlines the comments in each of these areas and then provides a single response to all of these suggestions.

One suggestion from several commenters was to delay the effective date of the final rule in order to provide States adequate time to review, process and issue initial operating permits, and adequate time to develop compliance strategies based on the final rule. Some commenters said that in certain cases, timing problems will result between the effective date of the enhanced monitoring rule and State deadlines for submitting operating permit applications.

Some suggested delaying implementation from 90 days to 18 months; another commenter suggested a delay of the earlier of the submittal of a

permit application or 12 months; still other commenters suggested delaying implementation until the source's permit was renewed. One commenter recommended tying the effective date of the enhanced monitoring rule to a source's operating permit instead of establishing an effective date by rule before operating permits are issued. Another commenter said that facilities should not be required to do any enhanced monitoring until SIPs have been revised to authorize enhanced monitoring (assuming that a SIP revision is necessary). This commenter added that after SIP revisions have been completed, facilities should be given enough time to install enhanced monitoring, even if permits must be reopened to incorporate enhanced monitoring requirements. Another commenter proposed that the implementation schedule for enhanced monitoring be developed in a separate, follow-up rulemaking, in which all affected parties can evaluate further research on alternatives to CEMS and thereby streamline the case-by-case implementation strategy by agreeing on appropriate techniques for broad source categories. Finally, another commenter proposed that the rule not be effective until after the first round of title V permitting is completed.

Another suggestion for reducing the burdens of the rule on the permits program was to phase in the applicability of part 64. Some commenters proposed that part 64 apply only to emissions units that are major sources by themselves initially, with subsequent reductions in applicability in subsequent stages. A number of these commenters noted that this approach is only necessary if EPA rejects their suggestion to select a higher applicability threshold than the one proposed, or that subsequent phases should occur only if the purported benefits of part 64 actually occur. One commenter suggested that the program be phased in so that States can focus first on areas of the most concern, such as nonattainment areas. Another commenter suggested that the proposed rule be implemented outside of the permit process using a tiered approach by which larger sources would be subject to the rule first to enable smaller sources to evaluate the effectiveness and applicability of various enhanced monitoring options.

Many commenters recommended that enhanced monitoring implementation be entirely separated from the permit process. The reasons for separating the processes include: alleviating burdens to permitting authorities that otherwise will be overburdened by simultaneously processing both permits and enhanced monitoring protocols; avoiding sources having to accept protocols that are too

onerous because overburdened permit writers will default to the most technologically advanced alternative; allowing time for the necessary technologies to develop that will allow enhanced monitoring protocols to be accurate and cost-effective; allowing the applicable emission limitations and standards to be established in the permits before the source proposes its enhanced monitoring protocol; and allowing permitting authorities flexibility in the timing of requiring enhanced monitoring proposals. Additional concerns include the fear that the proposed implementation approach would lead to uncertainty and vagueness regarding how compliance will be determined, and the concern that it would be impossible to certify compliance under the operating permits program, since permit applications would be incomplete. Another commenter said that separating enhanced monitoring from the permitting process will make it easier for permitting authorities to develop specific expertise in enhanced monitoring.

Many commenters recommended that enhanced monitoring be separated from the permit process until the operating permits program is established.

A commenter said that it would be impractical for sources to expend the time and money necessary to develop enhanced monitoring protocols based on a proposed rule. This commenter also recommended separating enhanced monitoring protocol submittal from the operating permit application submittal and delaying issuance of operating permits until after enhanced monitoring protocol information has been submitted and reviewed.

Other suggestions for separating the implementation process from the title V permit process included allowing sources to implement proposed enhanced monitoring protocols on an interim basis until a separate enhanced monitoring protocol is approved or placing a schedule for developing and implementing enhanced monitoring at the source in each permit, and thereafter incorporating the enhanced monitoring protocol into the permit through some form of permit modification (preferably an administrative amendment or minor modification). A utility trade group proposed that a separate enhanced monitoring application procedure, with complete public notice and comment, and rights for review of final decisions, be developed. After any challenges to final agency action on the enhanced monitoring proposed by the source is complete, the final enhanced monitoring could be included in the source's permit.

Some commenters suggested a resolution process to address the

enhanced monitoring protocol so that a permit will not be denied simply because an enhanced monitoring protocol has not been approved. Another commenter suggested that proposed enhanced monitoring protocols be submitted with permit applications and that permits be approved while the State continues to review the proposed enhanced monitoring protocol. Once the enhanced monitoring protocol was approved, it could be incorporated into the permit by administrative amendment; this approach would still allow for public review and comment.

Response: The EPA has decided to extend the effective date of the rule so that the applicability of the rule will be phased in over time. The EPA believes these changes adequately address the concerns about burdens to the permit process that underlie the commenters' suggestions. The Agency disagrees that the monitor approval process should be separate from the permit approval process because that separation would effectively require an entirely new set of approval procedures, including public participation procedures. The Agency believes that the part 70 process provides an appropriate vehicle for finalizing monitoring approaches developed by a source in response to part 64.

Letter(s): ALCOA (IV-D-288); Allied Signal, Inc. (IV-D-313); American Automobile Manufacturers Association (IV-D-538); American Gas Association (IV-D-265); American Petroleum Institute (IV-D-289); ARCO (IV-D-396); Arkla Energy Resources Company (IV-D-343); Armco Steel Company (IV-D-395); Bay Area Air Quality Management District (IV-D-402); Buffalo Color Corporation (IV-D-466); Can Manufacturers Institute (IV-D-478); Chemical Manufacturers Association (IV-D-301); Class of '85 Regulatory Response Group (IV-D-338); Clean Air Implementation Project (IV-D-242); Colorado Association of Commerce and Industry (IV-D-243); Columbia Gas System Service Corporation (IV-D-341); Consolidated Natural Gas Company (IV-D-350); Corn Refiners Association, Inc. (IV-D-391); Dow Chemical Company (IV-D-260); East Ohio Gas Company, The (IV-D-355); Eastman Chemical Company (IV-D-347); Eastman Kodak Company (IV-D-333); El Paso Natural Gas Company (IV-D-271); ENRON Operations Corp. (IV-D-390); Entergy (IV-D-281); Exxon Chemical Americas (IV-D-339); Exxon Company, USA (IV-D-310); Gas Processors Association (IV-D-227); Gas Research Institute (IV-D-303); General Electric Company (IV-D-278); GPM Gas Services Company (IV-D-229); International Business Machines Corporation (IV-D-238); KBN Engineering and Applied Sciences, Inc. (IV-D-475); Kerr-McGee Chemical

Corp. (IV-D-385); Minnesota Pollution Control Agency (IV-D-469); 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); Natural Gas Pipeline Company of America (IV-D-248); Occidental Chemical Corporation (IV-D-240); Ohio Chamber of Commerce (IV-D-370); Ohio Edison (IV-D-266); Ohio EPA (IV-D-283); Pacific Gas Transmission Co. (IV-D-234); Public Service Electric and Gas Company (IV-D-282); Questar Corporation (IV-D-505); Rubber Manufacturers Association (IV-D-331); Society of the Plastics Industry, Inc. (IV-D-287); Southwestern Public Service Company (IV-D-272); Tennessee Valley Authority (IV-D-389); Texaco Inc. (IV-D-357); Texas Intrastate Natural Gas Pipelines (IV-D-221); Union Carbide Corporation (IV-D-293); United States Sugar Corporation (IV-D-382); Utility Air Regulatory Group (IV-D-489); Westinghouse Electric Corporation (IV-D-321)

8.1.7: Other Recommendations for Reducing the Implementation Burdens

Comment a: One commenter proposed to delay applicability of part 64 for sources that will be subject to future MACT standards so that appropriate monitoring for both hazardous air pollutant and non-hazardous pollutant requirements can be integrated. (See related comments in Section 6.1.6 (Part I), above.)

Response: The Agency disagrees with this suggestion. See response in Section 6.1.6 (Part I) .

Letter(s): Goodyear Tire and Rubber Company, The (IV-D-292)

Comment b: Commenters suggested that the burdens of part 64 on the permitting process could be reduced by limiting the amount of monitoring specifics that would be included in permits. Some commenters said that a permit application or permit should make some reference to enhanced monitoring, including having the permit application identify the specific point and area sources that must comply with enhanced monitoring, but not include details of proposed monitoring protocols. The permit then could refer to the applicable requirement which requires the use of an enhanced monitoring method after the enhanced monitoring protocol is established outside of the permitting process. Some commenters

proposed implementing enhanced monitoring through "Enhanced Monitoring Plans." One commenter suggested that the Enhanced Monitoring Plan would accompany part 70 permit applications for the specific sources identified in the permit applications, and be similar to "Spill Prevention, Control and Countermeasures Plans," "Oil Spill Prevention and Response Plans," and "Storm Water Pollution Prevention Plans" under the Clean Water Act. This approach, some commenters added, would allow minor changes to be made to enhanced monitoring procedures without requiring reopening or modification of part 70 permits. A commenter recommended including performance verification test requirements in Enhanced Monitoring Plans, so that permit issuance would not depend on the success of an enhanced monitoring protocol. Finally, this commenter said that review and approval of Enhanced Monitoring Plans could proceed in parallel or in series with the part 70 permit process; however, the procedure for review and approval of such plans would not be as complex as approving enhanced monitoring protocols. The commenter provided specific proposed revisions to § 64.3 and other sections of the rule to implement this concept. Other commenters proposed that an Enhanced Monitoring Plan only be referenced in the permit, so that all enhanced monitoring requirements are not included as separate permit conditions. This approach, some commenters said, would hasten permit approvals.

Response: The EPA rejects suggestions that part 70 permits only reference that part 64 monitoring is being performed for a particular emissions unit for a particular pollutant without further detail. The Agency believes that it should use existing monitoring requirements as a guide for the appropriate amount of detail to include in a permit for part 64 monitoring. Generally, existing requirements specify the general type of monitoring methodology to be used and any applicable installation, performance and quality assurance requirements associated with the particular type of monitoring. For existing applicable requirements, a part 70 permit will have to include all of these requirements because they are part of the applicable requirements to which the owner or operator is subject. Part 64 will be no different and only these same types of details need be included in the permit. See Section II.F. of the preamble to the final rule for further discussion.

Letter(s): Exxon Chemical Americas (IV-D-339); Gas Processors Association (IV-D-227); Houston Lighting & Power (IV-D-322); National Environmental Development Association (IV-D-334); Texas Chemical Council (IV-D-365);

Texas Intrastate Natural Gas Pipelines (IV-D-221); Washington
Department of Ecology (IV-D-279)

8.1.8: Miscellaneous Issues

Comment a: A State agency stated that proposed § 64.3(b) should be clarified so that it is clear that enhanced monitoring is not required at a source until a permit is issued to that source.

Response: The EPA generally agrees with this comment. Section 64.7(a) of the final rule provides explicit direction as to when the owner or operator must begin to use part 64 monitoring. Generally, the duty commences on the date of permit issuance or, if applicable, the date specified in the permit for completion of installation, testing or final verification. This date is to be established under a compliance schedule in accordance with § 64.6(d).

Letter(s): Arkansas Department of Pollution Control and Technology (IV-D-3)

Comment b: Another State agency stated that the proposed enhanced monitoring rule should not broaden the scope of part 70 or State operating permits programs.

Response: Part 64 imposes independently applicable monitoring requirements for certain emissions units at major sources subject to title V permitting. The rule does not broaden the scope of title V or other operating permits programs.

Letter(s): Texas Natural Resource Conservation Commission (IV-D-371)

Comment c: Another State agency urged EPA to provide training and guidance on enhanced monitoring and establish a clearinghouse of acceptable enhanced monitoring in order to reduce the burdens on permitting authorities.

Response: The EPA intends to provide training and to issue guidance to facilitate implementation of part 64. In accordance with the phased-in implementation approach adopted in the final rule, the Agency anticipates publishing guidance on example monitoring for numerous process/control

device combinations.

Letter(s): Maryland Department of the Environment (IV-D-223)

Comment d: An industry commenter asserted that EPA has not sufficiently considered the time needed for design, procurement, construction, startup, and troubleshooting the enhanced monitoring protocol after approval, and estimated that this process could easily take 1-2 years. This commenter added that EPA must describe the expected sequence of events required to submit a title V permit application containing a proposed case-by-case enhanced monitoring protocol, approve the permit and enhanced monitoring protocol, and implement the enhanced monitoring protocol.

Response: The proposed and final rule both require that any necessary installation, startup, and verification testing of approved monitoring be completed as expeditiously as practicable after approval of the enhanced monitoring protocol. The final rule also adds that this period shall be no longer than six months. The Agency believes that this window of time is more than adequate for the type of monitoring contemplated by the final rule.

Letter(s): Exxon Company, USA (IV-D-310)

Comment e: Several commenters opposed the anticipated increase in permit fees that will be necessary to implement enhanced monitoring through the permitting process. A commenter suggested increasing the applicability threshold to avoid this necessity. One permitting authority stated that costs to cover reviewing enhanced monitoring protocols were never included in its proposed title V program, while another urged EPA to provide funding for States to carry out the program because it could not have foreseen the extensive effort required to implement enhanced monitoring when it developed its fee program.

Response: The permitting authority costs associated with part 64 are covered by the authority for permit fee revenue collections from sources under title V. State and local agencies should ensure that their fee programs are adequate to cover these costs.

Letter(s): Armco Steel Company (IV-D-395); Bay Area Air Quality Management District (IV-D-402); Coalition for Clean Air Implementation (IV-D-304); Kerr-McGee Corporation (IV-D-232); National Environmental Development

Association (IV-D-334); Ohio EPA (IV-D-283); Oklahoma Department of Environmental Quality (IV-D-463)

Comment f: Several commenters recommended adding to the rule a mechanism for appeal or review where a State and a source disagree on the technical adequacy of a proposed enhanced monitoring protocol. One commenter noted that this would be necessary to avoid unnecessary requirement of CEMS where other protocols would be necessary.

Response: The EPA believes that an appeal procedure under part 64 is unnecessary. 40 CFR 70.4(b)(3)(x) requires that a State permit program provide an opportunity for judicial review in State court of final permit actions. This procedure may require that State administrative remedies first be exhausted. The Agency does not believe that any additional appeals process that supersedes or modifies the general part 70 procedures for handling permit disputes would be appropriate in the context of this rulemaking.

Letter(s): American Gas Association (IV-D-265); Arkla Energy Resources Company (IV-D-343); Baltimore Gas and Electric Company (IV-D-296); ENRON Operations Corp. (IV-D-390); Mississippi River Transmission Corp. (IV-D-344); Ohio Cast Metals Association (IV-D-324)

Comment g: One commenter recommended allowing sources to renegotiate conditions included in earlier construction permits that do not necessarily provide definitive indications of compliance nor were they intended to do so.

Response: An owner or operator may seek to modify conditions in existing permits pursuant to appropriate modification procedures. However, the title V permitting process may not, in and of itself, be used to modify conditions in existing permits. If ambiguity exists in some particular aspect of a condition in an existing permit, the owner or operator and the permitting authority may seek to clarify that ambiguity in the context of the title V permitting process. (For further discussion on use of the title V permitting process to clarify ambiguity or fill gaps in existing regulations, see Technical Support Document for Title V Operating Permits Program, Section 6.9.1 (May 1992), EPA Air Docket No. A-90-33, and the preamble to the proposed part 70 regulations, 56 FR 21738, May 10, 1991.) In addition, the provision from the existing permit may be subsumed into

other conditions that establish requirements as least as stringent as those established by the subsumed requirements. See the discussion of streamlining multiple requirements in White Paper 2, docket item A-91-52-VI-I-2.

Letter(s): American Textile Manufacturers Institute (IV-D-440)

Section 8.2: Permit Modifications (§ 64.3(d))

8.2.1: Significant Permit Modification Requirement

Comment a: Section 64.3(d) of the proposed rule would have required an owner or operator to obtain a significant permit modification pursuant to 40 CFR 70.7 prior to modifying an approved enhanced monitoring protocol, or if an emissions unit is modified so as to subject the unit to enhanced monitoring or to cause an enhanced monitoring protocol previously approved for the unit to fail to meet the requirements of part 64.

Nearly all of the commenters submitting comments on the significant permit modification requirement were from the industrial sector, and the vast majority opposed requiring any change to an enhanced monitoring protocol to trigger a significant permit modification. Many commenters provided examples of the types of enhanced monitoring protocol changes that should be treated as "minor modifications." These types of modifications include the following: those that do not lessen a facility's requirements to comply with existing standards or those that institute monitoring equivalent to the existing enhanced monitoring protocol; changes that result in no loss of enhancement but reduce worker exposure to dangerous emissions; changes for which QA procedures can verify that monitoring data have not been compromised; changes that would not trigger a significant permit modification under part 70; in the plastics industry, variation of equipment or materials combinations for small batches done according to customer specifications; and in the electronics/semi-conductor industry, rapid changes in chemicals, processes, or equipment (many of which may be environmentally beneficial, like the phase-out of chlorofluorocarbons). At the November 19, 1993 public hearing, a commenter asked whether the acceptance of an additional control parameter to establish an emissions cap for netting purposes or to offset an increase under section 112(g) of the Act for air toxics would constitute a significant change in monitoring and, if so,

whether it would trigger a significant permit modification. One commenter also objected to requiring significant modifications for the addition of a non-major source to an approved protocol.

Requiring significant permit modifications for every change to an enhanced monitoring protocol would, according to many commenters, be extremely burdensome to industry. One commenter argued that such a procedure would cause delays that would threaten industry's ability to respond to a changing marketplace. Another commenter felt that delays in the permit modification process would leave affected units uncertain as to their enhanced monitoring obligations, while another stated that the proposed approach would be unworkable because, given that enhanced monitoring is a new program, enhanced monitoring protocol changes (and thus significant permit modifications) would be very frequent. The commenter at the public hearing asked whether significant permit modifications would result in a moratorium on emissions trading when the enhanced monitoring and permit programs are in effect.

Many commenters also provided examples of those enhanced monitoring protocol changes that would justifiably require a significant permit modification. These include: changes to a unit that would subject it to enhanced monitoring (§ 64.3(d)(1)); changes that would cause an existing enhanced monitoring protocol to fail to meet part 64 requirements (§ 64.3(d)(2)); process changes, changes that would have a significant effect on emissions, decrease monitoring frequency, institute less restrictive monitoring, or replace the monitoring methodology; substantial changes to QA plans; or any change that would trigger a significant permit modification under part 70.

Some commenters proposed that part 64 provisions concerning permit modifications for enhanced monitoring protocol changes mirror the procedures of title V or simply be governed by those procedures. Those advocating the former position supported the use of minor permit modification procedures consistent with part 70, and one commenter argued that the rule should allow permitting for anticipated changes to an enhanced monitoring protocol. Those advocating the latter position stated that the rule should not specify permit modification procedures and should simply refer to title V. They asserted that including permit modifications in the rule is duplicative and that only the rule language in § 64.3(d)(1) concerning emissions unit changes is necessary. One commenter noted that changes to the part 70 permit modification process

in response to pending litigation dictates that the rule should not attempt to clarify the relationship between enhanced monitoring and title V on this issue.

Response: In response to these concerns, the final rule relies on the applicable procedures for amending, modifying or revising a permit specified in part 70. The Agency agrees with those commenters that believe the part 70 procedures generally should be relied on for determining when, and if so, what type of, a permit change is required for different types of monitoring modifications.

Letter(s): ALCOA (IV-D-288); American Automobile Manufacturers Association (IV-D-538); American Cyanamid Company (IV-D-201); American Gas Association (IV-D-265); Arkla Energy Resources Company (IV-D-343); Armco Steel Company (IV-D-395); Chemical Manufacturers Association (IV-D-301); Class of '85 Regulatory Response Group (IV-D-338); Corn Refiners Association, Inc. (IV-D-391); County Sanitation Districts of Orange County, California (IV-D-235); Department of Energy (IV-D-358); Dow Chemical Company (IV-D-260); Eastman Chemical Company (IV-D-347); Eastman Kodak Company (IV-D-333); ENRON Operations Corp. (IV-D-390); Exxon Company, USA (IV-D-310); Exxon Chemical Americas (IV-D-339); General Electric Company (IV-D-278); Georgia Department of Natural Resources (IV-D-377); Goodyear Tire and Rubber Company, The (IV-D-292); Merck & Co., Inc. (IV-D-443); Minnesota Pollution Control Agency (IV-D-469); Mississippi River Transmission Corp. (IV-D-344); Monsanto Company (IV-D-273); Motorola Inc. (IV-D-302); National Environmental Development Association (IV-D-334); Occidental Chemical Corporation (IV-D-240); Pharmaceutical Manufacturers Association (IV-D-367); Public Service Electric and Gas Company (IV-D-282); Rubber Manufacturers Association (IV-D-331); Society of the Plastics Industry, Inc. (IV-D-287); Southwestern Public Service Company (IV-D-272); Union Camp (IV-D-359); Utility Air Regulatory Group (IV-D-489)

8.2.2: Alternative Modification Procedures

Comment a: Several commenters provided alternative modification procedures in order to alleviate perceived problems under the proposed process. One suggestion was to allow an enhanced monitoring protocol modification to be designated "minor" where the permitting authority and permittee agree

on such a designation. Another commenter stated that if EPA retains in the final rule the requirement of significant permit modifications for all enhanced monitoring protocol changes, then there should be a one-year grace period during which enhanced monitoring protocol changes would only require minor permit modifications. One commenter said that permitting authorities should have the discretion to determine whether an enhanced monitoring protocol change is significant or not. Another proposed that minor modifications be achieved by the submission of a letter of justification by the facility. One suggested approach to mitigate the effects of significant permit modifications was to allow facilities to include alternate enhanced monitoring protocols with alternate operating scenarios in their permit applications. Another suggested approach would allow facilities to change monitoring frequency based on formulas or other instructions written into the permit. For example, after one year of continuous compliance demonstrated by monthly monitoring of parameters, a facility would be allowed to reduce monitoring frequency to a quarterly basis without modifying the permit.

Response: Because of the significant changes to the permit modification procedure adopted in the final rule, as described above, these comments are no longer applicable.

Letter(s): American Gas Association (IV-D-265); Arkla Energy Resources Company (IV-D-343); Chemical Manufacturers Association (IV-D-301); ENRON Operations Corp. (IV-D-390); Mississippi River Transmission Corp. (IV-D-344); Monsanto Company (IV-D-273); Union Carbide Corporation (IV-D-293)

8.2.3: Inconsistencies with Other Rule Provisions

Comment a: One commenter argued that the permit modification procedure in § 64.3(d) is inconsistent with the proposed monitor failure reporting requirements in § 64.5(e). The commenter suggested that EPA clarify that approval of a corrective action plan supersedes any permit modification requirements for changes to an enhanced monitoring protocol. Enhanced monitoring protocol changes consistent with the corrective action plan, the commenter stated, could be incorporated into the permit through an administrative permit amendment.

Response: The final rule does not include the provisions discussed in these

comments and thus these comments are no longer applicable.

Letter(s): Chemical Manufacturers Association (IV-D-301)

Section 8.3: Preconstruction Permit Implementation

Comment a: Several commenters opposed implementation of enhanced monitoring through preconstruction permits, one stating that the requirements were redundant and unnecessary and another proposing language making the requirements less stringent. One commenter argued that for many sources preconstruction permit applications will have to be submitted months or years before detailed project engineering information will be available. Therefore, providing the level of detail required by the enhanced monitoring protocol will be impossible. Another industry commenter noted that the preamble to the proposed rule attempts to justify implementation of enhanced monitoring through preconstruction permits on the basis that this process will allow sources to tailor designs that allow for part 64 compliance. However, the commenter asserted that section 114(a)(3) of the Act does not authorize EPA to dictate the design of operations and, therefore, the proposal is an illegal intrusion by EPA into how a facility should be designed.

A State agency was concerned that the preconstruction permit provisions of the proposed rule would prevent States from requiring enhanced monitoring for synthetic minor sources. The State went on to say that even if it could impose enhanced monitoring on synthetic minors, it was not clear whether the requirements would be federally-enforceable.

One industrial trade association agreed with the implementation of enhanced monitoring through preconstruction permits because it could help streamline the incorporation of enhanced monitoring into operating permits. This approach was also seen to be consistent with the fact that, in most cases, New Source Review permits currently establish monitoring requirements for the purpose of determining compliance.

Response: The proposed rule provided that the requirements of part 64 would be implemented through the part 70 permits program and the preconstruction permit programs developed under parts C and D of title I of the Act. For several reasons, the final rule has been revised to provide that part 64 will be required to be implemented only through the part 70 permits program.

Most importantly, States will not necessarily have the authority to implement part 64 through a preconstruction permit. Although the proposed rule included proposed revisions to parts 51 and 52, EPA does not believe it appropriate at this time to require State agencies to revise a preconstruction permit program in order to accommodate part 64.

There are other supporting reasons for not requiring implementation of part 64 through preconstruction permit programs in the final rule. First, the Agency currently has no direct veto authority in the preconstruction permit process. The EPA is concerned that unless veto authority is generally available, it may lack adequate ability to assure effective, consistent implementation of part 64. Second, commenters were concerned that the information required for a permit application under part 64 would be too detailed for sources applying for preconstruction permits. For example, the appropriate type of monitoring may be based on the determination of best available control technology, for which no final decision will have been made at the time of the initial preconstruction permit application.

Notwithstanding this change made to the final rule, EPA encourages States and sources to develop the terms and conditions of preconstruction permits for new and modified sources with the requirements of part 64 monitoring in mind. New and modified sources subject to preconstruction permit programs under part C or D of title I of the Act are generally required to obtain a part 70 permit within twelve months after commencing operation (see 40 CFR 70.5(a)(1)(ii)). Therefore, the part 64 monitoring requirements may need to be addressed relatively soon after the preconstruction permit phase. Through proper consideration of monitoring issues at the earliest stages, sources and permitting authorities alike can streamline the part 70 process and reduce the potential for costly and time-consuming changes necessary to implement part 64.

In connection with this revision to the final rule, the conforming amendments proposed for §§ 51.165, 51.166, and 52.21 have been deleted. Those sections were applicable to implementation of part 64 through the preconstruction permit programs.

Letter(s): ASARCO (IV-D-327); American Automobile Manufacturers Association (IV-D-538); Chemical Manufacturers Association (IV-D-301); Michigan Department of Natural Resources (IV-D-438); Ohio Chamber of Commerce (IV-D-370); Texas Chemical Council (IV-D-365); Texas Natural

Resource Conservation Commission (IV-D-371)

Section 9: General Enhance Monitoring Requirements (§ 64.4)

Section 9.1: General Enhanced Monitoring Protocol Requirements (§ 64.4(a)Generally)

9.1.1: Comments on Requirements of Enhanced Monitoring Protocols in General

Comment a: Commenters on the general requirements of enhanced monitoring protocols were mainly concerned that the requirements are more specific and more stringent than necessary for an effective program, and that they are impractical for sources to put into place.

Several commenters complained that the proposed regulation is unnecessarily detailed and complex. One industry commenter argued that few permittees would be able to attain the level of expertise with monitoring systems and equipment that the proposed rule would require. Other commenters stated that the performance criteria for enhanced monitoring protocols are so detailed that sources may be forced to invest in complex compliance techniques that exceed what is necessary to determine a source's compliance status in a cost-effective manner. One commenter used as an example the application of the example protocols in the Reference Document to small boilers. One commenter argued that industry should devote its resources to controlling emissions through better and more efficient technology, instead of diverting its efforts to meeting stringent additional requirements of existing standards. The proposed rule will require changes to well-established standards for which a source has long been in compliance. One commenter pointed out that a monitoring methodology does not have to be sophisticated as indicated in the preamble (58 FR 54653 col. 2), it merely has to be reliable and timely. Finally, other commenters recommended that EPA focus on developing easy, cost-effective means of monitoring compliance rather than use the heavy-handed approach in the proposal.

Response: The Agency has substantially reduced the complexity of the design and performance criteria for monitoring in the final rule. The basic CAM approach builds upon existing monitoring designed to indicate potential control device problems and reduced control efficiency. Because of this approach, many of the detailed elements that were included in the proposed rule and appendices are no longer necessary.

Letter(s): ENRON Operations Corp. (IV-D-390); Kerr-McGee Chemical Corp. (IV-D-385); National Oilseed Processors Association (IV-D-267); Pacific Gas Transmission Co. (IV-D-234); People's Natural Gas Company (IV-D-27); Questar Corporation (IV-D-505); Society of the Plastics Industry, Inc. (IV-D-287)

Comment b: Certain commenters stated that the enhanced monitoring protocols listed in § 64.4(a)(2) are more stringent than necessary to show compliance with applicable emission limitations or standards. One commenter noted that implementing the listed enhanced monitoring protocols would be especially difficult for small HAP sources.

Response: The Agency disagrees and notes that the list of possible monitoring methodologies (included in revised form in the definition of "monitoring" in § 64.1 of the final rule) is intended to be a non-exclusive list that provides examples of the wide spectrum of monitoring approaches that may be used where appropriate to satisfy the requirements of part 64. With respect to hazardous air pollutant requirements, EPA first notes that part 64 applies solely to NESHAP requirements in 40 CFR part 61 that were proposed prior to November 15, 1990. In many instances, EPA believes the existing monitoring under part 61 already provides the basis for satisfying part 64, either automatically because a part 61 subpart includes a method for documenting compliance on a continuous basis or by upgrading existing monitoring under part 61.

Letter(s): Gas Processors Association (IV-D-227); KBN Engineering and Applied Sciences, Inc. (IV-D-475); Texas Intrastate Natural Gas Pipelines (IV-D-221)

Comment c: Certain commenters objected to validating compliance with monitoring methods more stringent than those used in developing the standard, such as AP-42 or manufacturer emission factors. These commenters argued that for standards such as these that were developed on the assumption of steady-state emissions, part 64 would result in unwarranted deviations. One commenter stated that EPA must allow sources to negotiate a statistically valid short-term emission limit in this situation, and suggested using a longer averaging time where potential emissions variability is high so that less frequent monitoring can be allowed.

Response: The commenters appear to be suggesting that the emission factors have

historically been used to both establish and determine compliance with the emission limit in certain situations. In these circumstances, it is unlikely that a control device would be necessary to achieve compliance with the standard given the nature of the emission limit. In those circumstances, part 64 will not apply. If a control device is used to achieve compliance, then part 64 will apply and the form of the emission limit is immaterial to the purpose of part 64 which is to assure that the control device is operated and maintained properly so that the source will remain in compliance.

Letter(s): Colorado Association of Commerce and Industry (IV-D-243); Gas Processors Association (IV-D-227); Texas Intrastate Natural Gas Pipelines (IV-D-221)

Comment d: Some commenters recommended maintaining the list of potential monitoring approaches in proposed § 64.4(a)(2), but commenters also recommended modifications. Certain commenters recommended expanding the explanations of non-CEMS monitoring listed in § 64.4(a)(2). One commenter pointed out that the current list could be misconstrued, and recommended that the rule specify what each option requires. Another commenter stressed the importance of including specific examples of non-CEMS monitoring because CEMS are not commercially available for all applications. A commenter specifically requested further detail on using engineering calculations in monitoring protocols, and some commenters recommended adding predictive emissions monitoring systems to the list. Another requested that the list be randomly organized to avoid any perceived bias. Finally, one commenter recommended clarifying that the technologies and practices listed in § 64.4(a)(2) are not the only ones that could constitute enhanced monitoring.

Response: The Agency has made certain changes to the list (§ 64.1 of the final rule), including the addition of predictive emission monitoring systems and clarifying revisions. Finally, the Agency notes that the list is arranged generally in alphabetical order and that the list is not intended to be all inclusive.

Letter(s): ALCOA (IV-D-288); Amoco Corporation (IV-D-244); Arkansas Department of Pollution Control and Technology (IV-D-3); Dow Chemical Company (IV-D-260); Eastman Chemical Company (IV-D-347); International Business Machines Corporation (IV-D-238); Los Angeles County Sanitation Districts (IV-D-26); Monsanto Company (IV-D-273); Pavilion

Technologies, Inc. (IV-D-309)

Comment e: One commenter was concerned that the proposed rule would require automated production systems or extensive manual oversight, because the rule focuses on immediately correcting any identified deviations. For many facilities, neither automated systems nor extensive manual oversight would be practical monitoring options. For example, most textile production systems cannot be automated without adversely affecting production, and it would not be economically feasible for most textile companies to develop manual systems of immediate correction.

Response: Although the rule does not necessarily require automated production systems or extensive manual oversight, the commenter is correct that the rule is intended to assure that good air pollution control practices are employed in a manner that minimizes both the number and duration of deviations from complying conditions. This purpose is consistent with long-standing approaches to air pollution control and most existing applicable requirements. This rule focuses on assuring that the means for detecting these types of conditions are in place and that the results of these practices are reported.

Letter(s): American Textile Manufacturers Institute (IV-D-440)

Comment f: Two commenters suggested that the rule allow States more flexibility to work with sources in determining protocol requirements. One commenter noted that permitting authorities and owners or operators would be best able to agree upon technical details.

Response: The Agency generally agrees with this comment and the final rule does not require specific performance and operating requirements for most monitoring elements.

Letter(s): Louisiana Mid-Continent Oil and Gas Association (IV-D-454); Texas Chemical Council (IV-D-365)

Comment g: Two commenters proposed an incentive program to allow sources that demonstrate continued compliance with enhanced monitoring requirements to obtain and report compliance data on a less frequent

basis. One commenter noted that such a program would reduce the burden of operating pollution control equipment that is clearly reliable and well-maintained. A Federal agency provided as an example a source that has complied with part 64 monitoring requirements for several years and has consistently demonstrated that its emission levels are stable and well below the regulatory standard. This type of source should be allowed to reduce monitoring frequency and still certify compliance. The commenter noted that any such reduced monitoring frequency should be based on assurances that processes and materials are unchanged and that the performance of pollution control equipment has not deteriorated.

Response: The Agency believes that the proposed and final rules provide the flexibility to reduce monitoring frequency based on a continued demonstration that both compliance is continuous and conditions that provide the assurance of compliance are not subject to change. Such a reduction in monitoring frequency could be accomplished by submitting a request to modify an approved monitoring approach, subject to any part 70 permit modification requirements that may apply to such a request (see responses to comments under Section 8.2 (Part I), above). With respect to reporting frequency, the final rule requires semiannual reporting, consistent with the minimum frequency requirements already established in part 70 (see responses to Section 10.2.1 (Part I), below).

Letter(s): Department of Energy (IV-D-538); Eli Lilly and Company (IV-D-349)

Comment h: One commenter agreed with EPA's decision not to require annual performance of compliance tests and suggested modifications to express this decision consistently throughout the rule. For example, the quality assurance/quality control provisions of the proposed rule refer to annual data accuracy assessments for enhanced monitoring protocols. This commenter recommended that the final rule specify that annual compliance testing will not be required, absent other reliable indications of noncompliance.

Response: The quality assurance provisions in the final rule do not require the same degree of quality assurance (QA) practices as were included in the proposed rule, and thus it is unlikely that part 64 QA procedures will entail comparative compliance testing.

Letter(s): American Automobile Manufacturers Association (IV-D-538)

Comment i: One State agency commenter noted that the detailed compliance determination requirements set forth in the proposed rule imply that EPA lacks confidence in State environmental agencies and their compliance programs. The agency strongly disagreed with this implied EPA assumption.

Response: The EPA does not intend to imply that existing State compliance programs generally fail to comply with existing federal requirements. However, EPA believes that Congress required in the 1990 Amendments to the Act that existing programs related to demonstrations of compliance (e.g., performance testing and inspection programs) be modified significantly so that owners or operators are required to certify as to their compliance status and have a means with which to make that certification.

Letter(s): Ohio EPA (IV-D-283)

9.1.2: Use of Representative or Statistically-Valid Periodic Monitoring

Comment a: Several commenters argued that periodic compliance testing or monitoring will achieve the same level of compliance as enhanced monitoring. One sugar industry commenter stated that for bagasse boilers and other units in the sugar industry, periodic stack tests provide all the necessary information and CEMS provide no additional benefit. Other commenters argued that representative periodic testing is consistent with NPDES monitoring requirements in the National Pollutant Discharge Elimination System (NPDES) permit program under the Clean Water Act. One commenter stated that once a year representative sampling or control efficiency studies would be sufficient.

Response: The Agency disagrees that once a year testing or sampling can be assumed generally as sufficient to document continuous compliance during the year, especially for emissions units that achieve compliance by means of a control device that is subject to reduced efficiency. Such periodic testing or studies may be appropriate as one element of part 64 monitoring, but more frequent monitoring that provides ongoing information about control device performance is required to satisfy the CAM approach adopted in the final rule.

Letter(s): American Cyanamid Company (IV-D-201); American Petroleum Institute

(IV-D-289); Asphalt Roofing Manufacturers Association (IV-D-495); Coalition for Clean Air Implementation (IV-D-304); People's Natural Gas Company (IV-D-27); Questar Corporation (IV-D-505); U.S. Sugar Corporation (IV-D-382)

Comment b: One federal agency commenter recommended that part 64 focus more on the adequacy of existing monitoring requirements to provide sufficiently reliable information to justify certifying continuous compliance. This commenter stated that new, enhanced monitoring should only be required at sources where existing monitoring does not provide sufficient information to certify continuous compliance. The commenter recommended allowing sources to provide a statistical demonstration that their existing monitoring protocols capture a significant enough portion of the variance of actual emissions from regulatory limits to justify certifying continuous compliance. This recommendation would include requiring sources in each category of current monitoring at major sources (e.g., PSD, SIPs, NSPS, and NESHAP) to submit and comply with plans demonstrating that 90% (or two standard deviations, or any other percentage EPA considers appropriate) of the variance of emission levels from regulatory emission limits is captured by the monitoring protocol that is in place or that will be put in place. The commenter argued that this approach would satisfy section 114(a)(3) of the Act and would be easier to implement than the proposed rule. The commenter provided a list of places in 40 CFR where references to the proposed variance and data capture might be located; this list could be used as a roadmap in drafting the proposed rule.

Response: The final rule is sufficiently flexible to support this type of demonstration. However, the Agency does not believe that requiring this type of demonstration is appropriate because many sources may not have adequate baseline data with which to develop the statistical analysis.

Letter(s): Department of Energy (IV-D-358)

9.1.3: Adequacy of Current Monitoring

Comment a: Several commenters argued that current monitoring when combined with title V compliance certifications is sufficient to ensure compliance. One commenter recommended revising part 64 to require only the monitoring necessary under title V permits to evaluate compliance with underlying

standards as promulgated. (See Sections 3.3 and 9.6 for related comments on existing and title V monitoring.)

Other commenters stated that the proposed regulation is unnecessary because NSPS and SIP monitoring requirements are adequate. The commenters argued that EPA should revise a particular NSPS subpart if it considers the monitoring to be inadequate. The commenters stated that SIPs establish monitoring requirements that should be applied to all sources subject to the SIP. commenters also criticized the proposed rule for ignoring other elements of the Clean Air Act compliance program that lessen the need for such a detailed, complex rule. Some commenters stated that the criminal and civil penalties provided in the Act will likely be enough to deter most companies from violating emissions standards, and noted that the Act provides enforcement tools, such as field inspections, citizen suits, and whistleblower provisions, that should be sufficient to assure compliance.

Response: The Agency disagrees that current monitoring, when combined with the general requirements in part 70, should be considered sufficient to satisfy section 114(a)(3) of the Act, at least for those emissions units and applicable requirements that rely on a control device to achieve compliance. In order to ensure that the implementation of section 114(a)(3) through part 64 results in the most benefits at reasonable cost, EPA is relying on current monitoring, combined with part 70 periodic monitoring requirements as the appropriate enhanced monitoring for the less significant emissions units and applicable requirements that are not subject to part 64. See the response in Section 3.3.2 (Part I) of this document.

Letter(s): American Petroleum Institute (IV-D-289); Coalition for Clean Air Implementation (IV-D-304); Kennecott Corporation (IV-D-262); National Oilseed Processors Association (IV-D-267); Questar Corporation (IV-D-505); Society of the Plastics Industry, Inc. (IV-D-287); Union Carbide Corporation (IV-D-293)

9.1.4: Requirements for Multiple Enhanced Monitoring Protocols for Similar Emissions Units

Comment a: Several commenters were concerned about the possibility of duplicative enhanced monitoring protocols or duplicative procedures being required

for similar emissions units.

commenters proposed allowing permitting authorities to allow sources that conduct enhanced monitoring on similar emissions units that emit the same pollutant to perform verification testing on one of the units instead of requiring verification testing of all of the units. One commenter noted that some States allow representative testing for State permit compliance tests, and allowing representative testing would be more cost-effective than requiring testing of all units as a source that use the same enhanced monitoring protocol. Another noted that this approach is consistent with section 7.1.1 of proposed appendix C.

Commenters also recommended allowing emissions units of the same type at the same facility to share an enhanced monitoring protocol or to monitor representative emissions units at a source with multiple similar units. One commenter suggested at least allowing reduced monitoring at some units where a facility has many identical units. One commenter suggested the use of a single enhanced monitoring plan for all similar units at a facility. Another commenter proposed that EPA allow representative multi-point protocols for sources with similar emissions units, such as multiple coating lines, in addition to allowing representative multi-point protocols for fugitive emissions. This commenter recommended at least allowing representative multi-point protocols for elements of enhanced monitoring protocols such as capture efficiency testing. This commenter also requested that EPA clarify how sources establish representative multi-point monitoring without eliminating this option merely because of small differences between emissions units.

Response: The final rule (see § 64.4(c)) allows for reliance on data other than site-specific testing to establish indicator ranges for any units, including multiple, similar units, if the owner or operator can justify that site-specific testing is unnecessary to establish such ranges. (See Section 9.8.1 (Part I), below, for further discussion.) However, the Agency disagrees with the suggestion to use representative monitoring of certain units with no monitoring of similar units at the source. In certain circumstances, elements of monitoring for separate pollutant-specific emissions units may rely on the same actual monitoring. For instance, where multiple units vent to a common control device, § 64.4(f) allows for the monitoring of the control device to suffice for all such units, except for any specific process or capture system parameters that may need to be performed for each unit. Also, where the same type of monitoring will be used at similar

units, the justification and description of the proposed monitoring may be submitted in a combined fashion under § 64.4(g) to streamline the documentation associated with the monitoring.

Letter(s): Can Manufacturers Institute (IV-D-478); Department of Energy (IV-D-358); Exxon Chemical Americas (IV-D-339); Houston Lighting & Power (IV-D-322); Monsanto Company (IV-D-273); Southwestern Public Service Company (IV-D-272); Texas Chemical Council (IV-D-365); Total Petroleum, Inc. (IV-D-354)

Comment b: One commenter recommended clarifying that only one monitoring protocol should apply to a given emissions unit. This commenter raised a concern that multiple enhanced monitoring protocols could be required if an emissions unit was subject to applicable requirements for different pollutants.

Response: The Agency disagrees. Monitoring under part 64 will be pollutant-specific, although monitoring for separate pollutants may share certain components (such as a multiple pollutant CEMS that includes separate analyzers, but uses the same probe, sample conditioning lines, and DAHS).

Letter(s): Monsanto Company (IV-D-273)

9.1.5: Comments Related to Specific Circumstances

Comment a: Several gas and oil industry commenters were concerned about the impact of enhanced monitoring on remote, unmanned sites. Commenters noted that the costs of enhanced monitoring at remote sites will be higher than at more accessible sites because of added personnel requirements. One commenter noted that costs of enhanced monitoring at remote sites in Alaska will be very high because of the extreme weather conditions. Commenters also noted that the proposed rule does not consider the problems of frequent data collection at unmanned sites. One commenter proposed adopting a streamlined means of monitoring unmanned facilities, through using detailed maintenance records, fuel records, records of hours of operation, and control parameter records.

Response: Because the final rule focuses on pollutant-specific emissions units that

rely on control devices to achieve compliance, the Agency believes that the sites for which the commenters raised this concern will be generally unaffected under part 64.

Letter(s): Alyeska Pipeline Service Company (IV-D-360); Columbia Gas System Service Corporation (IV-D-341); Gas Processors Association (IV-D-227); Gas Research Institute (IV-D-303); Louisiana Mid-Continent Oil and Gas Association (IV-D-454); Northwest Pipeline Corporation (IV-D-270); Pacific Gas Transmission Co. (IV-D-234)

Comment b: One commenter expressed concern that stack monitoring will be required to satisfy enhanced monitoring requirements even where current material balance procedures for volatile organic compounds provide acceptable results. Several commenters also stated that EPA must ensure that States will allow for and accept flexibility in enhanced monitoring protocols.

Response: Nothing in part 64 would require stack monitoring in such circumstances, although the Agency notes that because the final rule focuses on emissions units that rely on control devices, the types of material balance approaches discussed by the commenter often will not be appropriate for the units affected by part 64.

Letter(s): Chicago Heights Steel (IV-D-515)

9.1.6: Miscellaneous Issues

Comment a: A few commenters disagreed with the statement in the preamble that continuous instrument monitoring of emissions units with add-on control devices is generally required (see 58 FR 54657). Commenters said that the statement was arbitrary and capricious, and inconsistent with EPA's intent to implement a flexible program. Another commenter said that most add-on devices require only routine maintenance for proper operation. Two steel industry commenters suggested that EPA clarify that NSPS protocols, including visible inspections, are appropriate for assessing the performance of add-on devices.

Response: The Agency believes that the statement in the preamble to the proposed rule was generally correct and the final rule and the preamble to the final rule reflect this position. Many add-on control devices are capable of being operated at reduced performance efficiency that in many instances

cannot be detected without continuous instrumental monitoring of some kind. There may be certain types of add-on controls, such as capture and recovery systems for VOC control, where a periodic material balance approach to enhanced monitoring of units with add-on controls may be acceptable, such as is provided for in some NSPS subparts (e.g., subparts EE, MM, RR, SS, TT, WW, SSS and VVV).

Letter(s): Colorado Association of Commerce and Industry (IV-D-243); Marathon Oil Company (IV-D-376); Specialty Steel Industry of the United States (IV-D-328); Steel Manufacturers Association (IV-D-326); Unocal Corporation (IV-D-268)

Comment b: Two commenters raised concerns that monitoring should not be required during periods of startup or shutdown, with one commenter also including periods of equipment cleaning common to the pharmaceutical industry. These commenters argued that States and EPA generally exempt such periods from compliance requirements and that, in particular, it would not be practical to establish relationships of parametric monitoring to emissions during such periods. One commenter proposed specific revisions to § 64.4(a) to address this issue.

Response: The Agency disagrees, and has clarified in § 64.7(c) of the final rule that monitoring is required during all operating periods, including start-up or shutdown conditions. Existing monitoring requirements generally require monitoring during such periods even though the applicable requirements may excuse compliance during such periods. See Section II.G.1. of the preamble to the final rule for further discussion.

Letter(s): Eli Lilly and Company (IV-D-349); Monsanto Company (IV-D-273)

Comment c: One commenter recommended clarifying the reference to "this requirement" in the second sentence of § 64.4(a)(1).

Response: The revisions incorporated in the final rule address this concern.

Letter(s): Amoco Corporation (IV-D-244)

Section 9.2: Criteria for Enhanced Monitoring Protocols (§ 64.4(b))

9.2.1: Nature of the Performance and Operating Requirements

Comment a: Many commenters observed that the specificity of the performance and operating requirements in the proposed rule would limit the types of enhanced monitoring protocols that could be approved, while many other commenters argued that the performance and operating requirements were too subjective when applied in the context of demonstrating compliance with § 64.4(a). Commenters that were concerned about the requirements being too specific recommended making the focus of the performance requirements more general and lessening the emphasis on quantitative monitoring. One commenter particularly recommended simplifying the operating requirements to allow the use of non-quantitative monitoring systems. A State agency noted that the emphasis on quality control of collected data, measurement of emissions and parameters, and frequent reproduction of measurements does little to foster innovation. This agency recommended making more allowance for pollution prevention initiatives such as work practices and materials substitution.

Other commenters recommended changing the prescriptive approach of the proposed rule to a performance-oriented approach. These commenters proposed allowing sources and permitting authorities to work together to set performance requirements, which would make the rule more flexible. Owners or operators and permitting authorities would be able to negotiate performance and quality control requirements for each system, then allow sources to determine the implementation details themselves. Commenters also recommended allowing permitting authorities to waive minimum performance or verification requirements that are technologically or economically infeasible, or unnecessary. Another commenter proposed abandoning the current approach of imposing enhanced monitoring through a single, detailed set of requirements and instead giving sources the flexibility to work with permitting authorities to craft reasonable solutions. One commenter suggested that the § 64.4(b) requirements should be less focused on individual elements of data quality and more focused on overall data acceptability. Finally, another commenter objected that the detailed performance requirements imposed excessive recordkeeping burdens.

One commenter opposed technical requirements in general, stating that they are inapplicable for many sources and inaccurate for many sources where they do apply. Some commenters recommended moving the

technical guidelines for enhanced monitoring to the Reference Document, asserting that this would make monitor selection simpler and more flexible.

Several commenters that were concerned about the subjectivity of the requirements recommended making the terms of the data quality criteria more specific. Several commenters suggested including definitions of the terms in the rule, and defining what were "sufficient" for each performance element (frequent, precise, accurate, reliable, timely, and representative). Another commenter recommended articulating how cost would be considered in selecting among degrees of representativeness, accuracy, precision, and timeliness. A commenter suggested that EPA reopen the comment period after proposing definitions of the general criteria for enhanced monitoring (reliable, timely, etc.) and after defining the role of cost in selecting between two different levels of frequency, accuracy, and similar performance criteria. Commenters stated that the criteria listed exceed the mandate of section 504(b) of the Act and do not allow for reasonable alternatives to CEMS. These commenters suggested limiting the general criteria to only "reliable and timely," the two factors contained in section 504(b). One commenter suggested limiting the criteria for selecting an enhanced monitoring protocol to the protocol's ability to reliably detect deviations in a representative manner.

Response: The Agency has taken action in the final rule to address comments that raised concern that the performance and operating requirements are too specific on the one hand, while too subjective on the other hand. To address the specificity concerns, the final rule includes no appendices with detailed performance requirements and instead contains general design and performance criteria in § 64.3. These criteria focus on certain generally applicable performance requirements that all protocols should achieve and the specific requirements that should be met by CEMS, COMS, and PEMS. These changes in the final rule are discussed in Section II.C. of the preamble to the final rule.

To address the subjectivity concerns, the Agency first notes that the final rule establishes a different objective for the monitoring under part 64 than the proposed rule. The proposed rule would have required monitoring that essentially would serve as an alternative compliance test method for an applicable requirement designed to document continuous compliance. The final rule requires that the monitoring provide a reasonable assurance of compliance by establishing indicator ranges that reflect the proper

operation and maintenance of a control device (and associated capture system), in accordance with applicable design properties, for minimizing emissions over the anticipated range of operating conditions at least to the levels required to achieve compliance with applicable requirements. This basic objective of the monitoring is more consistent than the proposed rule with monitoring approaches under existing regulatory programs such as NSPS. Because the objective for the monitoring is more in line with existing requirements, EPA believes that the concerns about subjectivity will be reduced as permitting authorities and sources alike rely on experience developed under existing programs. In addition, frequency of the monitoring is a critical aspect of what monitoring is used to comply with part 64. For the large emissions units that may be subject to part 64 prior to permit renewal, the final rule establishes a presumption that continuous monitoring is appropriate. The extended implementation schedule for other, smaller emissions units will allow EPA time to develop guidance on example monitoring approaches and States time to develop programmatic rule requirements for these smaller sources. These approaches can serve to limit the concerns about subjectivity by providing examples of how the part 64 requirements can be applied to particular circumstances.

Letter(s): American Automobile Manufacturers Association (IV-D-538); Baltimore Gas and Electric Company (IV-D-296); Bay Area Air Quality Management District (IV-D-402); Chemical Manufacturers Association (IV-D-301); Department of Energy (IV-D-358); Eastman Chemical Company (IV-D-347); Eastman Kodak Company (IV-D-333); Energy Efficiency Systems, Inc. (IV-D-255); Exxon Chemical Americas (IV-D-339); General Electric Company (IV-D-278); Mobil Oil Corporation (IV-D-285); National Oilseed Processors Association (IV-D-267); Phillips Petroleum Company (IV-D-380); Questar Pipeline Company (IV-D-480); Texas Chemical Council (IV-D-365); U.S. Steel Group, The (IV-D-340); Washington Department of Ecology (IV-D-279)

Comment b: Several commenters asserted that the performance and operating requirements would not allow for reasonable alternatives to CEMS or COMS. As an example, one commenter discussed monitoring of combustion sources for SO₂, and stated that weekly or monthly checks to determine sulfur contents in various fuels such as coke oven gas, blast furnace gas, natural gas and fuel oil are effective means of enhanced monitoring for SO₂ for combustion sources. The commenter argued, however, that requiring a measurement frequency of every three hours

demonstrates a bias toward CEMS. One commenter noted in particular that the quality assurance and quality control requirements bias the proposed rule toward CEMS. Another commenter noted that the cost of CEMS does not substantially decrease as emissions units become smaller; therefore, the performance standards and quality assurance provisions would be even more burdensome for smaller units.

Commenters also expressed concern that the performance and operating requirements would make enhanced monitoring unduly difficult for certain types of sources to implement. As an example, one commenter discussed the difficulty that particulate matter and fugitive emissions sources would have in complying with the proposed rule's requirements. One commenter doubted that certain industries with variable processes would be able to achieve the performance requirements. As an example, this commenter discussed VOC emissions in the rubber and tire industry. Variations in product and VOC molecular weight would prevent monitoring systems (including VOC CEMS) from showing the correlation required in proposed appendix A, section 7.

Some commenters expressed concern that the performance and operating requirements would be technologically infeasible for protocols that involve non-instrumental monitoring. This concern would apply especially for VOC sources because the appropriate monitoring for many VOC sources involves engineering calculations and/or recordkeeping, and the requirements of the proposed rule are expressed in terms that apply to instrumental monitoring techniques. For instance, the terms "accurate" and "precise" seem to eliminate the use of engineering estimation techniques and recordkeeping as protocols, even though § 64.4(a)(2) lists them as possible enhanced monitoring methods.

Response: The performance criteria in the final rule do not include any requirements that could be construed to establish CEMS as the required technique to satisfy part 64. The basic focus of part 64 on control device operation as opposed to actual emissions measurement by itself eliminates any perceived bias toward CEMS in the proposed rule. Because the Agency does believe that CEMS, COMS and PEMS are preferred monitoring approaches, the final rule does require that existing applications of those monitoring systems be used to satisfy part 64. Moreover, many of the detailed performance requirements such as calibration gas specifications and relative accuracy requirements that had been included in the appendices to the proposed rule are not included in the final rule.

Letter(s): Armco Steel Company (IV-D-395); Clean Air Implementation Project (IV-D-242); Coalition for Clean Air Implementation (IV-D-304); Columbia Gas System Service Corporation (IV-D-341); Distilled Spirits Council of the United States (IV-D-300); General Electric Company (IV-D-278); Goodyear Tire and Rubber Company, The (IV-D-292); Houston Lighting & Power (IV-D-322); Kerr-McGee Chemical Corp. (IV-D-385); Lone Star Energy Company (IV-D-401); National Environmental Development Association (IV-D-334); New Mexico Oil and Gas Association (IV-D-228); Rocky Mountain Oil and Gas Association (IV-D-183)

9.2.2: Suggestions for General Improvements

Comment a: One commenter proposed limiting the operating standards to make it easier for existing monitoring to meet the requirements. Another commenter suggested deleting requirements in part 64 that are redundant with existing part 60 or part 61 requirements. A commenter also suggested adding the word "applicable" to proposed § 64.4(b)(3) as was done in §§ 64.4(b)(1) and (2).

Response: The Agency notes that the changes adopted in the final rule are consistent with these comments. For instance, for CEMS, COMS and PEMS used to satisfy part 64, compliance with existing requirements, including NSPS performance requirements, is deemed to satisfy part 64. Likewise, the addition of general operating requirements in § 64.7 of the final rule is consistent with similar general requirements in the NSPS and NESHAP programs. The revisions to proposed § 64.4(b) and the proposed appendices have made the suggestion to add "applicable" no longer relevant.

Letter(s): Columbia Gas System Service Corporation (IV-D-341); Dow Chemical Company (IV-D-260); Monsanto Company (IV-D-273)

9.2.3: Need for Clarity Regarding Which Specifications Apply to Which Monitoring Options

Comment a: Commenters requested that the final rule clarify which specifications apply to CEMS/COMS, which apply to parameter monitoring, and which apply to non-instrumental monitoring methods. Several commenters

recommended specifying in the final rule that the provisions that apply to CEMS/COMS do not apply to enhanced monitoring protocols that use engineering calculations or recordkeeping. These commenters also recommended providing guidelines for monitoring protocols that use engineering calculations and recordkeeping. One commenter also recommended including specific testing requirements that apply to predictive emissions monitoring systems (PEMS). One commenter also proposed grouping together appropriate performance standards and quality assurance requirements for particular systems instead of scattering them throughout the rule and the appendices. (See related comments in section 22 concerning organization of appendices.)

Response: The Agency believes that the changes to the general criteria and performance criteria included in § 64.3 and the operational requirements in § 64.7, and the deletion of the proposed appendices adequately respond to these comments.

Letter(s): Department of Energy (IV-D-358); Houston Lighting & Power Company (IV-D-530); National Environmental Development Association (IV-D-334); Questar Pipeline Company (IV-D-480)

9.2.4: Monitoring Frequency Issues

Comment a: One commenter agreed with EPA that frequency of measurement should be tied to potential variability of emissions. Another commenter also recommended requiring less frequent measurement for units that emit pollutants at levels well below the emissions limit.

Response: The proposed rule and final rule do allow for consideration of the margin of compliance, i.e., how far below allowable emissions are actual emissions, and other site-specific factors in establishing the monitoring used to satisfy part 64, including the appropriate frequency of monitoring. In addition, the final rule establishes a presumption of continuous monitoring for large emissions units, while granting more flexibility in establishing frequency for other units. This provision is intended to distinguish the monitoring based on unit size to account for cost considerations in the application of part 64.

Letter(s): Department of Energy (IV-D-358); Illinois Power Company (IV-D-274)

Comment b: Two commenters recommended providing criteria for adjusting frequency

of monitoring based on potential for emissions variability and/or margin of compliance. One commenter suggested that the criterion for variability should be that maximum emissions are twice the average. For margin of compliance, this commenter suggested defining the margin with reference to a percentage. For example, a small margin of compliance could be where a test shows emissions to be 90% or more of the emission limit.

Response: The Agency does not believe that any specific value can be established that will cover all potentially affected emissions units appropriately.

Letter(s): Baltimore Gas and Electric Company (IV-D-296); Kerr-McGee Chemical Corp. (IV-D-385)

9.2.5: Quality Assurance and Quality Control Issues (§ 64.4(b)(3))

Comment a: Commenters generally felt that the quality assurance and quality control requirements in the proposed rule would be too stringent and/or too open-ended. One commenter opposed the proposed rule's requirement that sources frequently reverify monitor accuracy because the monitoring system or periodic compliance testing alone should adequately demonstrate and verify monitor accuracy. Another commenter opposed requiring quarterly quality assurance and quality control testing for certain monitoring methods after satisfying quarterly relative accuracy test audits (RATAs) for the first year of monitoring. This commenter suggested requiring sources to perform RATAs to verify the accuracy of PEMS semiannually, or annually for technologies that meet more stringent criteria. The commenter noted that continual RATAs for every quarter of every year would make using PEMS for enhanced monitoring infeasible because PEMS cannot use cylinder gas audits as a less expensive verification method.

Response: The final rule stresses that the degree of quality assurance should be commensurate with the purpose of the monitoring to indicate shifts in control performance. Thus, for example, the QA requirements in Appendix F of part 60 would not be necessary under part 64, but the basic QA checks in § 60.13 (such as zero and span checks) would be appropriate.

Letter(s): Armco Steel Company (IV-D-395); Coalition for Clean Air Implementation (IV-D-304); Exxon Company, USA (IV-D-310); Houston Lighting & Power

(IV-D-322); People's Natural Gas Company (IV-D-27)

Comment b: A few commenters recommended allowing owners or operators and permitting authorities flexibility in the process of developing and approving quality assurance plans. For instance, commenters wanted the flexibility to develop facility-wide plans or plans tailored to specific circumstances.

Response: The final rule does not require the development of a QA plan and thus these comments are no longer applicable.

Letter(s): Alabama Department of Environmental Management (IV-D-453); Department of Energy (IV-D-358); Exxon Company, USA (IV-D-310)

9.2.6: Data Availability Issues (§ 64.4(b)(4))

Comment a: In general, commenters felt that the data availability requirements in the proposed rule would be too stringent. Several commenters recommended allowing routine maintenance and repair activities to be considered acceptable downtime, stating that the rule should recognize that occasional instrument failure or operator error does happen. Some commenters also recommended that periods of monitor malfunction be considered acceptable downtime. Another commenter recommended requiring quality-assured data only during representative monitored periods, instead of requiring quality-assured data at all times during the reporting period. This recommendation would allow for periods of unscheduled maintenance. One commenter suggested establishing a fixed percentage for non-quality assurance downtime, while another suggested that the rule allow the owner or operator to have downtime as necessary to conduct QA and perform repairs, with after the fact justification to the permitting authority or EPA. Another commenter proposed adding a required maintenance provision to § 64.4(b)(4)(i) if the underlying standard does not provide for downtime for maintenance. A commenter suggested that the final rule could require sources to provide a certified explanation for each downtime occurrence.

Many commenters believed the proposed rule required obtaining data for "all" periods of emissions unit operating time and recommended specific ways of modifying the data availability requirements. One commenter suggested deleting "all" from proposed § 64.4(b)(4). Another proposed exempting at least 10% of source operating hours from the data

availability requirement, unless the applicable emission standard specified a higher percentage. A commenter noted that a 10% exemption is consistent with current monitoring requirements, as reported in Appendix B of the draft Enhanced Monitoring Reference Document. This commenter also recommended exempting an additional fixed period of time each quarter for quality assessment and quality control procedures. In addition, this commenter proposed allowing additional time to be exempted, on a case-by-case basis, for maintenance when justified by the owner or operator. Another commenter suggested expanding the data availability provisions to allow data substitution for downtime due to quality assurance and quality control activities and scheduled maintenance activities.

Response: The final rule retains the basic concept that owners or operators should achieve the highest data availability reasonably achievable under part 64. The final rule requires that all monitoring be operated at all required intervals while the emissions unit is operating, except for periods in which a monitor malfunction occurs, subsequent repairs are being conducted, or QA activities necessitate the monitor being off-line. Monitor malfunctions include events that are not reasonably preventable by the owner or operator, but exclude breakdowns that are caused in part by poor maintenance or careless operation. In addition, § 64.6(c)(4) states that the permit may include a specific data availability requirement where appropriate. The Agency believes that this general duty approach, coupled with an option for a specific requirement, properly balances the desire to achieve high data availabilities with the potential uncertainty of what data availability may be achievable in a particular circumstance, especially in those cases where part 64 will involve new monitoring approaches for which EPA does not currently have extensive data on achievable data availability.

Letter(s): Baltimore Gas and Electric Company (IV-D-296); Coalition for Clean Air Implementation (IV-D-304); Dow Chemical Company (IV-D-260); Eastman Chemical Company (IV-D-347); International Business Machines Corporation (IV-D-238); Kerr-McGee Chemical Corp. (IV-D-385); Mobil Oil Corporation (IV-D-285); Monsanto Company (IV-D-273); Phelps Dodge Corporation (IV-D-483); Public Service Electric and Gas Company (IV-D-282); Southwestern Public Service Company (IV-D-272); Tennessee Department of Environment and Conservation (IV-D-399); Tri-TAC (IV-D-24); Union Carbide Corporation (IV-D-293); Unocal Corporation (IV-D-268); Utility Air Regulatory Group (IV-D-489)

Comment b: Another commenter proposed specifying in § 64.4(b)(4) that the owner or operator is not required to obtain quality assured data while complying with a corrective action plan under § 64.5(e).

Response: This comment is no longer applicable under the final rule.

Letter(s): Union Carbide Corporation (IV-D-293)

Comment c: One commenter stated that it would be impossible to "justify" how much downtime is needed to address QA since the necessary amount of QA cannot be established in advance. Another commenter proposed including criteria to allow owners or operators to justify meeting minimum data availability requirements for enhanced monitoring protocols.

Response: The final rule does not require this type of justification.

Letter(s): Amoco Corporation (IV-D-244); Baltimore Gas and Electric Company (IV-D-296)

9.2.7: Alternative Requirements (§ 64.4(b)(5))

Comment a: A few commenters objected to requiring alternative enhanced monitoring protocols to contain elements corresponding to the requirements of the appendices. Some commenters stated that this requirement removes the limited recognition in the other subsections of § 64.4(b) that the requirements of the appendices do not apply to many non-CEMS monitoring systems. One commenter noted that requiring alternative enhanced monitoring protocols to meet specifications that apply to CEMS would make using alternative protocols nearly impossible. Another commenter recommended authorizing permitting authorities to allow sources to follow alternate requirements where the appendix requirements are inappropriate. This commenter noted that the performance requirements do not apply to many types of monitoring, such as monitoring the presence of a pilot flame with a thermocouple. Another commenter suggested changing the text of § 64.4(b)(5) to show that not all of the listed specifications and procedures apply to all monitoring methods.

Some commenters recommended deleting the requirement that alternative monitoring methodologies meet performance specifications and quality assurance procedures at least as stringent and providing the same degree of confidence as those set forth in the appendices. Other commenters recommended deleting § 64.4(b)(5)(ii) and amending § 64.4(b)(5)(iii) to require alternative monitoring protocols to provide an equivalent degree of confidence in their data, instead of requiring the same degree of confidence. One commenter provided specific examples to show the importance of this change, including FTIR and mass spectrometry monitoring currently used at the commenter's facilities. These monitoring systems are technologically advanced and appropriate for the processes involved, but could not economically be tested in accordance with the relative accuracy test requirements in the part 64 appendices. The commenter also noted that relative accuracy testing for batch production areas would be extremely difficult and that a reference test method would have to provide for the compositing of samples to allow correlation with a CEMS or other monitoring methodology suited to the source's operation. These examples of problems with applying the appendices rigidly highlight the need to allow for alternative procedures without having to show exact equivalency of the alternate specifications. One commenter requested generally that EPA clarify the meaning of "provide . . . the same degree of confidence" in § 64.4(b)(5)(iii). Another commenter recommended clarifying in §§ 64.4(b)(1)-(3) that sources that use approved alternative test methods are not required to use the standard reference methods as required in the appendices.

Response: The main purpose of the proposed § 64.4(b)(5) was to allow States to substitute their existing performance and quality assurance requirements, in place of existing Federal requirements where appropriate. This approach was considered most important for CEMS for which many States have adopted requirements similar to, but not exactly the same as, federal requirements. In the final rule, this recognition of different state CEMS requirements is included in § 64.3(d)(2)(vi), which outlines what CEMS specifications are deemed to satisfy part 64. Other than this provision, the alternative monitoring concepts included in the proposal are no longer applicable to the final rule.

Letter(s): Amoco Corporation (IV-D-244); Columbia Gas System Service Corporation (IV-D-341); Dow Chemical Company (IV-D-260); Eastman Kodak Company (IV-D-333); Exxon Chemical Americas (IV-D-339); Exxon

Company, USA (IV-D-310); Monsanto Company (IV-D-273)

Comment b: One commenter suggested adding "applicable" in proposed § 64.4(b)(5)(ii) because not all of the listed specifications will be relevant

to all monitoring methods. Another commenter recommended modifying proposed § 64.4(b)(5) to allow waivers of performance verification tests.

Response: The final rule has been revised and these comments are no longer applicable.

Letter(s): Exxon Chemical Americas (IV-D-339); Pavilion Technologies, Inc. (IV-D-309)

9.2.8: Other Performance Specification Issues - Particular Concerns

Comment a: A few commenters noted that some existing CEMS cannot meet the 20% relative accuracy specification. One commenter noted that this was especially true at gas compressor sites because of changing load conditions. Furthermore, to convert the existing CEMS data into units of a mass emission standard, this commenter also noted that sources rely on poorly specified, uncalibrated flow devices, which eliminates the accuracy of using CEMS.

Response: If an existing CEMS cannot meet this specification, then the existing CEMS is not covered by § 64.3(d) and the CEMS is not considered as automatically satisfying part 64. The source could still propose to use such a CEMS, but would have to document that the data would be sufficiently representative and reliable to assess shifts in control device efficiency.

Letter(s): Arkansas Western Gas Company (IV-D-346); Chemical Manufacturers Association (IV-D-301); Clean Air Implementation Project (IV-D-242); Total Petroleum, Inc. (IV-D-354)

Comment b: A Federal agency recommended that the instructions and recommendations of the manufacturer of a monitoring system be taken into account in establishing performance requirements. This commenter

also recommended that EPA establish a certification program for maintenance and calibration personnel.

Response: Section 64.3(b) of the final rule adopts the commenter's suggestion that manufacturer guidelines be considered, but allows the owner or operator to make changes so long as the changes are documented so that the permitting authority can evaluate the appropriateness of such changes. The EPA believes that a certification program for maintenance and calibration personnel may be a useful program, but that it is beyond the scope of this rulemaking.

Letter(s): Department of Energy (IV-D-358)

Comment c: One commenter recommended clarifying the role of reliability, because reliability is the performance criterion most essential to ensuring that a system is cost-effective. A monitoring system that performs spectacularly in the short term may be prone to frequent breakdowns that would make it uneconomic for long-term use.

Response: The Agency agrees that on-going reliability is important. The general duty requirement related to continued operation of the monitoring coupled with the quality assurance requirements will reflect the overall reliability of monitoring to produce acceptable data over time.

Letter(s): Columbia Gas System Service Corporation (IV-D-341)

Comment d: Commenters recommended including an incentive system in the enhanced monitoring program. One commenter proposed replacing the data availability requirement with an incentive system to encourage high availability. Another commenter recommended allowing permit applicants to include incentives in their enhanced monitoring protocols. This commenter suggested as one incentive that quality assurance plans be based on relative accuracy assessments of a source's past compliance performance.

Response: The Agency believes that specific incentive programs would be impractical to develop as part of the general performance criteria in the rule given the breadth of monitoring approaches and source types involved. However, the general requirements in part 64 will allow for the development of such

incentives in appropriate circumstances. The Agency will consider the possibility of this type of approach as it develops guidance on example monitoring for particular types of emissions units.

Letter(s): Niagara Mohawk Power Corporation (IV-D-317); Questar Pipeline Company (IV-D-480)

Comment e: Two commenters stated that the rule and appendices contained no procedures, specifications or guidelines to quantify data precision. One State agency recommended adopting precision analysis procedures such as are in 40 CFR part 75, subpart E.

Response: The type of precision analysis required under subpart E of part 75 is considered inappropriate for the type of monitoring required under part 64. That type of precision requirement is not found in other monitoring requirements for monitoring analogous to part 64 (such as many NSPS parameter monitoring requirements). The Agency believes that the general performance criteria in § 64.3(b) are adequate to assure that the monitoring developed under part 64 will be sufficient to provide a reasonable assurance of compliance with applicable requirements.

Letter(s): Amoco Corporation (IV-D-244); Texas Natural Resource Conservation Commission (IV-D-371)

Section 9.3: Parameter Monitoring (§ 64.4(c))

9.3.1: General Concerns

Comment a: Commenters generally supported having the option of parametric monitoring available. One commenter agreed with EPA's approach to using parametric monitoring if it is properly correlated. Another commenter suggested that EPA establish a parametric monitoring clearinghouse. Another commenter supported the use of parameter monitoring for "emission standards" that require proper use of a particular control device as opposed to "emission limits." However, commenters also generally agreed that the correlation and instrumentation requirements for parametric monitoring systems would be extremely difficult and expensive to meet and that the difficulty of meeting the requirements would discourage sources from using parameter monitoring.

Two commenters asserted that EPA's bias against parametric monitoring kept EPA from considering a "parametric monitoring only" option in the preliminary RIA. These commenters found that the proposed rule imposes an unreasonably high barrier to the use of parametric monitoring, and stated that parametric monitoring can provide all of the air quality benefits that the enhanced monitoring rule is intended to provide. Other commenters criticized the requirement to evaluate any "significant parameter," an undefined term that could require extensive testing to show a correlation under any possible operating scenario. An industry coalition group argued that EPA had not shown that either predictive or demonstrated compliance parameter monitoring could perform adequately or could be used at reasonable cost.

Response: The final rule relies on parameter monitoring to establish indicator ranges intended to document that control devices continue to function in a manner consistent with their design for reducing emissions to the levels required by applicable requirements. This use of parameter monitoring is well understood and consistent with many existing requirements. The final rule does not include the concept of a "demonstrated compliance parameter level" (DCPL) that is correlated across all operating conditions to emissions. See Sections II.C. and II.D. of the preamble to the final rule for further discussion of this issue. For a response concerning the requirement to identify any "significant parameters," see Section 9.8.3, below. In addition, the preliminary RIA and the final Impact Analysis do not include a "parametric only" option because the Agency does not believe that parameter monitoring is necessarily appropriate in all instances or even the least cost alternative in some instances (such as for units that already are using a CEMS).

Letter(s): Ash Grove Cement Company (IV-D-311); Bay Area Air Quality Management District (IV-D-402); Coalition for Clean Air Implementation (IV-D-304); General Electric Company (IV-D-278); Merck & Co., Inc. (IV-D-443); Mobil Oil Corporation (IV-D-285); National Environmental Development Association (IV-D-334); Texas Intrastate Natural Gas Pipelines (IV-D-221); Tri-TAC (IV-D-24)

9.3.2: Appropriateness of Parameter Monitoring for Direct Compliance

Comment a: Some commenters objected generally to the requirement that any parametric monitoring assure that compliance will be maintained at all

times when parametric monitoring is used. The commenters argued that this requirement would severely discourage the use of parametric monitoring, and is contrary to the Act and to existing monitoring requirements for which parametric monitoring is acceptable.

Commenters also opposed using parameter monitoring for compliance determination if the rule assumes that deviation from a predicted range shows noncompliance with a standard. These commenters argued that demonstrating a precise relationship between measurement of a parameter and pollutant emissions is difficult; the level of emissions may change for reasons that are unrelated to the parameter being measured.

Commenters also objected to the use of parameter monitoring for direct compliance on the basis that DCPLs would make emission standards more stringent. Several commenters argued that DCPLs would be set at levels that do not account for imprecise relationships between parameters and emissions. An industry coalition group observed that three data points are not an adequate data base for establishing a continuously applicable surrogate standard because of the normal variability of systems over time. Using average results from the three tests will not reflect this variability. This commenter also provided data to show the variability in DCPLs for sources subject to the same limits. Another commenter stated that emission limits at most sources would be tightened by 50% or more.

Commenters suggested certain approaches that EPA could use to alleviate these problems. One would be to allow sources to operate control equipment at less than maximum feasible efficiency during the reference method testing period, or to expand the limits of any proposed sensitivity analysis. Another commenter recommended that the rule must include practical means for establishing parameter levels equal in stringency to the underlying standard, which must have been developed for continuous compliance. Commenters also recommended allowing owners or operators greater freedom to extrapolate the DCPL from the test results, otherwise the best controlled plants would be subject to the tightest DCPLs. The industry coalition argued that the examples in the Reference Document improperly imposed restrictions on how far from the baseline test results an owner or operator could attempt to extrapolate in order to establish a DCPL.

Response: As discussed in Section I.C. of the preamble to the final rule, the CAM approach is based on the concept that there is a reasonable assurance of compliance with emission limits so long as the emission unit is operated

under the conditions anticipated and the control equipment that has been proven capable of complying continues to be operated and maintained properly. In most cases, this relationship can be shown to exist through the performance testing without additional site-specific correlation of operational indicators with actual emission values. In contrast, the proposed rule relied on a direct correlation of parameters and emissions across all operating ranges. This change in the basic criteria for monitoring under part 64 effectively addresses the concern raised in these comments. The Agency also notes that the extent to which excursions from established parameter indicator ranges may be used to determine the existence of a violation of an applicable requirement will be addressed in accordance with the criteria established in the CE Revisions rulemaking.

Letter(s): American Portland Cement Alliance (IV-D-284); American Textile Manufacturers Institute (IV-D-440); ASARCO (IV-D-327); Ash Grove Cement Company (IV-D-311); Chemical Manufacturers Association (IV-D-301); Coalition for Clean Air Implementation (IV-D-304); Eastman Chemical Company (IV-D-347); National Environmental Development Association (IV-D-334); Texaco Inc. (IV-D-357)

9.3.3: Reducing the Burdens on Parameter Monitoring

Comment a: Commenters suggested reducing the burden of parameter monitoring by establishing exemptions for certain source categories, cutoff levels below which the requirements would not apply, or a cost per ton limit on enhanced monitoring protocols.

Response: The Agency believes that the focus of part 64 only on emissions units with control devices, coupled with the changes in the basic criteria that must be achieved by parameter monitoring under part 64, addresses these concerns in nearly all situations. In addition, clarifications and changes to the procedures for establishing indicator ranges for parameter monitoring, as discussed immediately below, will reduce the burdens of the part 64 requirements.

Letter(s): Bay Area Air Quality Management District (IV-D-402); Coalition for Clean Air Implementation (IV-D-304)

Comment b: Commenters suggested several ways to reduce the burdens of the

correlation requirements. Several commenters recommended allowing the use of some established parametric monitoring requirements. One commenter recommended allowing sources to rely on established correlation factors, such as AP-42 emission factors guidance, or correlation factors established at other, similar units or facilities, instead of reference method testing. (See also sections 19.6, 21.5.1 and 21.5.2 (Part I) for related comments.) Commenters also recommended allowing States to approve parametric monitoring approaches currently used to assure compliance. Others stated that the rule should allow for the use of equipment design and efficiency calculations or other appropriate engineering calculations in place of costly testing. One commenter argued that the CEMS-biased specifications in the appendices are inappropriate for showing parametric correlations, and suggested relying on whatever correlation procedures currently are used for parameter monitoring.

Some commenters also recommended amending § 64.4(c)(1) to allow permitting authorities to waive paperwork and correlation test requirements that are unnecessary, repetitive, or obvious. Some correlations, such as NSPS requirements, are well established and should not require development. An example would be the use of a thermocouple to monitor the presence of a flame on a flare. One commenter stated that where a program such as NSPS establishes parameter exceedance levels for reporting purposes, no additional DCPL or correlation requirements should be necessary. Revisions to proposed §§ 64.4(c)(1) and 64.4(f)(1) also were suggested so that correlation tests would be required only where no established correlation exists that satisfies the permitting authority.

Response: The Agency agrees with the basic position taken in these comments, but believes that the testing provisions in proposed appendix C would have allowed for waiving site-specific testing in such circumstances. To clarify the opportunity for flexibility in testing, § 64.4(c) addresses this issue explicitly. See Section II.D. of the preamble to the final rule for further discussion.

Letter(s): Amoco Corporation (IV-D-244); Chemical Manufacturers Association (IV-D-301); Clean Air Implementation Project (IV-D-242); Exxon Chemical Americas (IV-D-339); Exxon Company, USA (IV-D-310); General Electric Company (IV-D-278); Merck & Co. (IV-D-443); Monsanto Company (IV-D-273); Pharmaceutical Manufacturers Association (IV-D-367); Union

Carbide Corporation (IV-D-293)

Comment c: Two commenters recommended that the rule presume opacity and mass emission limitations to be equivalent. Some opposed forcing industry to expend resources to establish a correlation between opacity and mass emissions. A commenter recommended adding a provision to the rule stating explicitly that sources may use opacity limits to presume compliance with mass particulate standards. (See related comments in Section 3.1.8. (Part I), above.)

Response: The Agency does not believe that a general assumption that mass and opacity standards are equivalent is a valid approach to monitoring compliance with mass emission limits. Under the NSPS, for instance, depending on the type of control equipment being used and the design of an emissions unit (especially stack diameter), opacity standards are often established at a level which represents a likely significant exceedance of the particulate matter standard. In those circumstances, an opacity level below a required opacity standard would be more appropriate as a CAM indicator. Therefore, the use of a COMS may require an indicator range separate from the applicable opacity standard. The averaging period for the indicator range would not necessarily have to be consistent with the typical averaging period of the opacity standard (i.e., six minutes). Therefore, the Agency disagrees with this suggestion by the commenters. See Section II.D. of the preamble to the final rule for further discussion.

Letter(s): Bunge Corporation (IV-D-444); China Clay Producers Association, Inc. (IV-D-254)

Comment d: Certain gas industry commenters requested that the rule instruct States to allow sources using parameter or predictive systems to monitor internal combustion engines to use mass/time units or engine load/speed condition units rather than requiring them to use grams per horsepower/hour. If this is not done, engine operations at reduced capacity could lead to technical deviations, even though actual mass emissions are far below emissions at full capacity, which many existing rules presumed as the only operating condition. One commenter noted that these surrogate limits could be developed by establishing DCPLs based on parameters that provide surrogate mass emission level data, such as engine speed and fuel rate, and demonstrating through testing

that any permit limitations specified on a grams per horsepower/hour are met. If emission limits cannot be expressed in a mass/time format, several commenters requested that the rule specify emission limits for a particular engine load/speed condition.

Response: Because the final rule focuses on emissions units that rely on control devices to achieve compliance, and the types of combustion controls used to control NO_x from gas-fired engines are explicitly excluded from the definition of a control device, these comments are no longer applicable.

Letter(s): American Gas Association (IV-D-265); Arkla Energy Resources Company (IV-D-343); Gas Research Institute (IV-D-303); Mississippi River Transmission Corp. (IV-D-344)

Comment e: An industry commenter remarked that correlation development for predictive parameter monitors is very expensive, and recommended allowing permitting authorities to defer correlation demonstrations until after monitoring protocol approval. (See also Section 19.6 (Part I), below.)

Response: The Agency agrees that testing should not be required until the approach proposed by the source is approved, and the final rule provides for this type of deferred demonstration in § 64.4(e).

Letter(s): Exxon Company, USA (IV-D-310)

9.3.4: Requests for Clarification

Comment a: One commenter recommended stating that correlation specifications must be established in accordance with the "applicable" sections of proposed appendices A and C, since not all sections of the appendices apply to all parametric monitoring methods.

Response: These comments are no longer applicable given the modifications to the proposed appendices adopted in the final rule.

Letter(s): Pavilion Technologies, Inc. (IV-D-309)

Comment b: A local agency requested that additional specifications be added to the duty to list "all significant parameters" in order to create an objective standard for determining whether lists of parameters to be monitored are complete.

Response: The duty under proposed § 64.4(f) to list all significant parameters not included in a parameter monitoring protocol has been deleted in response to concerns raised about the practicality of this requirement.

Letter(s): South Coast Air Quality Management District (IV-D-524)

Comment c: A commenter requested that EPA explain more clearly when correlation analysis is required. This commenter also requested a clearer explanation of the difference between predictive parameter monitoring and demonstrated compliance parameter levels.

Response: The concerns about correlation testing are discussed in detail in Section II.C. and II.D. of the preamble to the final rule. The final rule relies on the concept of indicator ranges, analogous to common parameter levels established under NSPS regulations for purposes of reporting excess emissions. The DCPL approach included in the proposed rule would have required an increased degree of certainty and confidence in the correlation between the parameter level selected and the associated emission levels. A predictive parameter approach, such as a predictive emission monitoring system, provides data in terms of emission values even though no actual emissions monitoring occurs. The proposed DCPL approach, and the indicator range approach included in the final rule both will provide data in terms of the parameter(s) being monitored.

Letter(s): ARCO (IV-D-396)

Comment d: An industry coalition group noted that the classification of fuel sampling and coating sampling techniques is unclear. This commenter believed that fuel sampling and coating sampling techniques are examples of materials balance monitoring, not predictive parameter monitoring.

Response: Under the final rule, no such distinction is necessary. The issue under the final rule is whether such methods are used as a continuous compliance determination method. If they are, then the standards for

which they are used to determine compliance may be exempt from part 64. See Section II.B. of the preamble to the final rule for further discussion of this exemption.

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

9.3.5: Miscellaneous DCPL Comments

Comment a: An industry coalition group pointed out that Method 9 cannot be used for DCPL or predictive parameter monitoring development or implementation because Method 9 has low sensitivity and Method 9 readings are imprecise and have significant potential for negative bias. Errors would be particularly problematic where DCPLs would be low, as where a stack is essentially clear.

Response: Method 9 requires that its imprecision and potential bias be taken into account when evaluating the results of Method 9 testing. However, these concerns do not affect the requirement to report Method 9 results that may be in excess of an established opacity requirement. Where Method 9 testing is used to provide data for part 64 purposes, this same approach will be followed. Excursions beyond required opacity limits, or indicator ranges if applicable, will have to be reported as excursions, but the evaluation of the data for compliance purposes must take into account the potential imprecision and bias of the method in accordance with the provisions included in Method 9.

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

Comment b: Another commenter recommended allowing any NO_x source to use DCPL monitoring, regardless of its emission levels, and recommended allowing owners or operators to extrapolate DCPLs up to the level of the emission standard using known relationships developed by manufacturers or in the literature without requiring further proof to justify the extrapolation.

Response: Although the DCPL concept has been changed to the indicator range concept under the final rule, the Agency agrees generally that an owner or operator should be able to consider the use of an indicator range approach to monitoring (as opposed to direct emissions monitoring) for

any emissions unit, except where direct or predictive emissions monitoring is already required. Under § 64.3(d), if a CEMS, COMS or PEMS is already required by other federal, state or local requirements, the owner or operator must also use that system to satisfy part 64. In addition, § 64.4 allows the owner or operator to use data other than compliance test results to supplement the justification for indicator ranges. This provision is included in part to allow for the type of proposed extrapolation suggested in this comment.

Letter(s): National Oilseed Processors Association (IV-D-267)

Comment c: A commenter recommended lessening the stringency of requirements for daily average parameter values to allow sources up to 3% excused deviation periods from daily average parameter values during a single reporting period. This change would take into account meteorological, mechanical, and other problems that may cause deviations in parameter values, in spite of a source's best efforts.

Response: The Agency disagrees. The Agency believes that the circumstances mentioned by the commenter are best addressed in the context of evaluating particular excursions from established indicator ranges and what response to those excursions is appropriate.

Letter(s): Chemical Manufacturers Association (IV-D-301)

Comment d: Commenters objected to automatically deeming a failure to achieve any single parameter level a deviation from the applicable emission limitation or standard. One commenter pointed out that deviation from the emission standard should result from failure to achieve one parameter level only when the established parametric level shows that a deviation has taken place. One commenter noted that where a group of parameters are monitored with respect to one standard, the focus should be on the relationship between the parameters or an acceptable combination of levels. These commenters argued that it would be improper to determine compliance based on any one of such a group. (See related comments on the definition of a DCPL, section 7.3 (Part I).) Other commenters discussed utility units as an example of sources where many parameters could be used to monitor emissions and where small deviations in one parameter would be matched by deviations in other

parameters that would not necessarily contribute to emissions exceedances. These commenters stated that it would be unreasonable to require that so many parameters be kept within specified levels to maintain compliance.

Response: As discussed in response to section 7.3 (Part I), above, the DCPL concept has been modified in the final rule. Under the indicator range approach used in the final rule, § 64.3(a) allows for an indicator range to constitute the empirical output of more than one parameter where interrelated parameters are used. In addition, the Agency points out that whether an excursion from an indicator range constitutes a violation of the underlying emission limitation or standard will require evaluation of the particular circumstances involved. Under the final rule, excursions will be reported as possible exceptions to compliance, which are not necessarily "deviations." See Section I.E. of the preamble to the final rule for further discussion concerning the use of part 64 monitoring data to document violations of underlying emission limits.

Letter(s): Houston Lighting & Power (IV-D-322); National Environmental Development Association (IV-D-334); People's Natural Gas Company (IV-D-27); Southwestern Public Service Company (IV-D-272); Texaco Inc. (IV-D-357)

Comment e: Other commenters wanted assurance that deviations of one or more surrogate parameters would constitute only one potential violation of an emission limit, no matter how many parameters fail to meet an established DCPL. Some commenters recommended applying this option for deviations that take place within the same averaging period. These commenters noted that surrogate parameters are intended to measure compliance with a single emission limit, so only one potential violation of an applicable requirement should occur.

Response: Under the final rule, an excursion from an indicator range does not necessarily mean that an emission limit has been violated. As pointed out above, the issue of whether an excursion from an indicator range constitutes a violation of the underlying emission limitation or standard will require evaluation of the particular circumstances involved. See Section I.E. of the preamble to the final rule for further discussion concerning the use of part 64 monitoring data to document violations of underlying emission limits.

Letter(s): Association of International Automobile Manufacturers (IV-D-264); Eli Lilly and Company (IV-D-349); National Environmental Development Association (IV-D-334); Pharmaceutical Manufacturers Association (IV-D-367); Union Carbide Corporation (IV-D-293)

Comment f: Commenters raised concerns about proposed § 64.4(c)(2). One commenter provided proposed language to clarify that failing to achieve DCPLs may constitute a deviation from part 64 requirements or from an underlying standard, but not both. Other commenters recommended deleting the first sentence in § 64.4(c)(2), which states that failure to achieve a DCPL shall constitute a deviation from the applicable emission limitation or standard. One commenter found that statement inappropriate for parametric modeling techniques. One commenter also opposed allowing surrogate parameter deviations to constitute separate violations, suggesting that surrogate parameter deviations should only be considered deviations of the underlying permit condition that reflects the applicable requirement. An industry coalition group said that the last sentence of § 64.4(c)(2) appears to mean that a deviation from a DCPL does not constitute a violation of part 64 that is separate and independent of a violation of the underlying standard being monitored, which is appropriate because stating otherwise would create new emission requirements. A trade association stated that § 64.4(c) should establish that failure to achieve a DCPL is a failure to satisfy the underlying applicable requirement (provided that the monitoring approach has been legally established as the reference method) -- and not constitute a failure to satisfy part 64. If the parameter monitor is not established as the test method, then no violation of the applicable requirement can be found, but violations of part 64 data availability requirements may be found where appropriate, according to this commenter.

Response: Under the final rule, excursions from parameter monitoring indicator ranges must be reported and the owner or operator must take appropriate corrective action to return operations within normal operating conditions. In addition, excursions must be identified as possible exceptions to compliance in a compliance certification. As pointed out above, the issue of whether an excursion from an indicator range constitutes a violation of the underlying emission limitation or standard will require evaluation of the particular circumstances involved. See Section I.E. of the preamble to the final rule for further discussion concerning the use of part 64

monitoring data to document violations of underlying emission limits. Finally, contrary to the assertions of one of these comments, the Agency points out that it is possible for parameter data to be used to show that a violation of an underlying requirement has occurred provided the burdens of proof established in section 113(e) and the CE revisions, as applicable, are satisfied.

Letter(s): Clean Air Implementation Project (IV-D-242); Dow Chemical Company (IV-D-260); Eastman Chemical Company (IV-D-347); Houston Lighting & Power (IV-D-322); Mississippi Chemical Corp. (IV-D-179); Texas Chemical Council (IV-D-365)

Section 9.4: Fugitive Emissions Monitoring (§ 64.4(d))

9.4.1: Monitoring of Multiple Fugitive Emissions Points

Comment a: Many commenters opposed requiring monitoring of emissions from each fugitive emissions point and suggested that the rule require less detailed monitoring of fugitive emissions. One commenter recommended monitoring only total emissions from an emissions unit. Another commenter suggested exempting sources of fugitive emissions that emit small amounts and that are controlled through work practices. This commenter pointed out that developing enhanced monitoring protocols for multiple-point fugitive emissions monitoring could require disproportionate spending. Another commenter recommended explicitly stating in the rule that multiple point fugitive emissions protocols are acceptable. This commenter supported the proposed rule's allowing the use of multiple point fugitive emissions monitoring protocols, but was confused by the language in the preamble that suggested that monitoring of each point may be required. Another commenter recommended substituting "fugitive emissions areas" for "fugitive emissions points" in § 64.4(d).

A local agency that supported the special consideration given to fugitive monitoring requested that the final rule clarify whether a single monitoring protocol used to monitor multiple fugitive emissions points must be able to differentiate points when deviations occur.

One commenter recommended that the final rule provide sources with flexibility in determining which fugitive emissions points to aggregate in a single enhanced monitoring protocol. This commenter provided proposed

language that would allow plants to group fugitive emissions sources from one manufacturing process, from two manufacturing processes, or from the entire plant.

Response: Because the final rule focuses on pollutant-specific emissions units that rely on control devices to achieve compliance, no separate fugitive emission monitoring requirements are necessary. Where emissions that would otherwise be considered fugitive emissions are captured and vented to a control device to achieve compliance, part 64 may apply to those emissions but the only difference between part 64 requirements for that situation and non-potential fugitives will be the required capture system monitoring to assure the emissions are in fact captured.

Letter(s): Class of '85 Regulatory Response Group (IV-D-338); Department of Energy (IV-D-358);Dow Chemical Company (IV-D-260); Fort Howard Corporation (IV-D-233);South Coast Air Quality Management District (IV-D-524); Texas Chemical Council (IV-D-365)

9.4.2: Methods of Monitoring Fugitive Emissions

Comment a: Commenters generally opposed requiring the use of monitoring devices to monitor fugitive emissions. Several commenters stated that the final rule should clarify that fugitive emissions monitoring should almost always be through records of work practices and not through monitoring devices. Fugitive emissions are not emitted at discrete locations where control devices, monitors, or testing practices can be applied. Also, fugitive emissions may not be measurable (such as dust from unpaved roads). Although sources cannot report specific amounts of such emissions, they can report work practices that were used to prevent or lessen such fugitive emissions. Also, operators should focus on fixing leaks instead of measuring them.

Although one industry commenter supported generally the special recognition for fugitive monitoring in proposed § 64.4(d), several industry commenters recommended specifying in the rule that complying with work practice standards (including leak detection and repair programs) for controlling fugitive emissions and following the recordkeeping and reporting requirements of those standards, satisfies enhanced monitoring requirements. It is often unnecessary to monitor beyond demonstrating compliance with work practice standards. Commenters argued that,

although the draft Enhanced Monitoring Reference Document states that work practice standards to control fugitive emissions can be upgraded to satisfy enhanced monitoring requirements, the rule should specify this point because the Enhanced Monitoring Reference Document does not have the binding effect of the rule.

Response: See the response to Section 9.4.1 (Part I), above.

Letter(s): American Portland Cement Alliance (IV-D-284); Ash Grove Cement Company (IV-D-311); Dow Chemical Company (IV-D-260); Eli Lilly and Company (IV-D-349); General Electric Company (IV-D-278); Illinois Power Company (IV-D-274); Kennecott Corporation (IV-D-262); National Environmental Development Association (IV-D-334); Rubber Manufacturers Association (IV-D-331); Utility Air Regulatory Group (IV-D-489)

9.4.3: Monitoring of Fugitive Emissions at Specific Types of Sources

Comment a: One commenter recommended that the monitoring required for for-hire storage facilities take into consideration the vast differences in types of units and operations at such storage facilities and the types of units and operations at typical manufacturing facilities.

Response: See the response to Section 9.4.1 (Part I), above.

Letter(s): Independent Liquid Terminals Association (IV-D-468)

9.4.4: General Comments on Fugitive Emissions Monitoring

Comment a: One commenter opposed negotiating fugitive emissions monitoring requirements on a case-by-case basis during the permit process. This commenter suggested that the States or EPA establish an appropriate enhanced monitoring protocol for fugitive emissions through a formal rulemaking process. This commenter added that there is a high level of uncertainty regarding AP-42 fugitive emissions factors, and instituting and operating an annual program would be very expensive. Therefore, in light of the inaccuracies of the fugitive emissions factors, imposing the high cost of fugitive emissions monitoring would seem inconsistent with section 312 of the Act.

Response: See the response to Section 9.4.1 (Part I), above.

Letter(s): ARCO (IV-D-396)

Section 9.5: Selection Process Generally (§ 64.4(e))

9.5.1: Top-down Selection Process

Comment a: Several environmental and State agency commenters favored a top-down approach for selecting monitoring systems. In support of such an approach, a commenter cited sections 504(b) and 114(a)(1)(E) of the Act which specifically provide that the use of indirect monitoring procedures is appropriate only where "direct monitoring of emissions is impractical." Additional reasons supporting such an approach are that it would facilitate review by permitting authorities; result in the adoption of enhanced monitoring protocols that will yield better data; for at least some source categories, is warranted and consistent with other air programs; and would allow for the use of alternatives that can monitor emissions as well as or better than CEMS. Another commenter said that continuous compliance verification by CEMS is necessary to help end environmental racism.

A commenter in support of the top-down approach said that States should be allowed to continue to focus CEMS efforts on significant sources regardless of whether such an approach would be considered top-down. A commenter suggested that EPA's definition of "best" is the same as States' criteria for requiring CEMS (when "feasible and appropriate"). Another commenter suggested that EPA evaluate the costs of CEMS and parameter monitoring over time on the belief that it will show CEMS to be cost-effective for large sources and assuage concerns that States with strong CEMS programs will be in disagreement with sources over what is the most appropriate monitoring for a source.

Numerous other commenters opposed a top-down approach and supported EPA's stated intent in the preamble to reject a top-down approach (see, however, discussion below on comments arguing that the rule in effect creates a top-down approach). The primary reasons for opposing a top-down approach were that it is too costly, burdensome, inconsistent with congressional intent, would provide minimal or no environmental benefit, and unnecessary to fulfill the stated intent of

enhanced monitoring to determine compliance. Many commenters argued that investing in the most technologically advanced monitoring systems available may not produce data that are more accurate, more reliable, or more quickly accessible, while others noted that better data are not always necessary to show compliance. Commenters argued that a source's particular needs and compliance status may not warrant the cost of obtaining the best monitoring system available. An air pollution control agency association argued that the policy reasons for having top-down selection of control technologies under new source review do not exist for the Enhanced Monitoring Program.

Response: The Agency notes that this rule is being promulgated under section 114(a)(3) and not sections 114(a)(1)(E) or 504(b), and section 114(a)(3) gives EPA broad discretion in designing enhanced monitoring requirements. The Agency agrees that a top-down selection process is not necessary for enhanced monitoring because of the broad range of possible approaches for providing a reasonable assurance of compliance and has made changes to the final rule to clarify its position on this topic. The criteria in § 64.3 of the final rule specify the minimum elements that are required to satisfy part 64. Provided those criteria are satisfied, the owner or operator may use the monitoring that the owner or operator believes is appropriate for its situation. The exception to this approach is where a separate requirement already requires the use of a CEMS, COMS or PEMS. In that situation, the monitoring under the existing requirements must be used to satisfy part 64. See Section II.C. of the preamble to the final rule for further discussion. Also, the Agency notes that nothing in part 64 excuses the owner or operator from complying with monitoring requirements that may apply under other applicable requirements.

Letter(s): Air Compliance Total Services (ACTS) (IV-D-19); American Automobile Manufacturers Association (IV-D-538); American Electronics Association, Clean Air Task Force (IV-D-437); Amoco Corporation (IV-D-244); Appalachian Mountain Club, Northern New England Regional Office (IV-D-5); ARCO (IV-D-396); Arizona Public Service Company (IV-D-18); ASARCO (IV-D-327); AT & T (IV-F-1); California Air Resources Board (IV-D-387); Can Manufacturers Institute (IV-D-478); Clean Air Implementation Project (IV-D-242); Coalition for Clean Air Implementation (IV-D-304); Council of Industrial Boiler Owners (IV-D-319); County Sanitation Districts of Orange County, California (IV-D-235); Department of Energy (IV-D-358); E.I. DuPont de Nemours and Company (IV-D-329);

Entergy (IV-D-281); Fertilizer Institute, The (IV-D-251); Fort Howard Corporation (IV-D-233); General Electric Company (IV-D-278); Institute of Clean Air Companies (IV-D-379); Kaiser Aluminum & Chemical Corporation, Primary Prod. Div. (IV-D-368); Kerr-McGee Corporation (IV-D-232); Kerr-McGee Chemical Corp. (IV-D-385); Large Public Power Council (IV-D-336); Leather Industries of America (IV-D-286); Lubrizol Corporation, The (IV-D-306); Merck & Co., Inc. (IV-D-443); Monsanto Company (IV-D-273); Motorola Inc. (IV-D-302); National Environmental Development Association (IV-D-334); Natural Resources Defense Council, et al. (IV-D-225); NESCAUM (IV-D-253); New Mexico Environment Department (IV-D-247); Niagara Mohawk Power Corporation (IV-D-317); Occidental Chemical Corporation (IV-D-240); Ohio Manufacturers Association (IV-D-348); Pharmaceutical Manufacturers Association (IV-D-367); Phillips Petroleum Company (IV-D-380); PQ Corporation, The (IV-D-25); Rocky Mountain Oil and Gas Association (IV-D-183); Rubber Manufacturers Association (IV-D-331); Safety-Kleen Corporation (IV-D-22); Sierra Club, Lone Star Chapter (IV-D-364); Sierra Club, Pennsylvania Chapter (IV-D-23); Society of the Plastics Industry, Inc. (IV-D-287); Specialty Steel Industry of the United States (IV-D-328); State and Territorial Air Pollution Program Administrators, et al. (IV-D-439); Steel Manufacturers Association (IV-D-326); Tenneco Gas (IV-D-263); Tennessee Valley Authority (IV-D-389); Texas Intrastate Natural Gas Pipelines (IV-D-221); Tri-TAC (IV-D-24); Union Carbide Corporation (IV-D-293); United States Sugar Corporation (IV-D-382); Unocal Corporation (IV-D-268)

9.5.2: Requirement to Select "Best" Monitoring

Comment a: Many commenters opposed the requirement that sources select the "best" monitoring for a particular emissions unit. Several commenters stated that the legislative history did not support requiring that a proposed enhanced monitoring protocol be the "best", and provided no indication that Congress intended to require the foremost monitoring techniques. Numerous commenters said that the requirement of "best" monitoring was inconsistent with not requiring top-down selection of protocols; several commenters noted that the use of "best" makes the monitor selection process equivalent to the top-down BACT process under the PSD program. A number of commenters stated that section 504(b) of the Act argues against requiring the "best" monitoring, and instead only requires a monitoring methodology that is "sufficient/reliable/ adequate." Lastly, a

commenter said that EPA does not have legal authority to require monitoring more exacting than existing monitoring required in underlying emission standards.

Many commenters argued that the Act's goal of increasing compliance through better monitoring did not require the best monitoring and that the "best" requirement would mandate unnecessary replacement of appropriate enhanced monitoring protocols if a new protocol is deemed "better" from some technical perspective. Others argued that having to justify that a particular type of monitoring other than CEMS is the "best" may preclude the use of other types of monitoring, such as recordkeeping, that are most appropriate for a source.

Many other commenters stated that the "best" concept is inconsistent with EPA's stated intent of flexibility in monitor selection. Commenters stated that requiring the "best" monitoring will make permitting agencies reluctant to consider monitoring systems other than the most technologically demanding and that not allowing sources to choose the most appropriate enhanced monitoring will stifle innovation in monitoring technologies.

Numerous commenters said that EPA should require permittees to demonstrate only that a selected methodology meets the required technical criteria, not that it is the best. A number of commenters suggested that EPA delete "best" from the monitoring selection process and some suggested that the rule allow for "appropriate" monitoring protocols, which some said better reflects the process proposed to be used to establish monitoring requirements. Another commenter recommended substituting "adequate", "sufficient", or "optimal" for "best" or requiring simply "established monitoring."

Some commenters said that the definition of "best" was too vague, and a commenter was concerned that a vague definition would make it difficult for the permit applicant and the permitting authority to agree on the protocol for specific units and delay the permitting process. Another commenter suggested that "best" be clearly defined to ensure that units for which more stringent monitoring is excessive or unnecessary will not be forced to implement such monitoring. This commenter also urged that the Enhanced Monitoring Reference Document be finalized to allow sources to analyze what is considered to be the range of acceptable monitoring and to determine on a case-by-case basis what is the most cost-effective means of monitoring.

Several commenters said that requiring a permitting authority to determine the "best" monitoring was burdensome for the permitting authority without helping to achieve a correct decision. A commenter was concerned that permitting authorities may interpret "best" to require the most stringent monitoring option, regardless of cost, if it is technologically feasible for the unit to install the monitoring system. This could result even if a unit does not require stringent monitoring to demonstrate consistently and accurately that it is in compliance. Some commenters asked that EPA ensure that States allow flexibility in developing enhanced monitoring protocols.

If the "best" requirement is retained, several commenters suggested that the determination should include a reasonableness component, based on costs and other burdens, and clarify that other criteria in the "best" inquiry can be compromised if the resulting choice would impose unreasonable burdens for the specific emissions unit. Some commenters also suggested that if the final rule retains the "best" requirement, the rule should state clearly that "best" does not mean maximum monitoring, that economic feasibility is a key factor, that the goal is to provide an assurance of compliance, and that monitoring requirements that are excessive, unreasonable, misallocate compliance resources, or disrupt implementation of the Act will not be considered "best." Another commenter suggested that the potential benefits should be factored into the "best" monitoring decision, using as an example a small emissions unit located in an attainment area for the emitted pollutant which should raise less concern than a similar unit located in a nonattainment area, and concluding that the monitoring burdens imposed on the former unit should be less than those that might be imposed on the latter unit.

One commenter argued that the rule should provide a presumption that recordkeeping and engineering calculation methods are "best" for batch operations and pharmaceutical facilities. Another commenter recommended that the final rule establish recordkeeping practices as the "best" monitoring for work practice and other operational standards. Other commenters recommended that the rule should presume that parametric monitoring is appropriate for enhanced monitoring.

Response: The Agency has considered all of these comments and has deleted the requirement to select the best monitoring for a particular emissions unit from the final rule. See Section II.C. of the preamble to the final rule for

further discussion.

Letter(s): Agribusiness Association of Iowa (IV-D-529); ALCOA (IV-D-288); American Automobile Manufacturers Association (IV-D-538); American Cyanamid Company (IV-D-201); American Portland Cement Alliance (IV-D-284); American Textile Manufacturers Institute (IV-D-440); Amoco Corporation (IV-D-244); ARCO (IV-D-396); Arkansas Department of Pollution Control Technology (IV-D-3); Can Manufacturers Institute (IV-D-478); Chemical Manufacturers Association (IV-D-301); Class of '85 Regulatory Response Group (IV-D-338); Coalition for Clean Air Implementation (IV-D-304); Colorado Association of Commerce and Industry (IV-D-243); Corn Refiners Association, Inc. (IV-D-391); Council of Industrial Boiler Owners (IV-D-319); County Sanitation Districts of Orange County, California (IV-D-235); Department of Energy (IV-D-358); Dow Chemical Company (IV-D-260); E.I. DuPont de Nemours and Company (IV-D-329); Eastman Chemical Company (IV-D-347); Eastman Kodak Company (IV-D-333); Eli Lilly and Company (IV-D-349); Energy Efficiency Systems, Inc. (IV-D-255); Exxon Chemical Americas (IV-D-339); Exxon Company, USA (IV-D-310); Gas Processors Association (IV-D-227); General Electric Company (IV-D-278); Goodyear Tire and Rubber Company, The (IV-D-292); Houston Lighting & Power (IV-D-322); Illinois Power Company (IV-D-274); International Business Machines Corporation (IV-D-238); Kaiser Aluminum & Chemical Corporation (IV-D-295); KBN Engineering and Applied Sciences, Inc. (IV-D-475); Kerr-McGee Corporation (IV-D-232); Kerr-McGee Chemical Corp. (IV-D-385); Leather Industries of America (IV-D-286); Marathon Oil Company (IV-D-376); Merck & Co., Inc. (IV-D-443); Mississippi Chemical Corp. (IV-D-179); Monsanto Company (IV-D-273); National Association of Manufacturers (IV-D-261); National Environmental Development Association (IV-D-334); National Grain and Feed Association (IV-D-312); New Mexico Environment Department (IV-D-247); Occidental Chemical Corporation (IV-D-240); Ohio Edison (IV-D-266); Oklahoma Department of Environmental Quality (IV-D-463); Pavilion Technologies, Inc. (IV-D-309); Pennzoil Company (IV-D-373); Pharmaceutical Manufacturers Association (IV-D-367); Phillips Petroleum Company (IV-D-380); PQ Corporation, The (IV-D-25); Printing Industries of America, Inc. (IV-D-473); Rubber Manufacturers Association (IV-D-331); Specialty Steel Industry of the United States (IV-D-328); Steel Manufacturers Association (IV-D-326); Tennessee Valley Authority (IV-D-389); Texaco Inc. (IV-D-357); Texas Chemical Council (IV-D-365); Texas Intrastate Natural Gas Pipelines (IV-D-221); Texas Natural Resource Conservation Commission

(IV-D-371); 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); Westinghouse Electric Corporation (IV-D-321)

9.5.3: Costs as a Criterion for Protocol Selection

Comment a: Numerous commenters said that costs must be an explicit criterion for selecting an enhanced monitoring protocol. Many commenters said that where multiple monitoring systems are shown to meet the requirements, a cost/benefit analysis should be a criterion for selecting one of them. A commenter said that consideration of costs would be especially appropriate in selecting enhanced monitoring protocols for units with low use levels.

A commenter said that the sufficiency standard in section 504(b) of the Act mandates consideration of costs in selecting enhanced monitoring protocols. Another commenter said that the Act's structure and legislative history show that Congress intended EPA to take costs into account in regulating emission sources except where Congress specifically stated otherwise. A permitting authority said that its State law required that economic feasibility be part of all regulatory actions. Additional reasons for including cost as a criterion were that all other technologically based standard setting programs under the Clean Air Act, except for LAER for new source review in nonattainment areas, include cost as a determining factor; requiring a more expensive protocol would not provide any environmental benefit where a less expensive protocol is capable of determining compliance; and, instrumental monitoring systems should only be required when all other methods of compliance verification (such as recordkeeping) were neither applicable nor sufficient.

Commenters recommended that permitting authorities consider, in addition to the price of the monitoring equipment, the expenses associated with locating, installing, operating, and maintaining the monitoring device (including, but not limited to, access structures and elevators), and managing the vast amounts of data.

A commenter recommended that the preamble be clarified to provide that selecting monitoring that is technically and economically feasible does not mean that economic feasibility may be excluded from the selection

process. Another commenter said that, because monitoring systems are required to prove compliance, the method that is least expensive to install and operate should be approvable as enhanced monitoring. Still another commenter proposed adding "the relative cost-effectiveness of alternative monitoring protocols" to the list of elements for determining what is "best" for a particular emissions unit in § 64.4(e). Another commenter proposed that the rule explicitly state that a "bottom up" selection approach should be used. Lastly, commenters suggested, especially for engines and other "low cost" sources, that the rule be structured to foster selection of the least expensive and least complex method possible to demonstrate compliance.

Response: Section 64.3 of the final rule establishes the minimum criteria that must be achieved to satisfy part 64. The Agency believes that these criteria allow for the use of cost-effective monitoring approaches that can provide a reasonable assurance of compliance with applicable requirements. So long as the part 64 criteria are satisfied, the owner or operator can select the most cost-effective option available for its particular circumstances. See the detailed response to this issue in section 6.4 (Part III) of this response to comment document.

Letter(s): Air Compliance Total Services (ACTS) (IV-D-19); American Gas Association (IV-D-265); American Automobile Manufacturers Association (IV-D-538); American Foundrymen's Society, Inc. (IV-D-294); American Portland Cement Alliance (IV-D-284); Arkla Energy Resources Company (IV-D-343); Can Manufacturers Institute (IV-D-478); Carolina Power & Light Company (IV-D-297); Chemical Manufacturers Association (IV-D-301); Clean Air Implementation Project (IV-D-242); Coalition for Clean Air Implementation (IV-D-304); Colorado Association of Commerce and Industry (IV-D-243); County Sanitation Districts of Orange County, California (IV-D-235); Department of Energy (IV-D-358); Dow Chemical Company (IV-D-260); Eastman Chemical Company (IV-D-347); El Paso Natural Gas Company (IV-D-271); Eli Lilly and Company (IV-D-349); Enserch Development Corp. (IV-D-239); Exxon Chemical Americas (IV-D-339); Exxon Company, USA (IV-D-310); Fertilizer Institute, The (IV-D-251); Fort Howard Corporation (IV-D-233); Gas Processors Association (IV-D-227); Greater Cincinnati Chamber of Commerce (IV-D-224); Houston Lighting & Power Company (IV-D-530); Illinois Power Company (IV-D-274); International Business Machines Corporation (IV-D-238); Kingsford Products Company, The (IV-D-246); Large Public Power Council (IV-D-336); Merck & Co., Inc. (IV-D-443); Mississippi River

Transmission Corp. (IV-D-344); National Association of Manufacturers (IV-D-261); National Oilseed Processors Association (IV-D-267); Natural Gas Pipeline Company of America (IV-D-248); New Mexico Oil and Gas Association (IV-D-228); Ohio Edison (IV-D-266); Ohio Cast Metals Association (IV-D-324); Ohio Chamber of Commerce (IV-D-370); Ohio Edison (IV-D-266); Pavilion Technologies, Inc. (IV-D-309); Peoples Gas Light and Coke Company, The (IV-D-527); Pharmaceutical Manufacturers Association (IV-D-367); Phillips Petroleum Company (IV-D-380); Public Service Company of Oklahoma (IV-D-477); Safety-Kleen Corporation (IV-D-22); Shell Oil Company (IV-D-280); Society of the Plastics Industry, Inc. (IV-D-287); Southern Union Gas (IV-D-9); Southwestern Public Service Company (IV-D-272); Synthetic Organic Chemical Manufacturers Association (IV-D-362); Tenneco Gas (IV-D-263); Tennessee Department of Environment and Conservation (IV-D-399); Texas Chemical Council (IV-D-365); Tri-TAC (IV-D-24); United States Sugar Corporation (IV-D-382); Unocal Corporation (IV-D-268); Utility Air Regulatory Group (IV-D-489); Waukesha Engine Division, Dresser Industries Inc. (IV-D-342); Williams Natural Gas Company (IV-D-213)

9.5.4: Other Elements Appropriate for "Best for a Particular Emissions Unit" Analysis

Comment a: Commenters suggested revisions and additions to the list of factors to be considered in determining whether a monitoring protocol is "best" for a particular emissions unit. A commenter said that selection of an appropriate enhanced monitoring protocol will entail consideration of several factors that may not be considered relevant by the permitting authority. These factors include: the source's experience with a particular technology, and compatibility of technology with existing equipment on the plant site. These factors may not make the technology or instrument appear better or worse in a demonstration, but may have a significant effect on the cost and difficulty of compliance.

Other commenters recommended providing for the age of affected facilities to be taken into consideration in determining what is best monitoring. A commenter added that issues concerning the age of a facility or unit include hardware and software compatibility, the level of complexity of using computerized systems, and the level of expertise and training of the people using these systems.

Several commenters supported the concept of requiring less sophisticated monitoring requirements for emissions units which have a large margin of compliance and low potential variability in emissions. A commenter cited as examples old existing sources that are permitted under the "process rate tables" or which have opacity limits of 20% or higher. One commenter argued that in such cases enhanced monitoring should not be required. One commenter proposed that the word "higher" be used at the beginning of § 64.4(e)(1)(ii)(C) to clarify the role of margin of compliance in determining what is best for a particular source. Another commenter recommended defining "large" and "small" margins of compliance in terms of percentages. Finally, one commenter cautioned that the margin of compliance concept should not be used to reduce a source's permit limits or interfere with the ability to use emission reductions for emission offset purposes. (See related discussions under R-2.19 (Other Definitions to Consider), R-4.2 (Monitor Performance and Operating Requirements), and A-1.1 (Measurement Frequency Specifications).)

Response: The decision to delete the concept of "best" in the final rule adequately responds to these comments.

Letter(s): American Textile Manufacturers Institute (IV-D-440); Armco Steel Company (IV-D-395); China Clay Producers Association, Inc. (IV-D-254); Kerr-McGee Chemical Corp. (IV-D-385); Merck & Co., Inc. (IV-D-443); Michigan Department of Natural Resources (IV-D-438); Motorola Inc. (IV-D-302); Tri-TAC (IV-D-24); Union Carbide Corporation (IV-D-293)

9.5.5: Perceived Bias Toward Continuous Emissions Monitoring Systems

Comment a: Many commenters asserted that the language of the proposed rule created a bias toward CEMS and COMS in the selection process, and asked EPA to reject CEMS as a necessary means of determining compliance. Several commenters found this bias toward CEMS in the requirement that sources identify the "best" monitoring for the particular unit. Others noted that the criteria for enhanced monitoring and much of the language in the proposed rule, appendices and draft Enhanced Monitoring Reference Document could only apply to CEMS. Others stated that workload burdens and a desire to avoid controversy will cause permit writers to require CEMS when other monitoring would suffice, that the extensive quality assurance and parameter correlation requirements appeared to disfavor parameter enhanced monitoring and bias the rule

toward CEMS, and that failure to take into account costs always allow CEMS to be "best." Commenters argued that Congress recognized that enhanced monitoring could include a range of measurement options appropriate for different types of emissions sources that make different contributions to air pollution. Many commenters provided examples of non-CEMS monitoring for emissions units within their industry that is far more cost-effective than CEMS and appropriate for certifying compliance. Therefore, these commenters argued, the bias toward CEMS is inappropriate.

Commenters proposed changes to the rule to ensure that it does not favor CEMS over other monitoring options. These changes include: (1) adding provisions for non-CEMS systems that parallel provisions already included for CEMS; (2) stating explicitly that predictive emission monitoring systems are deemed equivalent to CEMS; (3) clarifying in the performance and operating requirements under § 64.4(b) that non-instrumental monitoring is either preferred or at least not disfavored; (4) revising the final rule so that it does not force all sources, by default, to install CEMS; (5) revising the final rule so that it does not require extensive and unnecessary data evaluation and submittal; (6) revising the final rule and the Enhanced Monitoring Reference Document to eliminate any language that presumes or prefers instrumental monitoring or CEMS; (7) plainly stating throughout the rule, the RIA, and the Enhanced Monitoring Reference Document that CEMS is merely one of several forms of acceptable monitoring; and (8) specifying criteria for choosing acceptable alternatives to CEMS.

Certain commenters recommended thresholds for even considering CEMS or COMS as an enhanced monitoring option. Thresholds included units over 200 tons per year for COMS, and units over a threshold ranging from 300 to 500 tons per year for CO, NO_x, and SO₂ CEMS.

Environmental groups argued that the rule should contain a CEMS bias. In addition to the arguments favoring a top-down selection process stated above, these groups generally believed that CEMS should be required because they are necessary to support emission averaging and trading programs, and to assure accurate emission inventories, baseline profiles, and State records on actual emissions.

Response: The Agency has taken several steps in the final rule to eliminate the perceived bias toward CEMS, including: deleting the "best" selection

process; revising the general criteria that monitoring must achieve to satisfy part 64; and revising the performance and operating criteria. The only bias toward CEMS (and COMS and PEMS) is in situations where such systems are already required. In those situations, the Agency believes that it is appropriate for those systems to also be used for purposes of satisfying part 64.

Letter(s): Agribusiness Association of Iowa (IV-D-529); Aluminum Association (IV-D-378); American Automobile Manufacturers Association (IV-D-538); American Gas Association (IV-D-265); American Petroleum Institute (IV-D-289); Appalachian Mountain Club, Northern New England Regional Office (IV-D-5); Arkla Energy Resources Company (IV-D-343); Armco Steel Company (IV-D-395); Baltimore Gas and Electric Company (IV-D-296); BP Oil Company (IV-D-315); Bunge Corporation (IV-D-444); Coalition for Clean Air Implementation (IV-D-304); Council of Industrial Boiler Owners (IV-D-319); Delhi Gas Pipeline Corporation (IV-D-351); Department of Energy (IV-D-358); Distilled Spirits Council of the United States (IV-D-300); El Paso Natural Gas Company (IV-D-271); Eli Lilly and Company (IV-D-349); Energy Efficiency Systems, Inc. (IV-D-255); Enserch Development Corp. (IV-D-239); Entergy (IV-D-281); Exxon Company, USA (IV-D-310); Fertilizer Institute, The (IV-D-251); Fort Howard Corporation (IV-D-233); Gas Processors Association (IV-D-227); General Electric Company (IV-D-278); Greater Cincinnati Chamber of Commerce (IV-D-224); Houston Lighting & Power (IV-D-322); International Business Machines Corporation (IV-D-238); Leather Industries of America (IV-D-286); Lubrizol Corporation, The (IV-D-306); Mississippi River Transmission Corp. (IV-D-344); National Grain and Feed Association (IV-D-312); National Petroleum Refiners Association (IV-D-276); Natural Gas Pipeline Company of America (IV-D-248); Natural Resources Defense Council, et al. (IV-D-225); Northwest Pipeline Corporation (IV-D-270); Ohio Chamber of Commerce (IV-D-370); Ohio Edison (IV-D-266); Pennzoil Company (IV-D-373); Pharmaceutical Manufacturers Association (IV-D-367); Phillips Petroleum Company (IV-D-380); Sierra Club, Pennsylvania Chapter (IV-D-23); Society of the Plastics Industry, Inc. (IV-D-287); Specialty Steel Industry of the United States (IV-D-328); Steel Manufacturers Association (IV-D-326); Sugar Cane Growers Cooperative of Florida, et al. (IV-D-252); Synthetic Organic Chemical Manufacturers Association (IV-D-362); Tenneco Gas (IV-D-263); Total Petroleum, Inc (IV-D-354); United States Sugar Corporation (IV-D-382)

9.5.6: Selection of Enhanced Monitoring Protocol Based Upon Specified Technical Criteria

Comment a: Many commenters supported an approach by which the technical criteria for an enhanced monitoring protocol are specified and the owner or operator is allowed to demonstrate that its proposed enhanced monitoring protocol achieves the criteria. Some commenters indicated support for the "best monitoring for a particular emissions unit" concept if it is viewed solely in this manner. The reasons provided by commenters in support of this approach include: (1) that it is appropriate under section 504(b) of the Act; (2) the concern that specifying precise enhanced monitoring protocol requirements for each source category would be impractical because the operating conditions of each source may vary; (3) this approach provides maximum compliance flexibility on a facility-specific basis, and it is important that part 64 not be overly prescriptive; (4) provided that a proposed enhanced monitoring protocol meets the specified criteria, there are no additional benefits achieved by forcing technology; (5) this approach will allow utilization of unique monitoring techniques and compliance assurances developed in response to regulatory programs for other media such as hazardous waste; and (6) because sources face enforcement exposure for proposing inadequate monitoring, they have every incentive to propose sufficient monitoring without requiring "best" monitoring.

Many commenters had suggestions as to how to implement this approach, including requiring permitting authorities to maintain a list of all technologically feasible methodologies in a data clearinghouse and allowing sources to choose from those options; having EPA provide permitting authorities with specific guidance on determining the "best" monitoring system; allowing an owner or operator to exercise flexibility in determining the optimum system for specific applications to achieve compliance in a cost-effective manner; and allowing the specific type of unit in question to dictate what type of monitoring is "best" or sufficient.

Some commenters suggested that the only criteria should be that the monitoring be sufficient to determine compliance as required under part 64. One commenter said that the provision that a source is responsible for assessing or obtaining approval of an enhanced monitoring protocol will motivate the source to obtain a protocol that meets the rules requirements, and avoid noncompliance situations associated with inadequate monitoring technology. Other commenters said that the most

cost-effective methodology that can reasonably determine compliance should be sufficient for enhanced monitoring. That approach would be in line with EPA's stated position in the preamble, and be consistent with Executive Order No. 12866.

Response: The Agency believes that the final rule is consistent with these comments. The final rule includes no specific selection process requirements, but instead requires the owner or operator to propose for approval monitoring that satisfies the criteria specified in § 64.3 of the final rule. See Section II.C. of the preamble to the final rule for further discussion.

Letter(s): American Automobile Manufacturers Association (IV-D-538); ASARCO (IV-D-327); Buffalo Color Corporation (IV-D-466); Can Manufacturers Institute (IV-D-478); China Clay Producers Association, Inc. (IV-D-254); Colorado Department of Health (IV-D-209); Council of Industrial Boiler Owners (IV-D-319); County Sanitation Districts of Orange County, California (IV-D-235); Department of Energy (IV-D-358); Department of the Navy (IV-D-206); E.I. DuPont de Nemours and Company (IV-D-329); Entergy (IV-D-281); Hazardous Waste Treatment Council (IV-D-392); Houston Lighting & Power (IV-D-322); Kaiser Aluminum & Chemical Corporation (IV-D-295); Los Angeles County Sanitation Districts (IV-D-26); National Environmental Development Association (IV-D-334); Oklahoma Department of Environmental Quality (IV-D-463); Pharmaceutical Manufacturers Association (IV-D-367); Public Service Company of Oklahoma (IV-D-477); Tenneco Gas (IV-D-263); Texas Natural Resource Conservation Commission (IV-D-371); Tri-TAC (IV-D-24); Unocal Corporation (IV-D-268)

9.5.7: Selection of Enhanced Monitoring Protocol Based Upon Specified Monitoring Methods for Some Source Categories

Comment a: Many commenters supported a variation of an option considered in the preamble to the proposed rule, by which specific monitoring methods would be established for at least some source categories. The reasons provided by commenters in support of this approach include uniformity in application; streamlining the permitting process; enabling permitting authorities to use general permit vehicle to approve enhanced monitoring protocols with large savings in resources; and reducing the waste of resources caused by case-by-case selection.

Some of the source categories cited as possible candidates for this approach were fossil fuel-fired steam generating units, printing sources, and emissions units that tend to operate independently or that are equipment-based, such as spray booths, boilers, internal combustion engines, and storage facilities. For NSPS and NESHAP sources, a commenter suggested that EPA identify specifically where existing monitoring is not adequate and specify the appropriate modifications, with some allowance for case-by-case alternatives. This will assure consistency and reduce workload.

Several commenters suggested that EPA should develop specific protocols for the most common source categories that include specific, reasonable, well-researched, cost-effective benchmark monitoring. At the least, another commenter suggested, EPA should develop data on appropriate operating conditions for such units that correlate to compliance and then include that information in the Enhanced Monitoring Reference Document. Another commenter proposed an approach similar to the RECLAIM program in California's South Coast area, by which EPA would develop a top-down list of monitoring by source category and post the list on EPA's electronic bulletin board system; then, as technical advances are made, changes to the list could be made. Another commenter also suggested that EPA publish a list of established monitoring protocols and allow sources to select and use any protocol on that list. Still another commenter recommended simplifying the enhanced monitoring protocol approval process to allow permitting authorities to use the EPA data base and reference documents to determine the level of review. Where a protocol is proposed that is included in the Enhanced Monitoring Reference Document as satisfying the requirements of § 64.4, approval could be granted immediately.

Numerous commenters argued that certain types of monitoring should be automatically accepted as enhanced monitoring, which would greatly simplify the selection process. Many commenters argued that established monitoring should constitute enhanced monitoring without justification (see detailed summary of these comments in discussion of established monitoring comments in Section 9.6). Other forms of monitoring that commenters believed appropriate for automatic acceptance as enhanced monitoring included: (1) monitoring previously approved into permits; (2) monitoring examples included in the Enhanced Monitoring Reference Document; (3) monitoring approved under RECLAIM or similar title I emission trading programs; (4) the daily topcoat

protocol for automobile and light duty truck coating sources; (5) Reference Method 9 tests for slag processing areas at steel facilities; (6) engineering calculations, including for NO_x and CO monitoring at steel facilities; (7) RACT requirements; (8) State-approved alternative methods for NSPS facilities; and (9) existing recordkeeping and inspection practices for work practice, engineering and inspection standards.

Response: The implementation approach taken in the final rule is generally consistent with this approach, while still allowing for flexibility in proposing and approving monitoring. First, § 64.3(d) requires the use of CEMS, COMS and PEMS where such systems are already required. Second, § 64.4(b) lists several types of monitoring for which no further justification generally will be required to document that the monitoring will satisfy part 64. Third, the Agency will continue to develop example monitoring approaches that can be used to streamline the decision making process. Fourth, permitting authorities can develop programmatic SIP rules which specify the appropriate monitoring for particular source categories. Because part 64 will not be effective for most affected pollutant-specific emissions units until permit renewal, there should be sufficient time to implement these third and fourth procedures for many common situations, especially for smaller units that can most benefit from this type of approach. The Agency notes, however, that the examples developed by EPA will not be mandatory so that owners or operators will retain the flexibility to propose a different monitoring approach. The Agency will consider the comments summarized above that provide examples as the Agency develops examples of acceptable monitoring for various types of affected emissions units.

Letter(s): American Automobile Manufacturers Association (IV-D-538); American Foundrymen's Society, Inc. (IV-D-294); American Textile Manufacturers Institute (IV-D-440); Appalachian Mountain Club, Northern New England Regional Office (IV-D-5); Association of International Automobile Manufacturers (IV-D-264); Atmos Energy Corporation (IV-D-212); Baltimore Gas and Electric Company (IV-D-296); California Air Resources Board (IV-D-387); Chemical Manufacturers Association (IV-D-301); E.I. DuPont de Nemours and Company (IV-D-329); Eastman Chemical Company (IV-D-347); Exxon Chemical Americas (IV-D-339); Illinois Environmental Protection Agency (IV-D-518); Large Public Power Council (IV-D-336); Leather Industries of America (IV-D-286); Minnesota Pollution Control Agency (IV-D-469); Mississippi Department of Environmental Quality, State of (IV-D-472); Monsanto Company (IV-D-273); Natural

Resources Defense Council, et al. (IV-D-225); New United Motor Manufacturing, Inc. (IV-D-467); Niagara Mohawk Power Corporation (IV-D-317); North Dakota Department of Health and Consolidated Laboratories (IV-D-250); Ohio Cast Metals Association (IV-D-324); Pharmaceutical Manufacturers Association (IV-D-367); PQ Corporation, The (IV-D-25); Printing Industries of America, Inc. (IV-D-473); Society of the Plastics Industry, Inc. (IV-D-287); South Coast Air Quality Management District (IV-D-524); Southern California Gas Co. (IV-D-290); Specialty Steel Industry of the United States (IV-D-328); Steel Manufacturers Association (IV-D-326); Texaco Inc. (IV-D-357); Union Carbide Corporation (IV-D-293); Unocal Corporation (IV-D-268); Washington Department of Ecology (IV-D-279)

9.5.8: Impact of the Selection Process on Small Sources

Comment a: Several commenters were concerned about the impact of the proposed selection process on small sources. Commenters noted that small businesses do not have the time, technical expertise or resources to accomplish the "best" analysis and other selection process requirements included in the proposed rule. One commenter complained that the rule provided perverse incentives for sources to build large emissions units because the cost of CEMS does not change greatly according to the size of the emissions unit being monitored. This cost issue will hinder creation of small sources that are often more environmentally beneficial (such as cogeneration). Another commenter said that enhanced monitoring will provide adverse precedent to future MACT regulations which will have a significant impact on small business.

Response: The Agency believes that the major changes adopted in the final rule discussed throughout this document (including the focus of the rule solely on pollutant-specific emissions units that rely on control devices to achieve compliance, the deletion of the "best" analysis, and the extended implementation schedule for smaller emissions units) will reduce the implementation burdens of the rule for small sources. Because nothing in the rule requires the use of CEMS, the Agency does not believe that the rule will hinder development of small sources. In fact, the rule may foster the development of certain types of small projects that may not require the use of control devices to achieve compliance.

Letter(s): Enserch Development Corp. (IV-D-239); Printing Industries of America, Inc. (IV-D-473); Utility Air Regulatory Group (IV-D-489); Washington

Department of Ecology (IV-D-279)

9.5.9: Miscellaneous Issues

Comment a: A commenter noted general support for EPA's intent to allowing the private market to develop new and innovative means of achieving the Act's air quality goals, although another commenter expressed concern that there is insufficient expertise to fulfill the need for the outside consultation that companies will require in order to comply with the rule.

Response: The Agency believes that the revisions concerning applicability and implementation that are included in the final rule retain the benefits of flexibility included in the proposed rule while at the same time addressing the commenter's concerns about the technical resources available to implement effectively the requirements of the rule.

Letter(s): Armco Steel Company (IV-D-395); Large Public Power Council (IV-D-336)

Section 9.6: Established Monitoring Issues (§ 64.4(e)(1))

9.6.1: Distinguishing Established and Enhanced Monitoring

Comment a: Numerous commenters suggested that established monitoring be considered to be, or at least be presumed to be, enhanced monitoring. Many commenters argued that this approach would simplify the implementation of enhanced monitoring by reducing costs and burdens to sources, by giving permitting authorities certainty in choosing among pre-approved options and allowing permitting authorities to build on monitoring decisions that EPA has already made. Certain commenters also stated that a review of the most technologically sophisticated monitoring equipment is not necessary to certify compliance and therefore established monitoring should be sufficient, while others argued that requiring individual review of each proposed use of established monitoring would limit the advantages of using established monitoring. Commenters also argued that any advantage to customizing established monitoring would be outweighed by the time and resources that would be required to reconsider monitoring plans that have already been recognized as sufficient. Several commenters suggested that established monitoring at least be considered sufficient for enhanced monitoring purposes unless

the permitting authority determines otherwise. Other commenters said that established monitoring should be presumed to be equivalent to enhanced monitoring and approved without any demonstration as to adequacy. One commenter recommended exempting source categories that meet the requirements of established programs from direct emissions measurement unless it is required under the established program.

Some commenters requested guidance on the distinction between "established" and "enhanced" monitoring protocols. The commenters were concerned that monitoring adopted under current programs to show compliance would have to be reevaluated and recertified under the Enhanced Monitoring Program. This would be especially troubling for monitoring that has already been approved under major new source review permitting.

Some commenters recommended deleting the statements that established monitoring could require upgrading to meet enhanced monitoring requirements because upgrading would diminish the value of using established monitoring. One of these commenters was concerned that the scope of possibly required upgrades to established monitoring was indefinite. This commenter added that sources preparing applications would have uncertainty and would lack clear criteria against which to judge and possibly challenge an upgrade proposed by a permitting authority.

Response: As proposed, established monitoring would have referred merely to monitoring that is already included in Federal regulations and permits. In many instances, that monitoring may have been adopted in those regulations without consideration of the elements in part 64 that the Agency believes are appropriate for satisfying the enhanced monitoring requirements in the Act. For that reason, EPA rejects the approach of deeming established monitoring to be equivalent to enhanced monitoring. Because of the decision to require only that the owner or operator propose monitoring that satisfies the criteria in part 64, the provisions concerning "established monitoring" are no longer necessary and have been deleted in the final rule. However, § 64.4(b) of the final rule does allow for the justification of proposed monitoring to be based in part on the fact that the monitoring is already established in existing requirements for the source, and in some cases allows for the owner or operator to rely presumptively on certain regulatory precedents. See Section II.D. of the preamble to the final rule for further discussion.

Letter(s): Aluminum Association (IV-D-378); American Automobile Manufacturers Association (IV-D-538); Association of International Automobile Manufacturers (IV-D-264); Chemical Manufacturers Association (IV-D-301); Chevron (IV-D-397); Corn Refiners Association, Inc. (IV-D-391); Distilled Spirits Council of the United States (IV-D-300); Dow Chemical Company (IV-D-260); Eastman Chemical Company (IV-D-347); Fertilizer Institute, The (IV-D-251); Kerr-McGee Corporation (IV-D-232); Lone Star Gas Company (IV-D-211); Los Angeles County Sanitation Districts (IV-D-26); New United Motor Manufacturing, Inc. (IV-D-467); Pacific Gas Transmission Co. (IV-D-234); Pharmaceutical Manufacturers Association (IV-D-367); Society of the Plastic Industry, Inc. (IV-D-287); Solar Turbines (IV-D-7); South Coast Air Quality Management District (IV-D-524); Specialty Steel Industry of the United States (IV-D-328); Steel Manufacturers Association (IV-D-326); Tennessee Valley Authority (IV-D-389); Texaco Inc. (IV-D-357); Union Carbide Corporation (IV-D-293); Washington Department of Ecology (IV-D-274)

Comment b: Certain commenters stated that all, or at least certain, specific NSPS and NESHAP monitoring should be deemed to satisfy enhanced monitoring requirements, while several commenters recommended declaring that the protocols described in the Enhanced Monitoring Reference Document constitute enhanced monitoring. One commenter also suggested incorporating the Enhanced Monitoring Reference Document into the CFR by reference to facilitate the latter approach.

Response: As noted above, the proposed established monitoring provisions have been deleted in the final rule. Under the extended implementation schedule, EPA will develop guidance on example monitoring for various process/pollutant/control device combinations. Those examples will be approaches that EPA considers acceptable to satisfy part 64. Where appropriate, an example approach may be the same as the requirements in the NSPS or NESHAP standard, such as flare monitoring requirements. However, other NSPS/NESHAP monitoring requirements may not be adequate. For instance, 40 CFR Part 60, Subpart E requires only monitoring of process throughput, which is not adequate to provide a reasonable assurance of compliance with the Subpart E particulate matter standards.

Letter(s): American Automobile Manufacturers Association (IV-D-538); Association of International Automobile Manufacturers (IV-D-264); Chemical

Manufacturers Association (IV-D-301); New United Motor Manufacturing, Inc. (IV-D-467); Society of the Plastic Industry, Inc. (IV-D-287); Specialty Steel Industry of the United States (IV-D-328); Steel Manufacturers Association (IV-D-326); Washington Department of Ecology (IV-D-274)

Comment c: Another commenter was concerned that the possible requirement to upgrade existing established monitoring systems to meet the "best" standard will increase the stringency of underlying standards. The commenter added that EPA is not authorized to change underlying standards without undergoing proper rulemaking procedures. Another commenter argued that EPA lacked legal authority to require upgrades to monitoring already included in existing standards.

Response: Although this comment is no longer applicable given the revisions incorporated in the final rule, EPA notes that the Agency disagrees that it lacks the authority to require enhanced monitoring independently of the existing standards that may differ from the monitoring under those standards. See section 3.1.2 (Part I), above, for further discussion of this issue.

Letter(s): Large Public Power Council (IV-D-336)

9.6.2: Part 75 Monitoring as Established Monitoring

Comment a: A commenter supported EPA's proposal to use the established monitoring concept because it will allow a source that uses a CEMS under the Acid Rain Program to satisfy enhanced monitoring with minimal effort, especially with the coordination of enhanced monitoring and part 75 performance and QA/QC requirements in the part 64 appendices.

Some commenters asked that the rule specify that the protocols of appendices D and E to part 75 are considered established monitoring so that they can be considered by non-title IV sources in selecting a protocol.

A commenter noted that the preamble to the proposed rule and the draft Enhanced Monitoring Reference Document state that the monitoring requirements of the Acid Rain Program will be considered established monitoring for purposes of the Enhanced Monitoring Program, but believed that sources subject to part 75 (including those with excepted or alternate protocols) should not be required to upgrade monitoring for

NSPS and/or SIP compliance purposes.

However, several commenters advised clarifying that part 64 does not require the level of data that the Acid Rain Program requires and recommended that the reference in Section IV.D.(2) of the preamble to the proposed rule to appendix E of part 75 be removed to avoid the possible misinterpretation that the Enhanced Monitoring Program requires data of the level required for the Acid Rain Program or other emission trading programs.. One commenter said that appendix E of part 75 requires retesting NO_x correlations every 3000 operating hours and requires reestablishing load correlations whenever load parameters vary by even small amounts. The commenter concluded that appendix E was not a feasible technique for nonpeaking units.

Response: Although the established monitoring provisions are not included in the final rule as discussed above, EPA notes that it believes that the monitoring required under part 75 will provide sources affected under the Acid Rain Program with monitoring methods that may also be tailored to certifying compliance with non-Acid Rain emission limitations and standards. For this reason, CEMS, COMS or PEMS required by existing standards must also be used to satisfy part 64. In addition, § 64.4(b) states that no justification is required if the owner or operator proposes to use part 75 monitoring methods, including excepted or alternative methods under that part, to satisfy part 64. Although these methods may be considered for satisfying part 64 at non-Acid Rain Program emissions units, it is not EPA's intent that the part 75 monitoring requirements be imposed as minimum requirements for such other units. The Acid Rain Program monitoring is designed to provide extremely accurate accounting of total actual emissions because the monitoring will serve as the primary tool for verifying the tonnage reductions under the Acid Rain Program and ensuring the consistent value of the emission allowance trading system under the Acid Rain Program. The nature of providing a reasonable assurance of compliance for an emissions unit with other types of applicable requirements, such as NSPS or SIP limits, does not require the same degree of accuracy and other data quality as required under the Acid Rain Program or other emission trading programs. The Agency discusses in further detail the relationship between part 75 monitoring and part 64 monitoring in section 6.6 (Part I), above.

Letter(s): ARCO (IV-D-396); Arkla Energy Resources Company (IV-D-343); Class of '85 Regulatory Response Group (IV-D-338); Large Public Power Council

(IV-D-336); Mississippi River Transmission Corp. (IV-D-344); Montana Power Company (IV-D-499); Windrock, Inc. (IV-D-405)

9.6.3: Other Monitoring Proposed by Letter(s) to be Considered Established Monitoring

Comment a: Certain commenters requested that additional, particular monitoring be recognized as "established." A few commenters supported the Protocol for Determining the Daily Volatile Organic Compound Emission Rate of Automobile and Light-Duty Truck Top-Coat Operations, which has been deemed sufficient for assessing compliance with certain VOC emission limitations. One such commenter recommended that the protocol not be upgraded unless it is changed to address other substantive and compliance issues. Another commenter cited as an example the Can Manufacturers Institute's liquid/gas method as an alternative to a temporary total enclosure (TTE) for capture efficiency testing. Other commenters recommended generally that alternative compliance monitoring or certification testing independently accepted by EPA's OAQPS be presumed "best" established monitoring for purposes of part 64.

Some commenters said that established monitoring should include monitoring developed by States other than that developed for title I New Source Review purposes. Some commenters suggested that the South Coast Air Quality Management District's RECLAIM monitoring for NO_x and SO_x sources be adopted as established monitoring. One commenter recommended that monitoring currently required of complying sources in attainment areas be considered established monitoring.

Some commenters recommended that parametric monitoring be considered best established monitoring for small gas turbines, with even simpler techniques for small internal combustion engines. Finally, a commenter recommended that the rule provide that part 63 procedures constitute established monitoring for HAPs.

(See the related comments on the definition of established monitoring in Section 7.9 (Part I).)

Response: These comments are no longer applicable given the revisions incorporated in the final rule as discussed above. However, the types of monitoring

mentioned in these comments will be considered as EPA develops guidance on example monitoring for particular types of process/pollutant/control device combinations. In addition, it is possible under § 64.4(b)(5) for the Administrator to identify particular monitoring as presumptively acceptable for satisfying the criteria in § 64.3. The Agency is willing to work with any interested parties to establish such approaches.

Finally, States can develop SIP rules that establish particular types of monitoring as acceptable for satisfying part 64.

Letter(s): American Automobile Manufacturers Association (IV-D-538); Association of International Automobile Manufacturers (IV-D-264); Can Manufacturers Institute (IV-D-478); Kerr-McGee Corporation (IV-D-232); Lone Star Gas Company (IV-D-211); New United Motor Manufacturing, Inc. (IV-D-467); Solar Turbines (IV-D-7); South Coast Air Quality Management District (IV-D-524); Southern California Gas Co. (IV-D-290)

9.6.4: Discretion to Use Monitoring Other Than Established Monitoring

Comment a: A commenter proposed that the term "may" as used in proposed § 64.4(e)(1)(i) be replaced with "shall" to limit the source's discretion in the selection of other monitoring where established monitoring that can be used for part 64 compliance exists. Other commenters, however, expressed concerns that the rule as proposed already limits too severely a source's discretion to use monitoring other than established monitoring. Industry commenters stated that a source will face insurmountable opposition to use other than established monitoring, even if a non-established technique is more appropriate. As an example, one commenter cited the new liquid/gas method for determining capture efficiency that, although developed in consultation with EPA, does not meet the established monitoring definition. This method has been proven to be more accurate at lower cost than the established technique.

Response: These comments are no longer applicable given the revisions incorporated in the final rule, as discussed above.

Letter(s): American Petroleum Institute (IV-D-289); Can Manufacturers Institute (IV-D-478); Michigan Department of Natural Resources (IV-D-438); Mobil Oil Corporation (IV-D-285)

Section 9.7: Ability to Use Other Monitoring (§ 64.4(e)(2))

9.7.1: General Ability to Use Alternative Monitoring

Comment a: Several commenters supported EPA's decision to allow facility owners or operators to propose alternative monitoring other than established monitoring. A commenter said that facility owners and operators have the best ideas for economically and technologically optimized monitoring programs. Many commenters, however, recommended that the flexibility of this option be increased. Certain commenters recommended deleting the requirement that monitoring other than established monitoring be sufficiently representative, accurate, precise, and frequent, and requiring only that enhanced monitoring protocols be sufficiently reliable and timely. Another commenter recommended requiring only that the owner or operator show that the proposed option meets the basic requirements of providing a means for determining and certifying whether compliance is continuous or intermittent. Commenters also opposed requiring sources to choose the "best" other monitoring and to list all technologically feasible monitoring methodologies (see the next two topics for a discussion of these comments).

Response: The final rule deletes the selection process requirements in proposed § 64.4(e) and provides simply that the owner or operator propose monitoring that meets the criteria in § 64.3. In this manner, the intended flexibility of the rule has been clarified since the proposal.

Letter(s): Air Compliance Total Services (ACTS) (IV-D-19); American Automobile Manufacturers Association (IV-D-538); American Cyanamid Company (IV-D-201); American Portland Cement Alliance (IV-D-284); American Textile Manufacturers Institute (IV-D-440); Bay Area Air Quality Management District (IV-D-402); Chemical Manufacturers Association (IV-D-301); Chevron (IV-D-397); Corn Refiners Association, Inc. (IV-D-391); Council of Industrial Boiler Owners (IV-D-319); Distilled Spirits Council of the United States (IV-D-300); E.I. DuPont de Nemours and Company (IV-D-329); Eastman Chemical Company (IV-D-347); Eastman Kodak Company (IV-D-333); Exxon Chemical Americas (IV-D-339); Gas Processors Association (IV-D-227); General Electric Company (IV-D-278); Georgia Department of Natural Resources (IV-D-377); Houston Lighting & Power (IV-D-322); KBN Engineering and Applied Sciences, Inc. (IV-D-475); Kaiser Aluminum & Chemical Corporation, Primary Prod. Div. (IV-D-368); Kerr-McGee Chemical Corp. (IV-D-385); Lower Colorado River Authority, et al. (IV-D-256); Marathon Oil Company (IV-D-376);

Merck & Co., Inc. (IV-D-443); Mississippi Chemical Corp. (IV-D-179); Monsanto Company (IV-D-273); Motorola Inc. (IV-D-302); New Mexico Environment Department (IV-D-247); Pavilion Technologies, Inc. (IV-D-309); Pharmaceutical Manufacturers Association (IV-D-367); Phillips Petroleum Company (IV-D-380); Printing Industries of America, Inc. (IV-D-473); Questar Pipeline Company (IV-D-480); Society of the Plastics Industry, Inc. (IV-D-287); Southwestern Public Service Company (IV-D-272); Synthetic Organic Chemical Manufacturers Association (IV-D-362); Texas Chemical Council (IV-D-365); Union Carbide Corporation (IV-D-293); United States Sugar Corporation (IV-D-382); Unocal Corporation (IV-D-268)

9.7.2: Best Other Monitoring Methodology

Comment a: Several commenters opposed top-down review for the selection of enhanced monitoring protocols other than best established monitoring and considered the requirement to list all technologically feasible monitoring and to then select the "best" monitoring for the particular source to be a de facto top-down process. A commenter said that top-down review could lead to permitting authorities requiring CEMS where other types of monitoring systems would be sufficient and appropriate. Another commenter said that if a source proposed an enhanced monitoring protocol that provided frequent, verifiable data, those who wished to require a different monitoring protocol should be required to prove that their alternative more appropriately meets enhanced monitoring requirements. Some commenters said that a top-down approach went against EPA's intent stated in Section I.B.(1) of the preamble to the proposed rule. Another commenter said that so long as a proposed enhanced monitoring protocol met the criteria, the source should be able to use an enhanced monitoring protocol that could be less expensive than the "best" for its source category.

Some commenters suggested that at least the reference to the "best" monitoring methodology be deleted from § 64.4(e)(2). Commenters suggested that "appropriate" be substituted for "best," while one commenter proposed substituting "reasonably available" for "best." Still another commenter said that the requirement appears to conclude that CEMS will be the "best" monitoring technology in all cases.

A State agency recommended changing the word "may" in the second

sentence of § 64.4(e)(2) to "shall" to limit the source's discretion in considering source-specific factors when determining which monitoring methodology is "best."

Response: As noted above under Section 9.5 (Part I), EPA has deleted the concept of "best" in the final rule, and the owner or operator may propose any monitoring, provided that the proposed monitoring meets the requirements of part 64.

Letter(s): Air Compliance Total Services (ACTS) (IV-D-19); American Automobile Manufacturers Association (IV-D-538); Chemical Manufacturers Association (IV-D-301); Clean Air Implementation Project (IV-D-242); Eastman Kodak Company (IV-D-333); Eli Lilly and Company (IV-D-349); Georgia Department of Natural Resources (IV-D-377); Los Angeles County Sanitation Districts (IV-D-26); Michigan Department of Natural Resources (IV-D-438); Monsanto Company (IV-D-273); Pharmaceutical Manufacturers Association (IV-D-367); Rocky Mountain Oil and Gas Association (IV-D-183); Tennessee Department of Environment and Conservation (IV-D-399)

9.7.3: Listing All Technologically Feasible Monitoring Methodologies

Comment a: Several environmental groups favored requiring all sources to list all technologically feasible monitoring methodologies in their permit applications, even if they propose "established monitoring." These groups added that permitting authorities lack the resources and expertise to determine all the methods available for every emissions unit.

However, numerous industry and State agency commenters opposed requiring sources to list all technologically feasible monitoring methodologies if an established one is not selected. Many commenters said that requiring every source to identify all possible monitoring alternatives was a waste of resources, not cost-effective or not feasible. A commenter said that the proposed rule specifies that an owner or operator need not adopt any of the alternative technologies discovered during the search, so the requirement to list all alternative methodologies could be useless. Another commenter said that small sources would have to hire outside consultants to do this work and would therefore be at a competitive disadvantage. Other commenters said that the burden of this requirement and the difficulty of obtaining regulatory approval of

non-established monitoring will discourage sources from investing in new technologies.

Some commenters said that requiring sources that do not select established monitoring to identify all feasible monitoring options would expand the scope of permit applications and would overburden permitting authorities and EPA. Some commenters also stated that evaluating all possible options without explicit consideration of cost will drive permitting authorities to always require the most sophisticated, expensive monitoring.

Another commenter added that both States and sources will be overwhelmed by the requirement to identify all technologically feasible monitoring. The commenter added that similar sources would be preparing the same report, thereby leading to redundancy in the system, and further burdening permitting authorities and sources unnecessarily.

Several commenters also asserted that it should be sufficient that the protocol meets specified requirements for accuracy, reliability, and timeliness. Several commenters said that sections 114(a)(3) and 504(b) of the Act require sufficient monitoring, rather than maximum monitoring, and that requiring sources that do not propose established monitoring to identify all feasible monitoring options serves no statutory purpose.

Many commenters proposed deleting § 64.4(e)(2) and its requirement that a source identify all technologically feasible methodologies. One commenter proposed that if § 64.4(e)(2) is not deleted, the section should be amended to require only a list of other monitoring technologies which were considered in lieu of the best established monitoring method. A commenter said that the RIA failed to address the phenomenal cost of this requirement. A State agency said that part 64 does not offer any criteria as to what would constitute a technologically feasible protocol, and recommended requiring owners or operators to list pertinent established monitoring methodologies and discuss them in the manner described in § 64.4(e)(2). Another commenter was concerned that an owner or operator could be considered in violation of part 64 if it is determined after the owner or operator's protocol was submitted that an obscure but technologically feasible monitoring methodology was unknowingly omitted from the selection process.

Other alternatives to EPA's proposed approach were suggested. One commenter proposed requiring sources to identify the differences between their proposed enhanced monitoring protocol and the best established

monitoring and then demonstrate the sufficiency of their proposed enhanced monitoring protocols through relative accuracy tests or DCPL correlations while another commenter suggested that a source that proposes other than established monitoring merely be required to show why its proposed enhanced monitoring protocol is superior to established monitoring options for its facility. Another commenter argued that a source should be required to submit a different enhanced monitoring protocol only if its proposed enhanced monitoring protocol is rejected. Another commenter recommended stating that applications proposing innovative, non-established monitoring need contain only information bearing on the sufficiency of the proposed monitoring to assess compliance. Still another commenter suggested that EPA establish a clearinghouse for monitoring approaches so that State permitting authorities can access the information to guide their decision-making.

Another commenter proposed that if an owner has received approval of an alternative monitoring plan under NSPS, then there should be no requirement to evaluate all other monitoring merely because an established monitoring technique has not been selected. The commenter added that the permitting authority in such an instance has already made site-specific determinations about the adequacy of such monitoring.

Response: This proposed requirement, in addition to all other selection provisions in proposed § 64.4(e), has been deleted in the final rule. The Agency believes that the proposed requirement would add unnecessary paperwork burdens to the process without providing any particular benefit given that the owner or operator need only demonstrate that the monitoring included with the part 70 permit application satisfies the criteria in part 64.

Letter(s): Air Compliance Total Services (ACTS) (IV-D-19); Alyeska Pipeline Service Company (IV-D-360); American Automobile Manufacturers Association (IV-D-538); American Cyanamid Company (IV-D-201); American Portland Cement Alliance (IV-D-284); American Textile Manufacturers Institute (IV-D-440); Bay Area Air Quality Management District (IV-D-402); Chemical Manufacturers Association (IV-D-301); Chevron (IV-D-397); Corn Refiners Association, Inc. (IV-D-391); Council of Industrial Boiler Owners (IV-D-319); Distilled Spirits Council of the United States (IV-D-300); E.I. DuPont de Nemours and Company (IV-D-329); Eastman Chemical Company (IV-D-347); Eastman Kodak Company (IV-D-333); Exxon Chemical Americas (IV-D-339); Gas Processors Association

(IV-D-227); General Electric Company (IV-D-278); Georgia Department of Natural Resources (IV-D-377); Houston Lighting & Power (IV-D-322); KBN Engineering and Applied Sciences, Inc. (IV-D-475); Kaiser Aluminum & Chemical Corporation, Primary Prod. Div. (IV-D-368); Kerr-McGee Chemical Corp. (IV-D-385); Lower Colorado River Authority, et al. (IV-D-256); Marathon Oil Company (IV-D-376); Merck & Co., Inc. (IV-D-443); Mississippi Chemical Corp. (IV-D-179); Monsanto Company (IV-D-273); Motorola Inc. (IV-D-302); National Environmental Development Association (IV-D-334); Natural Resources Defense Council, et al. (IV-D-225); New Mexico Environment Department (IV-D-247); Pavilion Technologies, Inc. (IV-D-309); Pharmaceutical Manufacturers Association (IV-D-367); Phillips Petroleum Company (IV-D-380); Printing Industries of America, Inc. (IV-D-473); Questar Pipeline Company (IV-D-480); Society of the Plastics Industry, Inc. (IV-D-287); Southwestern Public Service Company (IV-D-272); Synthetic Organic Chemical Manufacturers Association (IV-D-362); Texas Chemical Council (IV-D-365); Union Carbide Corporation (IV-D-293); United States Sugar Corporation (IV-D-382)

Section 9.8: Verification Test Requirements (§ 64.4(f))

9.8.1: Verification Testing, Generally

Comment a: Some commenters suggested that the rule should allow verification testing on a representative number of sources whenever the same company operates multiple, similar units. A commenter noted that the Texas agency already allows for this approach in permitting, and that it is cost-effective. One commenter proposed allowing use of appropriately representative prior test results to satisfy testing required by proposed appendix C upon approval of the protocol. One commenter proposed that, for operations that are common across industry subgroups, facilities should be able to use general data and testing of specific processes instead of requiring site-specific testing. The commenter said that allowing the use of general data will significantly ease the burden of compliance on smaller sources without sacrificing the goals of the Enhanced Monitoring Program. The commenter also proposed deeming industry-wide data appropriate wherever practicable in lieu of site-specific testing, just as groups of facilities with similar emission characteristics may adopt a single enhanced monitoring protocol for all facilities in the group.

Response: The final rule presumes that site-specific testing should be conducted to establish the appropriate indicator ranges for monitoring used to satisfy part 64. This approach is consistent with the common practice under NSPS and NESHAP standards, and is also consistent with commonly understood baseline inspection techniques for air pollution control devices. For example, EPA has recognized in the past that:

The fundamental principle underlying the *baseline inspection technique* is that control device performance should be evaluated primarily by comparison of present conditions with specific baseline data. In other words, each separate control device should be initially approached with the assumption that its operating characteristics and performance levels will be unique. It is necessary to take this position since there are a myriad of process variables and control device design factors, any one of which can singly or collectively influence performance. It is often difficult, if not impossible, to determine why apparently similar units operate quite differently. Thus, a prime requirement of an inspection method in ensuring the collection of useful data is the comparison of conditions against a site-specific data base. Each variable which has shifted significantly is considered a "symptom" of possible operation problems. U.S. EPA, "Air Compliance Inspection Manual." EPA-340/1-85-020 (OAQPS). September 1985. Sec. 8.3.1, p. 8-8.

The baseline inspection technique is basically the same as the CAM approach, except that the CAM approach involves ongoing assessment by the owner or operator as opposed to infrequent inspections by a regulatory inspector. Thus, as a starting point, EPA believes that it is preferable to establish indicator ranges using site-specific data. However, the Agency also believes that the owner or operator should be able to propose that data other than site-specific data be relied on to establish indicator ranges, and § 64.4(d) allows for this approach. See Section II.D. of the preamble to the final rule for further discussion.

Letter(s): ASARCO (IV-D-327); Gas Processors Association (IV-D-227); Society of the Plastics Industry, Inc. (IV-D-287); Texas Chemical Council (IV-D-365)

Comment b: Two commenters proposed specifying that performance verification tests are not required when engineering calculations and recordkeeping are the enhanced monitoring methods used in an enhanced monitoring protocol.

Response: The Agency believes that the provisions in § 64.4(b) and (c) of the final rule allow for this type of flexibility, although the Agency notes that such monitoring approaches are unlikely to satisfy, by themselves, the criteria under § 64.3 when applied to monitoring the performance of a control device.

Letter(s): Department of Energy (IV-D-358); Exxon Chemical Americas (IV-D-339)

9.8.2: Test Plan Requirements

Comment a: Some commenters supported the concept that owners or operators should choose the appropriate specifications and verification procedures, which may vary among enhanced monitoring protocols. Commenters proposed clarifying that only the test plans for applicable verification tests are required in proposed § 64.4(f)(1) and inserting "applicable" in § 64.4(f)(1). Another commenter objected to the test plan submittal requirements as overly burdensome, while one commenter proposed deleting the requirement that sources include in test plans all pertinent information for all performance tests where EPA's specified procedures are used. This latter commenter added that the language be revised to specify that where tests follow a reference method specified by the EPA, the test plan need only identify the reference method.

Response: Sections 64.4(d) and (e) of the final rule require that an owner or operator submit a test plan and implementation schedule only if verification testing of the proposed monitoring is required. To address the concern that the test plan submittal requirements are overly burdensome, the final rule does not require specific details for test plans. The issues related to the details of test plans are best left to the judgment of the permitting authority and the source in the context of a particular situation.

Letter(s): Dow Chemical Company (IV-D-260); Exxon Chemical Americas (IV-D-339); Tosco Refining Company (IV-D-316)

Comment b: A commenter said that much of the detailed information required in performance verification testing for parameter monitoring is not available until after the enhanced monitoring protocol has been approved. The commenter suggested that proposed § 64.4(f) be revised to avoid

confusion and unfair treatment of applications proposing parametric monitoring.

Response: The final rule generally requires that an owner or operator submit all applicable information concerning the monitoring, including a plan and schedule for conducting the verification testing, with the permit application. If new or modified information becomes available, the permit application, including a proposed test plan, must be revised. The Agency notes that it is not the intent of the rule to require that the test plan included with the permit application necessarily include all of the technical details related to the general testing procedures to be used. Permitting authorities may have requirements for test plans that involve technical details concerning the conduct of tests. In the general test plan required under § 64.4(e), EPA anticipates that owners or operators would specify generally what operating conditions tests will be performed under, what parameters will be recorded, what test methods will be used (including any proposed modifications to approved test methods that would require prior approval), and the general locations at an emissions unit at which testing will be performed. This type of information is important for review of the proposed monitoring by regulatory agencies and interested citizens.

Letter(s): American Automobile Manufacturers Association (IV-D-538)

9.8.3: Requirements for Parameter Monitoring Test Plans

Comment a: Several commenters recommended relaxing (or deleting) the performance verification test plan requirements in proposed § 64.4(f)(1) for parameters that are not included as part of an enhanced monitoring protocol. This provision, some commenters said, created needless testing and verification requirements that will produce useless data. Another commenter said that this requirement was unworkable and added that parameters not included in the enhanced monitoring protocol were already below an implied significance level and that it would be infeasible to include all significant parameters due to their sheer quantity.

Commenters also suggested that proposed § 64.4(f)(1) be reworded. One commenter suggested that the rule require testing over the range of only those parameters identified in the proposed enhanced monitoring protocol as significant to the parametric correlation. Another suggested that the rule require description of any known relevant parameters that are

not included in the proposed enhanced monitoring protocol and to require owners or operators to explain how they are accounting for potential material variations. The commenter said that this proposed revision would limit the list of parameters to relevant ones and to allow owners or operators to account for effects that cannot be practically demonstrated.

Response: The EPA agrees that the requirement to describe in the test plan any significant parameters that are not included in the proposed enhanced monitoring protocol could be onerous. Thus, EPA has decided to delete it from the final rule. The EPA believes that if a parameter is significant, the owner or operator should include it in the proposed monitoring. Failure to include significant parameters could result in monitoring that does not meet the criteria of part 64. In addition, § 64.4(c) clarifies that testing is not required over the entire expected operating range of an emissions unit.

Letter(s): Amoco Corporation (IV-D-244); Eastman Chemical Company (IV-D-347); Exxon Chemical Americas (IV-D-339); National Environmental Development Association (IV-D-334); Pavilion Technologies, Inc. (IV-D-309)

Comment b: Another commenter proposed allowing sources to use methods of correlating compliance parameters to applicable emission limits in addition to, or instead of, EPA reference methods. For example, the commenter said, batch industries use equipment for many different processing needs; these industries require a flexible method of correlation to account for different process scenarios. The commenter also said that correlation test methods should be cost effective, correlation tests should be carried out only as necessary, and the correlation of monitoring equipment must be protocol specific.

Response: The final rule does not require the owner or operator to establish a statistical correlation across all operating conditions between the data from the proposed monitoring and the data obtained by the compliance test method. Part 64 now contains a more flexible approach to determining the appropriateness of indicator levels. Section 64.4 presumes the appropriateness of establishing the indicator range during compliance method testing, but allows for other methods to be relied on as well. See Section II.D. of the preamble to the final rule for further discussion.

Letter(s): Eli Lilly and Company (IV-D-349)

9.8.4: Test Schedule

Comment a: A commenter suggested that it would be more efficient in some circumstances to allow permitting authorities to verify enhanced monitoring protocols during the permitting process rather than after issuance of a permit. The commenter added that verifying enhanced monitoring protocols during the permitting process would allow monitoring to begin as soon as a permit is issued. The commenter also suggested that section 1.1 of proposed appendix A be correspondingly modified.

Response: The EPA believes that performance verification testing may occur during the permitting process under the provisions of the final rule. Such pre-approval testing, however, does not limit the permitting authority's ability to approve the monitoring on the condition of such tests as may be necessary to verify that the monitoring and indicator ranges are appropriate for satisfying part 64.

Letter(s): Air Compliance Total Services (ACTS) (IV-D-19)

Comment b: One commenter recommended revising proposed § 64.4(f)(2) to provide that the performance verification test schedule is developed on an elapsed time basis, starting with notification of the permitting authority, rather than on an actual calendar basis, which would be impossible because a source would not know at the time of permit application on what date a permit and enhanced monitoring protocol will be approved.

Response: The EPA disagrees that any regulatory change is needed, but acknowledges that proposed test schedules will have to be submitted on an elapsed time basis from the date of permit approval because the owner or operator will have no ability to know the date of permit approval at the time of developing the schedule.

Letter(s): Union Carbide Corporation (IV-D-293)

Comment c: A few commenters requested that the rule clarify that the schedule for

actually obtaining data from an enhanced monitoring protocol is to be determined in the context of permit issuance. One of the commenters suggested that the rule is unclear as to when enhanced monitoring protocols must be operational. Another commenter suggested that the schedule for compliance must not be started until the enhanced monitoring protocol is approved. This commenter noted that proposed § 64.4(f) appeared to be the only one to address the schedule for starting enhanced monitoring protocols, and suggested that dealing with scheduling in a separate section under § 64.4(a) might be easier than modifying proposed § 64.4(f)(2).

Response: In response to these comments, § 64.7(a) of the final rule specifies that the obligation to commence monitoring that satisfies part 64 begins on the later of the date of permit issuance or the scheduled date of final verification of the monitoring.

Letter(s): Alabama Department of Environmental Management (IV-D-453); Exxon Chemical Americas (IV-D-339); Mobil Oil Corporation (IV-D-285)

Comment d: A commenter suggested that proposed § 64.4(f)(2) specify that an enhanced monitoring protocol is considered finally approved when the permittee receives a letter from the permitting authority accepting the test results, and revising proposed (f)(3) to specify that the protocol must be operational after receipt of that letter.

Response: If performance verification testing is completed before permit issuance, the approval of monitoring will be established when the permitting authority acts upon it in issuing the part 70 permit. If performance verification testing is scheduled to occur after permit issuance, the approval of monitoring in the part 70 permit is subject to the successful completion of performance verification testing and other requirements, as further specified in § 64.6(d) of the final rule. The final rule does not require that the permitting authority issue a notice of final approval. The Agency notes that this position is consistent with requirements in the general provisions of 40 CFR part 60 concerning submittal of initial compliance test results or monitoring performance verification test results. See the comment and response immediately above for when monitoring must be operational.

Letter(s): Union Carbide Corporation (IV-D-293)

Comment e: Some commenters supported EPA's position to allow test results to be submitted as expeditiously as practicable. A commenter said that the proposed rule provides owners and operators the flexibility to conduct tests and report the results within the appropriate time, while making owners and operators responsible for expeditious testing and reporting. A State agency, however, suggested that the final rule should require verification tests to be completed within 60 days of permit issuance or commencement of operation, whichever is later, or by such date as the permitting authority approves.

Response: The EPA has decided to retain the "as expeditiously as practicable" language, but to also add an outside date of 180 days after permit issuance. This approach provides both the owners or operators and the permitting authorities with the flexibility necessary to reasonably accommodate the wide range of circumstances that may exist in the performance verification testing process, but also assures that the ability to postpone monitoring under part 64 will not extend indefinitely or for an inappropriately long period. Given the type of monitoring that is required under part 64, 180 days should provide ample time to commence operation after approval.

Letter(s): ALCOA (IV-D-288); Dow Chemical Company (IV-D-260); Michigan Department of Natural Resources (IV-D-438)

Comment f: Some commenters recommended that the requirement that owners or operators conduct performance tests as expeditiously as possible be clarified. They suggested specifying that "as expeditiously as possible" allows sources time to develop required facilities, to develop and implement the required procedures, and to conduct test runs before the formal verification test. One of the commenters recommended that EPA take into account the fact that many facilities will have to test many sources and enhanced monitoring protocols at the same time, while another noted that the timeframe necessary to conduct performance testing would directly relate to the applicability threshold chosen. Lastly, a commenter recommended clarifying that the test schedule will include all time required to design, procure, install, and initially test new enhanced monitoring systems and to upgrade existing systems. This commenter also suggested clarifying that execution of the enhanced monitoring protocol will not begin until the protocol is approved, and recommended

clarifying that the enhanced monitoring protocol can be completed after process start-up for modified and reconstructed facilities.

Response: The EPA has decided to further clarify the meaning of "as expeditiously as practicable" as used in § 64.4(e) by limiting the period for completing necessary installation and verification activities to 180 days after approval.

Within the 180 day time period, a determination of what is "as expeditiously as practicable" will be made on a case-by-case basis, as determined by the permitting authority as part of the permit approval. With the phased-in implementation schedule, and the focus of the final rule solely on units with control devices, and the nature of the monitoring required by the final rule, EPA believes that the practical timing considerations raised by one commenter are adequately addressed.

Letter(s): ALCOA (IV-D-288); Exxon Chemical Americas (IV-D-339); Exxon Company, USA (IV-D-310)

Comment g: Several chemical industry commenters requested clarifications or modifications related to when a permitting authority may require test schedule modifications. One commenter proposed limiting the permitting authority's power to order an owner or operator to modify a test schedule by modifying proposed § 64.4(f)(2) to allow test schedule modifications when the permitting authority reasonably considers modification appropriate. Another commenter objected that the provisions in proposed § 64.4(f)(2) that grant the permitting authority unilateral power to require a permittee to modify a schedule denies the permittee its procedural rights to comment on and object to any new requirements. Another commenter recommended revising proposed § 64.4(f) to restrict the number of changes that a permitting authority can make in a source's proposed enhanced monitoring protocol.

Some commenters also proposed limiting the permitting authority's power to designate the form for the submittal of test results. A commenter suggested that the permitting authority be allowed to designate reasonable requirements regarding the form for submitting test results. Another commenter recommended deleting the last sentence of proposed § 64.4(f)(2), because allowing the permitting authority to designate the form for submittal of test results may significantly increase the cost of performing the tests and reporting the results.

Response: The final rule has been revised to delete the express grant of authority to permitting authorities to modify test schedules or to dictate the form of test results. The EPA is concerned that the inclusion of these express grants of authority could be perceived as either a limitation or an expansion of the underlying powers of the permitting authority, as viewed by various commenters. To eliminate misperceptions, these express grants of authority have been deleted from the final rule. However, EPA emphasizes that these deletions are simply for clarification and the final rule is not intended to limit or expand whatever existing authority a permitting authority may have to exercise the authority described in the deleted language, including the part 64 authority to implement the "as expeditiously as practicable" language in § 64.4(e).

Letter(s): Dow Chemical Company (IV-D-260); Eastman Chemical Company (IV-D-347); Mississippi Chemical Corp. (IV-D-179); Monsanto Company (IV-D-273); Union Carbide Corporation (IV-D-293)

Comment h: Two chemical industry commenters proposed clarifying that only schedules for "applicable" verification tests are required in proposed § 64.4(f)(2).

Response: Section 64.4(e) of the final rule revises the relevant language from § 64.4(f)(2) of the proposed rule and is explicitly limited to situations in which such installation and/or verification activities are required.

Letter(s): Dow Chemical Company (IV-D-260); Exxon Chemical Americas (IV-D-339)

Comment i: A commenter noted that in proposed § 64.4(f)(2), the word "practical" should be substituted for "practicable" in the second sentence.

Response: The EPA disagrees. Although the two words generally have similar meanings, EPA believes that "practicable" is the more appropriate word in the context in which it is used because it stresses what is feasible to accomplish versus what may have been accomplished under other circumstances. The test schedule should stress finalizing test results as quickly as possible and thus the use of the word "practicable" is appropriate. See the discussion of the differences in meaning of these two words in The American Heritage Dictionary, Third Edition (1996).

Letter(s): Amoco Corporation (IV-D-244)

9.8.5: Completion of Tests

Comment a: A State agency recommended allowing data from an enhanced monitoring protocol that has begun QA procedures to be used for direct enforcement even if verification tests are not yet completed. For CEMS, the commenter said, verification tests are not designed to show CEMS performance over time, and if acceptable QA/QC has already commenced, data quality should not be a barrier to enforcement.

Response: The ability to use data from any monitoring system to prove a violation of the Act or otherwise support an enforcement action will be governed by the applicable provisions of the Act, and as clarified in the CE revisions rulemaking. Part 64 does not independently establish evidentiary rules related to the monitoring required by part 64.

Letter(s): Minnesota Pollution Control Agency (IV-D-469)

Comment b: Two commenters recommended allowing owners or operators a second opportunity to conduct performance tests in the event that unforeseeable problems or difficulties occurred during the initial tests. One of the commenters recommended providing an additional 60 days to conduct additional performance tests or to modify the enhanced monitoring protocol.

Response: The final rule does not limit the number of performance verification tests that may be performed before testing is deemed to be complete. As noted elsewhere, performance verification testing may be conducted during the permitting process. This may alleviate some of the commenters' concerns. If performance verification testing is not completed until after the permit is issued, § 64.4(e) requires that testing be completed and that test results be submitted "as expeditiously as practicable," but in no event more than 180 days after permit issuance. For innovative monitoring methods that may require trial testing before the conduct of final verification testing, such concerns should be included in establishing the completion date for testing that is "as expeditiously as practicable." The EPA believes that for truly unforeseeable problems or

difficulties that occur during the initial tests so as to prevent timely completion of testing, the permitting authority and the owner or operator will be able to address such issues through an appropriate response -- such as a compliance plan -- aimed at correcting the failure of the owner or operator to comply with the test schedule approved in the permit.

Letter(s): Department of Energy (IV-D-358); Union Carbide Corporation (IV-D-293)

9.8.6: Failure to Achieve Compliance

Comment a: Numerous commenters were concerned about the consequences of an enhanced monitoring protocol's failure to satisfy the requirements of proposed § 64.4(f)(4). Many commenters strongly opposed the presumption of noncompliance and of subjecting sources to immediate enforcement if their verification test fails. One of these commenters also strongly opposed allowing a source that failed its enhanced monitoring protocol verification test to be retroactively subject to enforcement for the period between completion of the test and the determination of failure. Another commenter said that enforcement of violations should only be an option where the failure to achieve compliance is material or significant. Some commenters suggested that the rule allow for the failure of conditionally approved innovative enhanced monitoring protocols, and that no violation should accrue to the source for a good faith effort to comply.

A commenter recommended providing for time when a source may test and refine its approved enhanced monitoring protocol without being in violation of its permit, and opposed the concept of conditional approval. The commenter also proposed specifying permit terms that approve enhanced monitoring protocols in stages. The proposal would allow a certain amount of time for testing and calibrating equipment, another block of time for modifying the enhanced monitoring protocol with input from the permitting authority, and another block of time would be allowed for the facility to submit an application for an administrative amendment to modify its enhanced monitoring protocol. The commenter added that using a conditional approval process in connection with a title V permit is inconsistent with the concept of a permit shield.

Commenters stated that in many cases, such failures may occur as a result of an envisioned protocol not being able to achieve the standards initially considered possible, or that there may be extenuating

circumstances out of the source's control that should be evaluated prior to finding a violation. For example, a commenter said that a violation should not be found where both the source and the permitting authority thought the specifications could be achieved but after testing determine that they cannot, no violation can reasonably be found. As another example, a commenter said that the requirements of proposed § 64.4(f)(4) would be often beyond a permittee's control. A few commenters said that during startup of a new system, some adjustments or modifications may be necessary and permitting authorities should allow time in the compliance schedule for adjustments to the system based on performance testing.

Several commenters suggested that the rule should specify the criteria by which a permitting authority may determine that an enhanced monitoring protocol fails to satisfy enhanced monitoring requirements. Another commenter said that the references in proposed § 64.4(f) to "failure to achieve the requirements of this part" are insufficient because so many of the requirements are broad, ambiguous, subjective standards. The commenter also suggested that a list of objective criteria be established for any finding of noncompliance. Lastly, some commenters requested clarification of when failure of a performance test, a performance test repeated after taking a corrective action on the monitor, a seven-day calibration drift test, or a first-attempt relative accuracy test audit must be reported as a failure to achieve compliance.

Many commenters recommended that, in most cases, failure of a verification test not be considered a violation. Several commenters recommended that the rule provide that, except in extraordinary cases of bad faith, verification test failure would be handled through permit reopening, and not through enforcement. Other commenters suggested that retesting be allowed to determine whether or not the previous results were erroneous, or that sources be given an adequate opportunity to correct the failure or develop a new enhanced monitoring protocol. Another commenter favored specifying that compliance with the monitoring protocol should constitute compliance with the regulation during review of test results. The commenter added that if results show a problem, a source should have the ability to address the problem without being in violation. Another commenter suggested amending proposed § 64.4(f)(4) to allow sources the opportunity to replace or correct their enhanced monitoring protocols, without the risk of enforcement, where a permitting authority requires a source to adopt a protocol different from the protocol that the source originally proposed, the source unsuccessfully

protests the enhanced monitoring protocol during the public comment period, the source installs the required protocol, and then discovers that the required protocol does not meet required standards. Another commenter proposed a shake-down period of 180 days like the one found in NSPS regulations. Lastly, a commenter recommended requiring a compliance plan if the monitoring protocol fails its second performance test.

Several commenters recommended that proposed § 64.4(f)(4)(iii) be deleted because it appears aimed at merely adding additional punishment and is too vague. Commenters argued that the provision would violate due process and that EPA and other regulators cannot summarily reject approved enhanced monitoring protocols merely because they think there may be a problem with the protocol they have previously approved. A commenter suggested that proposed § 64.4(f)(4)(iii) be revised to require that a determination that an enhanced monitoring protocol fails to meet enhanced monitoring requirements be based on valid, quality-assured data pertaining directly to the performance of the protocol, that the permitting authority take into account contrary evidence, and that the permitting authority's decision be reasonable. Another commenter recommended that proposed § 64.4(f)(4)(iii) be revised so that EPA can reverse itself only if new information develops and becomes available after approval; and that the appropriate response would be to provide time to develop a new enhanced monitoring protocol, not seek enforcement. Lastly, a commenter opposed proposed § 64.4(f)(4)(iii) because it is inconsistent with the permit shield.

Other comments were that in § 64.4(f)(4)(i), "section" should be "subsection," and that § 64.4(f)(4)(ii) be deleted. Finally, a commenter asked that EPA clarify that a source will not be shut down if the enhanced monitoring protocol does not yield acceptable results. The commenter added that there should be no enforcement actions or shutdowns if the source meets the existing standard using reference methods for that standard.

Response: Section 64.4(f)(4) of the proposed rule provided that, after issuance of the permit, the owner or operator would be considered to have failed to achieve compliance and would be deemed to be in violation of part 64 under certain circumstances. The EPA believes that such matters generally should be resolved through enforcement proceedings and that the rule need only specify what is required to comply with part 64. Thus,

the provisions included in proposed § 64.4(f)(4) are not included in the final rule; however, section 64.6(e)(3) does specify that if monitoring submitted with a permit application is disapproved, the source owner or operator is required to submit revised monitoring that meets part 64 requirements within 180 days from the date of the permit issuance or be deemed in noncompliance, subject to rebuttal. This provision provides an important incentive for source owners and operators to submit credible monitoring and adequate justification.

The Agency also notes that, once the monitoring used to comply with part 64 is approved and included in the permit, the owner or operator may be entitled to the protection of the permit shield for any allegation that the monitoring is insufficient to satisfy the part 64 requirements. In those cases, the appropriate action to take to cure a perceived deficiency in the monitoring would be to reopen the permit for cause in accordance with part 70 procedures. See Section II.F.5. of the preamble to the final rule for further discussion of this topic. In addition, the final rule does require that the owner or operator submit a permit modification application to revise approved monitoring under certain situations in which subsequent data document that the approved monitoring is in fact insufficient to satisfy the part 64 criteria. See Section II.F.5. of the preamble to the final rule for further discussion of this topic.

Letter(s): ALCOA (IV-D-288); American Automobile Manufacturers Association (IV-D-538); Amoco Corporation (IV-D-244); Chemical Manufacturers Association (IV-D-301); Coalition for Clean Air Implementation (IV-D-304); Department of Energy (IV-D-358); Dow Chemical Company (IV-D-260); Eastman Kodak Company (IV-D-333); Exxon Chemical Americas (IV-D-339); Exxon Company, USA (IV-D-310); General Electric Company (IV-D-278); Los Angeles County Sanitation Districts (IV-D-26); Mississippi Chemical Corp. (IV-D-179); Mobil Oil Corporation (IV-D-285); Monsanto Company (IV-D-273); Motorola Inc. (IV-D-302); National Environmental Development Association (IV-D-334); Union Camp (IV-D-359); Union Carbide Corporation (IV-D-293); Utility Air Regulatory Group (IV-D-489); Westinghouse Electric Corporation (IV-D-321)

9.8.7: Permit Reopenings

Comment a: Some commenters recommended deleting proposed § 64.4(f)(5), which would allow the permitting authority or EPA to reopen a source's permit

where the enhanced monitoring protocol does not meet enhanced monitoring protocol requirements. A commenter noted that the issue already is sufficiently addressed in part 70.

Several commenters proposed allowing minor corrections to a proposed enhanced monitoring protocol that has not achieved the performance requirements without requiring that the permit be reopened. A commenter suggested that the language be revised to specify that for protocol modifications that do not change the basic technology or the substance being measured, the permittee shall notify the permitting authority or the EPA Administrator of the change, but the permit does not need to be reopened. The commenter added that the proposed language would provide that major changes to a protocol, changing the basic technology or the substance being measured, must be made through reopening the permit. Lastly, a commenter recommended specifying that reopening the permit is the exclusive remedy for a mistake made by both the facility and the permitting authority in conditionally approving an enhanced monitoring protocol.

Response: Proposed § 64.4(f)(5), which supplemented proposed § 64.4(f)(4), has been deleted from the final rule in the same manner as proposed § 64.4(f)(4).

Letter(s): Dow Chemical Company (IV-D-260); Eli Lilly and Company (IV-D-349); Georgia Department of Natural Resources (IV-D-377); Mobil Oil Corporation (IV-D-285); National Environmental Development Association (IV-D-334); Texas Natural Resource Conservation Commission (IV-D-371)

9.8.8: Waivers or Variances During Verification Testing

Comment a: Some commenters recommended that permitting authorities be required to grant permit variances during enhanced monitoring protocol verification testing, because verification testing often requires operation outside of permit limits. A commenter proposed that the rule be revised to require that a permitting authority allow sources to temporarily exceed permit limits or operate without controls for purposes of verification testing. This commenter also recommended amending part 70 to allow permitting authorities to grant variances for operation outside of permitted ranges for the purpose of testing and complying with part 64 requirements.

Commenters also favored enforcement waivers in limited circumstances during the protocol approval process. A commenter said that where a source monitors operating parameters, it would have to operate out of compliance to demonstrate that its proposed enhanced monitoring protocol results in an out of compliance reading during that time.

Response: Generally, emissions units must be operated in compliance with underlying applicable requirements during performance verification testing. To establish appropriate parameters, EPA supports the use of extrapolations, or similar estimation techniques, to reflect operating conditions outside the range of conditions actually reflected during verification testing. Nothing in the final rule would require the owner or operator to operate at emission levels in excess of applicable requirements.

Letter(s): ALCOA (IV-D-288); Clean Air Implementation Project (IV-D-242); Dow Chemical Company (IV-D-260); Exxon Chemical Americas (IV-D-339); Exxon Company, USA (IV-D-310); Fort Howard Corporation (IV-D-233); Mobil Oil Corporation (IV-D-285); Union Camp (IV-D-359); Union Carbide Corporation (IV-D-293)

Section 9.9: Monitor Failures (§§ 64.4(g) and 64.5(e))

9.9.1: Reporting Within 24 Hours Monitor Failures with the Potential to Exceed 48 Hours

Comment a: Section 64.4(g) of the proposed rule would require the owner or operator of an emissions unit to report to the permitting authority an interruption in the operation of an enhanced monitoring protocol due to a monitor malfunction, where such interruption has the potential to exceed 48 hours. Pursuant to proposed § 64.5(e), the report would have to be made in accordance with any existing notification requirements or, if no such requirements exist, within 24 hours of the failure.

Numerous commenters opposed the requirement that monitor failures with the potential to exceed 48 hours be reported to the permitting authority within 24 hours of the monitor malfunction as unreasonable and too burdensome. Some comments focused on the "potential to exceed 48 hours" language and included the following observations and proposals: (1) the language is vague and open-ended, and a more objective test

should be provided (i.e., failures that actually last 24 or 48 hours); (2) rather than use the potential duration of downtime to define monitor failure, the rule should use a minimum data availability requirement similar to those used in the NSPS; and (3) notification should not be required where there is no potential for emissions to occur, as in the case where the entire unit has been shut down.

Other comments concerned the requirement to notify the permitting authority within 24 hours of the monitor failure. Many commenters proposed extending the period within which the report must be made, and the following reasons were provided: (1) sources may not discover or may be unable to determine the potential duration or cause of a failure within 24 hours; (2) sources may be unable to determine the accuracy of data supplied to the permitting authority within 24 hours; and (3) an official to whom a failure must be reported may not be available within 24 hours. One commenter suggested that the timing of the notification run from the time the failure is discovered, rather than the actual time of the failure, because the latter may be unknown. Another commenter proposed developing reporting obligations on a case-by-case basis for each source.

One commenter felt that notification should only be required where correction would exceed two weeks and a corrective action plan would be required. Several commenters went further and proposed notification on a quarterly or semiannual basis.

Response: In response to these comments, the final rule does not include any obligation to report monitor failures. The Agency believes that the degree to which permitting authorities may want to obtain this information is best left to individual circumstances. In addition, the Agency notes in response to one specific comment that under § 64.7(c) of the final rule, the monitoring must be operational only when an emissions unit is operating. Therefore, if an emissions unit has been entirely shut down, no monitoring failure can occur during that shutdown period.

Letter(s): Air Compliance Total Services (ACTS) (IV-D-19); Amoco Corporation (IV-D-244); Association of International Automobile Manufacturers (IV-D-264); Department of Energy (IV-D-358); Dow Chemical Company (IV-D-260); Eastman Chemical Company (IV-D-347); Eastman Kodak Company (IV-D-333); Exxon Company, USA (IV-D-310); Fort Howard Corporation (IV-D-233); Gas Processors Association (IV-D-227); Houston Lighting & Power (IV-D-322); Kerr-McGee Chemical Corp. (IV-D-385); Monsanto Company (IV-D-273); New Mexico Environment Department

(IV-D-247); Occidental Chemical Corporation (IV-D-240); People's Natural Gas Company (IV-D-27); Phillips Petroleum Company (IV-D-380); Questar Pipeline Company (IV-D-480); Southwestern Public Service Company (IV-D-272); Texaco Inc. (IV-D-357); Texas Chemical Council (IV-D-365); Texas Intrastate Natural Gas Pipelines (IV-D-221); Union Camp (IV-D-359); Union Carbide Corporation (IV-D-293); Utility Air Regulatory Group (IV-D-489); Westinghouse Electric Corporation (IV-D-321)

9.9.2: Certification of Malfunction Correction and Corrective Action Plans

Comment a: A few commenters opposed requiring sources to make a special report that correction of a protocol failure has occurred, because the same information would be in the quarterly enhanced monitoring report and because emergency situations are covered by other State reporting requirements. One commenter suggested that telephone notice should be sufficient, while another suggested changing "certify" to "confirm" to distinguish this two-week notice from formal certifications. A State agency recommended requiring the certification of correction to include a description of corrective action taken and preventive measures adopted to prevent a recurrence of the problem, while an industry commenter objected to any special reports and recommended instead including information on corrective action/preventive measures in the general enhanced monitoring report.

Response: In order to reduce the paperwork burdens associated with the rule, the Agency has decided not to include any specific certification of monitor failure correction. The records concerning monitor downtime and corrective actions taken will be required to be maintained and available for inspection as necessary for those situations in which monitor downtime becomes a concern. In addition, the summary report will have to include summary information on the amount of monitor downtime and the various causes of downtime. This summary data will be sufficient to target those situations for which follow-up is appropriate.

Letter(s): Eastman Chemical Company (IV-D-347); Gas Processors Association (IV-D-227); Michigan Department of Natural Resources (IV-D-438); Monsanto Company (IV-D-273); Pharmaceutical Manufacturers Association (IV-D-367); Phillips Petroleum Company (IV-D-380); South Coast Air Quality Management District (IV-D-524); Texas Chemical Council (IV-D-365); Texas Intrastate Natural Gas Pipelines (IV-D-221)

Comment b: Some commenters were entirely opposed to the corrective action plan (CAP) process, seeing it as redundant and wasteful of resources. Many commenters opposed requiring submission of CAPs within two weeks. Some commenters opposing the two week period argued that the task of preparing a CAP was too complex to complete in such a short time frame. Others said that extending the submission deadline to four or six weeks, or giving permitting authorities the discretion to do so, would allow most malfunctions to be corrected without having to prepare a CAP, thereby reducing the burden on both sources and permitting authorities.

Response: The final rule does not include specific corrective action procedures for monitor downtime incidents. The rule establishes a general duty that the monitoring be properly maintained, and that the monitoring be operational except when inoperation is caused because of monitor malfunctions, associated repairs or required QA activities. Existing enforcement authorities, including the ability to require corrective action plans, should be sufficient to assure that this general duty is satisfied.

Letter(s): American Automobile Manufacturers Association (IV-D-538); Department of Energy (IV-D-358); Dow Chemical Company (IV-D-260); Gas Processors Association (IV-D-227); Houston Lighting & Power (IV-D-322); Kerr-McGee Chemical Corp. (IV-D-385); Monsanto Company (IV-D-273); Occidental Chemical Corporation (IV-D-240); People's Natural Gas Company (IV-D-27); Pharmaceutical Manufacturers Association (IV-D-367); Phillips Petroleum Company (IV-D-380); Texas Chemical Council (IV-D-365); Texas Intrastate Natural Gas Pipelines (IV-D-221); Westinghouse Electric Corporation (IV-D-321)

Comment c: A large number of commenters either objected to requiring any approval of CAPs or were concerned about the lack of standards and guidelines for the CAP approval process. Among the proposed changes were the following: (1) permitting authorities should be required to process CAPs in a timely fashion; (2) the final rule should clarify the basis upon which a CAP may be denied and permitting authorities should be required to provide a detailed explanation of the reasons for denial; (3) a dispute resolution process should be in place to handle disagreements between sources and permitting authorities over the approval of CAPs; (4) except in the case of owner or operator negligence, sources should be given conditional approval of inadequate CAPs to allow for correction and

resubmittal, rather than automatically finding a violation upon denial of the plan; (5) delete any reference to a violation of part 64 in the event a CAP is disapproved; and (6) sources should not be held in violation for activities while awaiting CAP approval. A county sanitation district proposed allowing permitting authorities to grant either variances or interim exemptions for providers of essential public services when CAPs are not approved. These sources cannot simply stop operating such circumstances, and paying fines would be a waste of public funds. One commenter asked for clarification of how a CAP modification should be addressed in the context of the title V permit.

Response: As noted above, the final rule does not include these CAP requirements, and thus these comments are no longer applicable.

Letter(s): Amoco Corporation (IV-D-244); Clean Air Implementation Project (IV-D-242); County Sanitation Districts of Orange County, California (IV-D-235); Dow Chemical Company (IV-D-260); Eli Lilly and Company (IV-D-349); Fort Howard Corporation (IV-D-233); Kerr-McGee Chemical Corp. (IV-D-385); Los Angeles County Sanitation Districts (IV-D-26); Michigan Department of Natural Resources (IV-D-438); National Environmental Development Association (IV-D-334); People's Natural Gas Company (IV-D-27); Texas Intrastate Natural Gas Pipelines (IV-D-221); Union Carbide Corporation (IV-D-293)

Comment d: A number of commenters proposed extending beyond six months the period within which monitoring systems must be repaired or replaced, or giving permitting authorities the discretion to extend the period where appropriate.

Response: See previous response.

Letter(s): American Automobile Manufacturers Association (IV-D-538); Amoco Corporation (IV-D-244); Dow Chemical Company (IV-D-260); Eli Lilly and Company (IV-D-349); Exxon Chemical Americas (IV-D-339); Exxon Company, USA (IV-D-310); Pharmaceutical Manufacturers Association (IV-D-367)

Comment e: Several commenters indicated their support for the temporary use of alternate monitoring that may not satisfy enhanced monitoring provisions in the event of monitor failures that cannot be cured within two weeks.

However, some commenters felt that the proposed rule as written required sources to have enhanced monitoring data at all times, which would effectively necessitate two enhanced monitoring systems at each unit. To remedy this situation, it was proposed that only reasonably available methods be required while enhanced monitoring systems are down that do not have to meet the same criteria as enhanced monitoring. In addition, it was suggested that permitting authorities be required to consider the economic cost of providing temporary backup monitoring during short periods of downtime while a new enhanced monitoring protocol is being installed.

Response: See previous response.

Letter(s): American Automobile Manufacturers Association (IV-D-538); American Portland Cement Alliance (IV-D-284); Dow Chemical Company (IV-D-260); Eastman Kodak Company (IV-D-333); Eli Lilly and Company (IV-D-349); Exxon Company, USA (IV-D-310); National Environmental Development Association (IV-D-334); Pharmaceutical Manufacturers Association (IV-D-367); Rubber Manufacturers Association (IV-D-331); Texas Chemical Council (IV-D-365); Union Camp (IV-D-359)

Comment f: Some utility commenters also expressed concern about a reference in the preamble to the proposed rule that indicated that the part 64 monitor failure provisions do not relieve a source from complying with any statistical missing data procedures that apply in underlying requirements. The commenters wanted clarification that the rule does not require use of the 40 CFR part 75 data substitution procedures as part of an enhanced monitoring protocol, even if the source is relying on part 75 monitoring generally to fulfill its part 64 obligations. It was argued that the part 75 procedures are inappropriate for NSPS and SIP emission limits because they deliberately overestimate emissions and, therefore, are not suitable for purposes of part 64 compliance determinations. Thus, EPA should clarify that use of part 75 data substitution procedures for parts 64 and 70 purposes be left in the discretion of the owner or operator, subject to the permitting authority's approval.

Response: The EPA agrees generally with this clarification. Only where the part 75 missing data procedures are specifically included as part of the approved part 64 monitoring approach would the missing data have to be reported under part 64. The cited preamble reference was only intended to

indicate that nothing in part 64 would affect the owner or operator's obligations to provide missing data under part 75.

Letter(s): Southwestern Public Service Company (IV-D-272); Utility Air Regulatory Group (IV-D-489)

Comment g: One commenter recommended clarifying that CAPs are not subject to any permit modification requirements.

Response: These provisions are not included in the final rule and thus the comment is no longer applicable.

Letter(s): Union Carbide Corporation (IV-D-293)

9.9.3: Sudden and Unforeseeable Defense

Comment a: Section 64.4(g)(2) of the proposed rule would provide that if a malfunction (i.e., a sudden and unforeseeable event) causes the protocol to fail, then such an event would be a defense to any violation of the data availability requirements of proposed § 64.4(b)(4). However, the defense would not apply if the monitor failure is caused by improperly designed equipment, lack of preventative maintenance, careless or improper operation, or operator error. In addition, the owner or operator would have the burden of proving that the protocol failure was a sudden and unforeseeable malfunction through contemporaneous operating logs or other evidence which shows that (1) a sudden and unforeseeable malfunction did in fact occur and that the owner or operator can identify its cause; (2) the monitoring systems and procedures had been properly operated and maintained; and (3) during the malfunction reasonable steps were taken to minimize the period of inoperation.

The great majority of commenters generally supported the concept of a defense to violations where a protocol failure is the result of a sudden and unforeseeable event. However, most commenters proposed specific qualifications or revisions to the rule, particularly with regard to the meaning and scope of "sudden and unforeseeable." Several commenters felt that the notion of unforeseeable failure should be uniform throughout the rule and consistent with the emergency defense provisions of part 70 and other EPA rules. In addition, many commenters asserted that any

protocol "failures" (not just "malfunctions") that occur as a result of an event beyond the control of the owner or operator should be an adequate defense, because some causes of protocol failures such as lightning strikes are foreseeable but beyond the control of the operator, and other causes of protocol failures are beyond operator control but not sudden. Commenters also requested clarification as to the definition of a contemporaneous operating log which would support a sudden and unforeseeable defense. Commenters also objected to having to identify causes of malfunctions.

Other commenters expressed opposition to disallowing the sudden and unforeseeable defense where the monitor failure is due to improperly designed equipment. According to these commenters, the defense should still be available if the owner or operator acted in good faith, the design was based on sound engineering principles, and/or the defect was attributable to the supplier.

Two trade groups suggested that the data availability requirement (or some other regulatory provision) allow for a reasonable amount of monitor malfunction time to be determined by agreement between the source and the permitting authority. The affirmative defense would then apply only to events which would render monitors unavailable for extended periods of time. Another industry commenter recommended specifying in the permit a certain amount of protocol failure for reasons beyond the owner or operator's control as acceptable; this change would eliminate the need for the affirmative defense provisions in proposed § 64.4(g) and all of the special reporting elements in proposed § 64.5(e).

One State agency opposed the sudden and unforeseeable defense, proposing a requirement that sources use alternative monitoring technologies during monitor downtime. The agency argued that investigating claims of exemption due to monitor malfunction would be an inefficient use of agency resources. Another State agency suggested adding negligence to the list of items limiting the applicability of the defense.

Response: In response to these comments and comments on the data availability requirement, EPA has adopted a streamlined approach in the final rule with respect to the role of malfunctions in assessing data availability. The final rule does not require that the permit establish a specific data availability requirement. Rather, the owner or operator is under a general

duty to operate the monitoring at all required intervals whenever the emissions unit is operating. The only exception to this duty is if the inoperation of the monitoring is caused by a monitor malfunction, associated repairs or required QA activities. Monitor malfunctions are limited to those breakdowns which occur as a result of a sudden, infrequent, and not reasonably preventable failure of the monitoring to provide valid data. Monitoring failures that are caused in part by poor maintenance or careless operation are not considered malfunctions. This approach is similar to the malfunction defense included in the proposed rule, but does not entail the elaborate procedural elements of the proposed rule.

Letter(s): ALCOA (IV-D-288); Alyeska Pipeline Service Company (IV-D-360); American Automobile Manufacturers Association (IV-D-538); American Electronics Association, Clean Air Task Force (IV-D-437); Amoco Corporation (IV-D-244); Baltimore Gas and Electric Company (IV-D-296); Chemical Manufacturers Association (IV-D-301); Clean Air Implementation Project (IV-D-242); Department of Energy (IV-D-358); Dow Chemical Company (IV-D-260); E.I. DuPont de Nemours and Company (IV-D-329); Eastman Chemical Company (IV-D-347); Eastman Kodak Company (IV-D-333); Eli Lilly and Company (IV-D-349); Exxon Chemical Americas (IV-D-339); Exxon Company, USA (IV-D-310); General Electric Company (IV-D-278); Kerr-McGee Chemical Corp. (IV-D-385); Koch Industries, Inc. (IV-D-332); Los Angeles County Sanitation Districts (IV-D-26); Michigan Department of Natural Resources (IV-D-438); Monsanto Company (IV-D-273); Motorola Inc. (IV-D-302); National Environmental Development Association (IV-D-334); Pennsylvania Department of Environmental Resources (IV-D-15); Pharmaceutical Manufacturers Association (IV-D-367); South Coast Air Quality Management District (IV-D-524); Southwestern Public Service Company (IV-D-272); Texas Chemical Council (IV-D-365); Tri-TAC (IV-D-24); Utility Air Regulatory Group (IV-D-489); Westinghouse Electric Corporation (IV-D-321)

9.9.4: Non-waiver of Remedies

Comment a: Several industry commenters objected generally to being in violation as a result of a protocol failure, especially if the owner or operator has commenced to use a temporary method as required as part of a corrective action plan.

Response: These comments are no longer applicable under the final rule because the proposed non-waiver provision is not included in the final rule.

Letter(s): Association of International Automobile Manufacturers (IV-D-264); Dow Chemical Company (IV-D-260); Eli Lilly and Company (IV-D-349); Exxon Company, USA (IV-D-310); Goodyear Tire and Rubber Company, The (IV-D-292); Lone Star Energy Company (IV-D-401); Questar Pipeline Company (IV-D-480); Rubber Manufacturers Association (IV-D-331); Texas Chemical Council (IV-D-365)

9.9.5: Miscellaneous Comments

Comment a: Two trade groups suggested that proposed § 64.5(e) be revised to address specifically apparent monitor failures and deviations that occur during monitoring startup and shutdown, and that such periods of data unavailability not give rise to violations of underlying emissions limitations and standards.

Response: The Agency believes that the general duty provisions applicable to the monitoring in the final rule are appropriate, and are based on similar provisions in other federal monitoring regulations. Thus, the Agency does not believe that any further exceptions to these provisions should be included in the final rule.

Letter(s): American Automobile Manufacturers Association (IV-D-538);
Pharmaceutical Manufacturers Association (IV-D-367)

Comment b: Some utility industry commenters suggested that the protocol failure requirements in proposed §§ 64.4(g) and 64.5(e) were redundant with existing requirements. One commenter suggested deleting them entirely while another group of commenters suggested exempting sources subject to acid rain requirements in 40 CFR part 75 and sources subject to certain NSPS subparts.

Response: The Agency believes that the general duty requirements related to monitor operation and maintenance that are included in the final rule are reasonable minimum requirements that should be satisfied by all owners or operators and thus EPA disagrees with these comments.

Letter(s): Lower Colorado River Authority, et al. (IV-D-256); Texas Utilities Services, Inc. (IV-D-257)

Comment c: One commenter suggested allowing for owners or operators to use equivalent portable or temporary equipment to provide substitute data in the event of a protocol failure. The commenter suggested that the rule could allow for such backup systems to be specified in a proposed protocol.

Response: The Agency agrees conceptually with both of these suggestions and believes that this approach is consistent with the rule as proposed and as promulgated. The owner or operator is free to include as part of its proposed part 64 monitoring approach the use of such backup monitoring.

Letter(s): Mobil Oil Corporation (IV-D-285)

Comment d: One commenter recommended adding a provision that would allow the owner or operator to delay protocol repair until the next scheduled process shutdown in circumstances where a shutdown is necessary to conduct the repairs.

Response: The EPA disagrees with including that type of general provision in the rule. The conduct of monitoring under part 64 is an important element of the operation of an emissions unit and monitoring should be designed to allow for repair without substantial adverse impact on plant operations. In unique circumstances, this type of concern can be addressed on a source-specific basis in response to a particular failure.

Letter(s): Exxon Chemical Americas (IV-D-339)

Comment e: One commenter recommended stating explicitly that the requirement to resume "quality-assured" monitoring after a protocol failure is not intended to require the performance of a cylinder gas or relative accuracy test audit before recommencing operation. The commenter believed that a routine calibration check should be sufficient.

Response: The final rule does not include either the cited language or the level of quality assurance requirements included in the 1993 EM proposal. Thus, this comment is no longer applicable.

Letter(s): Union Camp (IV-D-359)

Section 9.10: Specific Monitoring Options (§ 64.4 Generally)

Comment a: Many commenters offered specific comments on what types of monitoring option should be used generally or for specific situations. Commenters also provided comments on particular situations where certain monitoring would be inappropriate. The following discussion provides a summary of these comments by monitoring type, followed by a single response to all of these comments.

- **Continuous Emission Monitoring Systems**

Several environmental organizations favored installation of CEMS for all major sources in order to support emission averaging and trading programs and because CEMS are necessary for emission inventories and baseline profiles, and to assure States have accurate records on sources' emissions. Some of these commenters said that CEMS are the best means of carrying out the goals of the Enhanced Monitoring Program because CEMS data can be used to develop source-wide mass balances to assist in tracking fugitive emissions, and because CEMS would provide data on emissions for nights and weekends, which are periods when most facilities operate. A commenter also supported the use of CEMS to assist inspectors in tracing air pollution problems to particular sources.

Many industry commenters, however, said that CEMS are unreasonable and/or infeasible for many source categories because capital and operating costs of CEMS are significant, monitor location specifications are demanding and costly, and CEMS have typically only been required at large sources with emissions well beyond major source thresholds. A commenter said that CEMS are not as dependable or accurate gauges of compliance as EPA appears to consider them, and added that EPA failed to provide any scientific data or studies to support the use of CEMS. This commenter also said that using CEMS would create substantial exposure to liability with significant opportunities for error and oversight in recordkeeping, reporting and maintenance of complicated and delicate instruments.

Industry commenters said that CEMS are not a viable measurement technique for many types of sources, including: (1) electronics industry

situations due to the small amount of pollutants diluted in large volumes of air; (2) sulfur capture requirements applicable to smelters, because sulfur capture requires knowledge of sulfur in feedstocks and sulfur captured, not sulfur content of emissions; (3) cogeneration units using gas turbines, because of the low concentrations; (4) remotely located oil exploration; (5) production and pipeline facilities; (6) industries that rely on batch processing, such as the pharmaceutical industry; (7) the hazardous waste treatment, storage and disposal industry; (8) VOC combustion sources; and (9) bagasse boilers and other units in the sugar industry. Another commenter said that CEMS are not commercially available for many applications such as VOC and HAPs.

Some commenters recommended that CEMS be considered only after fair and thorough review of all proposed options that best fit with a source's method of operation. One of these commenters suggested looking at Oregon's "plant-wide applicability limits" program, which requires that individual emitting units be given short term limits and that plants be given overall emissions caps. Oregon does not require CEMS for this program; recordkeeping or other appropriate methods can be used for monitoring.

- **Continuous Opacity Monitoring Systems**

Some commenters said that COMS are unreasonable and/or infeasible for many source categories because capital and operating costs of COMS are significant, monitor location specifications are demanding and costly, and COMS have typically only been required at large sources with emissions well beyond major source thresholds.

A commenter suggested that EPA establish emission level cutoffs below which the installation of COMS would not be required. The commenter said that the cutoff should be 200 tons per year in nonattainment areas and even higher in either attainment areas or for stub stacks and other emissions units with no access or support facilities. The commenter also said that the rule should exempt baghouses with multiple stub stacks or open roof vents, where the use of COMS would require major reconstruction. Another commenter said that COMS are often not appropriate for the hazardous waste treatment, storage and disposal industry. Another commenter said that COMS are generally inappropriate (even though they are established monitoring under NSPS Subpart J) for fluid catalytic cracking units because some units have such low opacity values that they would be within the allowed measurement error under the

part 60, appendix B specifications. The commenter added that reference method tests are the only way to establish compliance with particulate levels, but are expensive and should not be indiscriminately required. The commenter said that COMS should only be used for stack opacity and not particulate levels. Lastly, a commenter said that EPA should reduce the bias toward installing COMS at grain elevators by allowing the use of EPA-sanctioned emission factors or source emission data derived using approved testing techniques.

- **Parameter Monitoring**

A few commenters agreed with EPA that CEMS will be unnecessary in many cases, and that various surrogate monitoring approaches should be sufficient. A commenter said that parameter monitoring should be the presumptively acceptable monitoring technique. Another commenter requested clarification of EPA's position on the suitability of parametric monitoring. The commenter said that the preliminary RIA assumes that parametric monitoring will be used for VOC, but the Enhanced Monitoring Reference Document states that monitoring of one control device or process parameter, or even several parameters, may not adequately assure compliance with emission limitations or standards. These statements appear to conflict over whether parametric monitoring is adequate.

Many commenters suggested sources for which parametric monitoring should be deemed sufficient. These source types include: (1) internal combustion engines, by recording fuel usage and hours of operation; (2) compressor stations, by using existing fuel metering with either excess O₂ measurement or stack temperature values to monitoring NO_x emissions; (3) stationary gas turbines, by using water or steam injection monitoring systems to monitor NO_x emissions; (4) certain HAPs, by using a strip-chart recorder on a Magnehelic or other pressure gauge to provide an accurate record of the performance of a typical baghouse; (5) food processing and grain storage sources, by recording daily the control device parameters and conducting weekly opacity observations by non-certified readers; and (6) batch process equipment, when used in conjunction with engineering calculations, by using nitrogen flow rate indicators, process liquid or process gas temperature indicators, condenser cooling medial supply temperature indicators, scrubber liquid flow meters, scrubber pH indicators, and, baghouse pressure drop indicators. Other source types for which parameter monitoring was recommended included

miscellaneous sources at auto assembly and manufacturing plants (other than coating operations), small gas turbines, and other gas-fired installations. A commenter said that followup, infrequent, representative stack tests could be used to confirm compliance.

A commenter said that sources seem to be obligated to use parameter monitoring for particulate matter, although another commenter said that the Enhanced Monitoring Reference Document seems to indicate that control device parameter monitoring would generally be considered inferior to COMS for assessing compliance with particulate matter requirements. Certain commenters argued that there is evidence that no stable particulate matter/opacity correlation can be established. Another commenter was concerned that many sources with particulate matter or metal emissions will be forced to accept demonstrated compliance parameter levels that are far below actual compliance levels for these pollutants. The commenter was also concerned that there will be a widespread lack of consistency in the validity and degree of conservatism in these compliance levels and predictive parameters.

- **Fuel Sampling and Analysis**

Several commenters said that fuel sampling and analysis would be appropriate for gas-fired or oil-fired combustion sources, and in certain instances for coal-fired units. A commenter noted that the preamble states that fuel testing or fuel usage monitoring could be considered enhanced monitoring, and asked that fuel sampling and analysis be an explicit option in the rule.

- **Predictive Emission Monitoring Systems**

Several commenters supported explicit acceptance of PEMS as appropriate for enhanced monitoring. Some commenters said that PEMS produce reliable and accurate continuous emission data at significantly lower costs than CEMS. Another commenter said that types of sources for which PEMS should be considered best established monitoring include small gas turbines, gas-fired boilers, other gas- and oil-fired installations, routine combustion sources and for small units subject to part 64 because of emissions aggregating or bubbling.

- **Recordkeeping**

Several commenters recommended including recordkeeping in the rule, appendices, and/or Enhanced Monitoring Reference Document as an example of acceptable enhanced monitoring, at least for units subject to operational or work practice requirements, instead of numerical emissions limits. Other commenters recommended the use of inventory controls or other already-generated records to show that a source's potential to emit was not exceeded.

Some commenters were concerned that the proposed rule's emphasis on CEMS could lead permitting authorities to believe that CEMS are the only acceptable enhanced monitoring protocol approach. Commenters suggested that the use of product data sheets, material safety data sheets (MSDS), and specifications of process materials are all forms of recordkeeping that should be specifically cited in the rule as examples of enhanced monitoring, especially for coating sources.

Many commenters suggested sources for which recordkeeping should be deemed sufficient. These source types include: (1) VOC sources, by relying exclusively on manufacturer specifications to determine VOC content of solvents or coatings; (2) oil-fired boilers, by using fuel oil supplier certification to determine SO₂ and/or NO_x emissions; (3) beverage alcohol VOC emission sources, by using both recordkeeping and engineering calculations; (4) hazardous waste treatment, storage, and disposal facilities, by using waste characterization data from adequate waste analysis plans required to be collected under hazardous waste regulations; and (5) batch operations and pharmaceutical production. Another commenter said that State permits generally include recordkeeping and reporting protocols as the most preferred and accurate methods for assessing compliance for batch processing industries. Lastly, a commenter recommended establishing in the rule a preference for monitoring based on recordkeeping or engineering calculations.

- **Engineering Calculations and Emission Factors**

Many commenters recommended that engineering calculations and emission factors be included as acceptable enhanced monitoring. Some commenters said that owners or operators should be able to include in protocols the use of manufacturer certified control efficiencies (based on approved EPA test procedures), and then use that information in conjunction with emission factors or source-derived emission data (from EPA approved testing) to document emissions.

Commenters supported the use of engineering calculations where that approach has been proven to be accurate and reliable through industry use, or where monitoring at low concentrations is necessary and instrumental monitoring is uncertain. Commenters identified specific sources for which engineering calculations and emission factors such as AP-42 may be used, including: non-utility, smaller boilers; beverage alcohol VOC emission sources; steel facilities, principally based on tons of fuel or scrap consumed; plastic film manufacturers, based on the amount of resin used; and composites plastics facilities, based on their knowledge of the polyester resin used and the particular process.

A commenter was concerned about the use of AP-42 for storage tanks because there has been some controversy recently about the accuracy of AP-42. The commenter said that if AP-42 cannot be used because it is inaccurate, there is no other established, feasible means of monitoring tanks, making the technical and economic impacts of part 64 on tanks unclear.

Lastly, a commenter suggested that the rule clarify what constitutes enhanced monitoring for standards consisting of engineering and inspection requirements.

- **Reference Method Testing**

For particulate matter, a commenter proposed allowing a semi-annual periodic stack test to be enhanced monitoring. However, the commenter added that because EPA currently insists that data must generally be provided for each averaging period of an emission standard, and EPA assumes a 6-hour period for particulate matter standards, a periodic stack test appears to be insufficient to satisfy part 64.

One commenter provided a detailed analysis of concerns regarding monitoring for particulates from petroleum coke calcining units. The commenter argued that for these units no stable mass/opacity relationship exists. Also, daily Method 9 readings as proposed in the Enhanced Monitoring Reference Document would be excessive and unnecessary. The commenter stated that if there is a problem with the control device, anyone can see it and initiate corrective action. Some commenters said that Method 9 monitoring should constitute enhanced monitoring for slag processing areas at steel facilities.

Some commenters said that periodic testing of combustion engines is a feasible alternative to continuous monitoring. Several commenters proposed accepting the periodic use of portable monitors as opposed to official reference method tests as enhanced monitoring for small sources.

- **Material Balance**

A commenter said that material balance calculations are appropriate for sulfur capture requirements applicable to smelters. The commenter added that monthly balancing is an accurate measurement period, while daily balancing introduces large potential for inaccurate results. For those sulfur capture requirements that do not specify an averaging time, the commenter was concerned that enhanced monitoring could result in inappropriate short-term material balance monitoring.

- **Control Technique Guidelines**

A commenter recommended specifying that the draft CTG for batch processes would qualify as established monitoring for VOC limitations and would not require upgrades of any kind. The commenter added that because EPA has already examined the compliance requirements for the draft CTG for batch processes, examining potential upgrades would be unnecessary.

Response: The EPA will consider all of these suggestions, to the extent applicable to the units subject to the final rule, as it develops guidance on example monitoring that can satisfy part 64. Because of the flexible implementation process established in the final rule that does not require use of any particular monitoring methodology, no further response is required to these general comments on what types of monitoring may or may not be appropriate in particular types of situations. See also responses to comments in Section 6 of Part III of this Response to Comments document.

Letter(s): ARCO (IV-D-396); Agribusiness Association of Iowa (IV-D-529); Alyeska Pipeline Service Company (IV-D-360); American Electronics Association, Clean Air Task Force (IV-D-437); American Foundrymen's Society, Inc. (IV-D-294); American Gas Association (IV-D-265); Arkansas Western Gas Company (IV-D-346); Arkla Energy Resources Company (IV-D-343); Armco Steel Company (IV-D-395); BP Oil Company (IV-D-315); Baltimore

Gas and Electric Company (IV-D-296); Bay Area Air Quality Management District (IV-D-402); Bunge Corporation (IV-D-444); Can Manufacturers Institute (IV-D-478); Caterpillar Inc. (IV-D-497); Coalition for Clean Air Implementation (IV-D-304); Council of Industrial Boiler Owners (IV-D-319); Department of Energy (IV-D-358); Distilled Spirits Council of the United States (IV-D-300); Eli Lilly and Company (IV-D-349); Equitable Resources, Inc. (IV-D-388); Exxon Chemical Americas (IV-D-339); General Electric Company (IV-D-278); General Electric, Power Generation (IV-D-20); Hazardous Waste Treatment Council (IV-D-392); Houston Lighting & Power (IV-D-322); Houston Lighting & Power Company (IV-D-530); Independent Liquid Terminals Association (IV-D-468); Institute of Clean Air Companies (IV-D-379); Kerr-McGee Chemical Corp. (IV-D-385); Leather Industries of America (IV-D-286); Lone Star Gas Company (IV-D-211); Louisiana Mid-Continent Oil and Gas Association (IV-D-454); Marathon Oil Company (IV-D-376); Mississippi River Transmission Corp. (IV-D-344); Mobil Oil Corporation (IV-D-285); Montana-Dakota Utilities Co. (IV-D-517); National Grain and Feed Association (IV-D-312); New United Motor Manufacturing, Inc. (IV-D-467); Niagara Mohawk Power Corporation (IV-D-317); Northwest Pipeline Corporation (IV-D-270); Ohio Cast Metals Association (IV-D-324); Ohio Edison (IV-D-266); Ohio Manufacturers Association (IV-D-348); Pavilion Technologies, Inc. (IV-D-309); Pennzoil Company (IV-D-373); Pharmaceutical Manufacturers Association (IV-D-367); Phelps Dodge Corporation (IV-D-483); Phillips Petroleum Company (IV-D-380); Rubber Manufacturers Association (IV-D-331); Sierra Club, Lone Star Chapter (IV-D-364); Southwestern Public Service Company (IV-D-272); Specialty Steel Industry of the United States (IV-D-328); Steel Manufacturers Association (IV-D-326); Texas Intrastate Natural Gas Pipelines (IV-D-221); United States Sugar Corporation (IV-D-382); Utility Air Regulatory Group (IV-D-489)

Section 10: Reporting

Section 10.1: Compliance Certifications (§ 64.5(a))

10.1.1: General Concerns with the Compliance Certification Requirements

Comment a: Some commenters recommended that the proposed compliance certification provisions be deleted because the new obligation placed upon sources by § 64.5 was not adequately considered in the rulemaking process and because the part 70 operating permit rules satisfy the requirements of section 114(a)(3) of the Act.

Response: As explained in the response to the comments below, EPA believes that compliance certifications are an essential companion to enhanced monitoring. Moreover, the compliance certification elements in proposed § 64.5 were not intended to be separate from the part 70 compliance certification. Rather, the proposal intended that, for units subject to part 64, the annual compliance certification under part 70 would have to be based on part 64 and other required monitoring data. To clarify this intent, the final rule revises parts 70 and 71 directly rather than addressing this relationship in part 64. See Sections I.C.5. and II.K. of the preamble to the final rule for further discussion.

Letter(s): ALCOA (IV-D-288); Chemical Manufacturers Association (IV-D-301); Exxon Chemical Americas (IV-D-339); Monsanto Company (IV-D-273)

Comment b: In addition to the numerous comments generally opposed to using enhanced monitoring data to determine compliance (see section 3.1, above), certain commenters objected specifically to the linking of enhanced monitoring with compliance certification in proposed § 64.5. One industry association argued that a certification based on enhanced monitoring that has not been adopted as a test method through regulation can only have enforcement consequences for failing to meet a part 64 requirement, not the underlying emission limit being monitored. However, another industry association requested that the rule specifically state that

compliance with an enhanced monitoring protocol approved in a permit is prima facie evidence of compliance for the monitored emissions unit.

Response: The EPA believes that, Congress intended that enhanced monitoring be

linked with compliance certifications and that compliance certifications relate to all applicable requirements, not simply the requirement to conduct enhanced monitoring. Thus, EPA believes that Congress intended that enhanced monitoring data would be used to certify compliance with an underlying emission standard or limitation. See Sections I.C.5. and II.K. of the preamble to the final rule for further discussion. As to the last comment, EPA does not believe that compliance with an approved part 64 monitoring approach in all circumstances will be prima facie evidence of compliance for the monitored emissions unit. There may be situations in which other required monitoring (such as a stack test required by the permitting authority) shows a violation of an emission limit at the unit being monitored. In that circumstance, the stack test would be prima facie evidence of a violation of the emission limit and of a potential failure of the approved monitoring to satisfy the part 64 criteria. In that case, a reevaluation of the approved monitoring would likely be required under § 64.7(e).

Letter(s): Chemical Manufacturers Association (IV-D-301); China Clay Producers Association, Inc. (IV-D-254)

Comment c: One commenter argued that EPA should look at the compliance certification requirement itself as a baseline "enhancement" of current monitoring. According to this commenter, in order to feel comfortable certifying compliance, an owner or operator will take necessary precautions to have a system in place to evaluate compliance. This commenter argued that the proposed rule ignores this aspect of the new certification requirement, and that the final rule should provide industry greater flexibility to design a program of monitoring that the source believes is sufficient to support its certification.

Response: The EPA does not believe that this is a defensible interpretation of the statute. Section 114(a)(3) mandates that EPA "require enhanced monitoring and submission of compliance certifications." Requiring only the latter on the hope that it will produce the former as well is not responsive to the congressional command. Further, the EPA disagrees with the inference that the approach taken in part 64 fails to provide flexibility in monitoring selection, and the Agency has included numerous revisions in the final regulations to emphasize the selection of the most cost-effective monitoring approach that meets the necessary criteria.

Letter(s): American Textile Manufacturers Institute (IV-D-440)

10.1.2: Use of Other Data Collected for the Purpose of Determining Compliance for Compliance Certification

Comment a: Some commenters opposed requiring owners or operators to report deviations and certify compliance based on "any data collected for the purpose of determining compliance." Reasons provided included the notion that this approach is inconsistent with the permit shield concept that is central to the title V operating permits program and the concern that the requirement would make unclear what information EPA would use as the basis for the certification. One suggestion was to specify that only other "representative compliance data" be required. Commenters also objected that requiring certifications to be based on such non-enhanced monitoring data could be construed to include data collected during internal environmental audits. These commenters recommended exempting such internal audits from, and using only enhanced monitoring protocol data for, compliance certification. It was pointed out that EPA and the Department of Justice have recognized that using voluntary, good-faith compliance efforts against sources in enforcement is unfair and may cause environmental harm. On the other hand, a number of commenters supported the reciprocal use of data generated outside of an approved enhanced monitoring protocol. They reasoned that since EPA could use such data to prove a violation, any credible evidence should be allowed to establish continuous compliance.

Response: The final rule includes revisions to § 70.6(c) which state that the certification must be based on the monitoring and testing required by the permit. In addition, the owner or operator must also consider any other material information to the extent necessary to avoid submitting an incomplete, inaccurate or false certification. These provisions are consistent with those comments that argued that other information should be considered to document compliance as well as to document possible exceptions to compliance. See Section II.K. of the preamble to the final rule for further discussion. Use of such data is not inconsistent with the permit shield. A permit shield could be provided to protect an owner or operator from allegations that it had failed to satisfy CAA monitoring requirements. The shield, however, would relieve the owner or operator of the obligation to comply with the underlying emission standard. See 62

FR 8314, 8320 (February 24, 1997).

Letter(s): American Automobile Manufacturers Association (IV-D-538); Amoco Corporation (IV-D-244); Can Manufacturers Institute (IV-D-478); Chemical Manufacturers Association (IV-D-301); Council of Industrial Boiler Owners (IV-D-319); Dow Chemical Company (IV-D-260); Exxon Chemical Americas (IV-D-339); Fort Howard Corporation (IV-D-233); Pacific Gas Transmission Co. (IV-D-234); Pharmaceutical Manufacturers Association (IV-D-367); Tenneco Gas (IV-D-263); Union Camp (IV-D-359); Union Carbide Corporation (IV-D-293)

10.1.3: Effect of Data Availability on Certifying Continuous Compliance

Comment a: Commenters proposed allowing facilities to certify continuous compliance, despite minor monitor failures, where the owner or operator has significant reason to believe that no exceedance has occurred. It was argued that a facility that had not violated any emission standard could be forced to explain its intermittent compliance status to control agencies and citizen groups. One commenter stated that sources which lack quality-assured data for certain periods should not have to endure the stigma associated with certifying intermittent compliance when they have other means of certifying continuous compliance. In addition, one commenter stated that the only way to avoid minor lapses in monitoring is to install backup monitors; this option was seen as unreasonable, expensive, and not likely to guarantee absolute reliability. Another comment relating to minor monitor failures recommended allowing for minor deviations in compliance due to unidentifiable instrument malfunctions. The commenter urged adoption of a provision similar to the language in EPA's wastewater rules for compliance with pH limitation which would allow for deviations from numerical standards for a total of one percent of the operating time of an emissions unit subject to enhanced monitoring. Another commenter recommended allowing affirmative defenses that would excuse failure to obtain quality-assured enhanced monitoring data for reasons such as losing data in transit to the laboratory.

Response: The Agency has clarified in the final rule that a certification of intermittent compliance can result from having only intermittent data, and that this type of certification does not necessarily indicate noncompliance. See Section II.K. of the preamble to the final rule for further discussion. See also related comments on the ramifications of "intermittent compliance" in

section 10.1.5 (Part I), below.

Letter(s): Amoco Corporation (IV-D-244); Association of International Automobile Manufacturers (IV-D-264); Chemical Manufacturers Association (IV-D-301); Council of Industrial Boiler Owners (IV-D-319); Synthetic Organic Chemical Manufacturers Association (IV-D-362); Union Carbide Corporation (IV-D-293)

10.1.4: Certifications for Certain SIP Standards

Comment a: A State agency asked for clarification in situations where a SIP has not yet been changed to allow for enhanced monitoring data to be used for certifying compliance. The commenter asked whether the underlying stack test obligation has to be performed in a manner that meets part 64 frequency obligations, and, if not, how testing conducted on a less frequent basis will affect the source's certification of continuous compliance. An industry commenter said that compliance with the permit should constitute compliance with part 64. Another insisted that the SIP method would have to determine compliance until it is revised.

A State agency recommended that where the permitting authority specifies a single means of determining compliance, the requirements for additional monitoring data under parts 60 and 61 should be eliminated because that data would no longer be used to determine compliance.

Commenters also argued that proposed § 64.5(a)(2) would impermissibly require States to go through rulemakings to change federally-mandated

NSPS and RACT limits to include enhanced monitoring protocols as the basis for assuring compliance.

Response: Under § 64.5(a)(2) of the proposed rule, if at the time of issuance of a source's operating permit a SIP provides for an exclusive means of determining compliance that is not the enhanced monitoring protocol, the permitting authority and the source would be able to continue to use that method as the sole basis of compliance until the SIP is modified as required by EPA's SIP Calls to the States (see section 3.4 (Part I)). The permit could also establish that a compliance certification will be based upon enhanced monitoring data upon revision of the applicable

requirement to allow certification on such basis. If the permitting authority and the source do not identify enhanced monitoring as the basis for certifying compliance, § 64.5(a)(3) of the proposed rule would require the permit to be reopened upon revision of the applicable requirement to provide that enhanced monitoring and any other additional means of determining compliance be used as the basis of the compliance certification.

Unlike the proposed rule, the final rule does not include this type of provision. The Agency believes that even where a SIP may specify an exclusive test method, that provision does not interfere with the compliance certification process. Since promulgation of part 70 in 1992, owners or operators have been required to consider all required monitoring in submitting compliance certifications, including monitoring data that may be different than an exclusive test method. The Agency has proceeded with the SIP Call to clarify that such exclusive test method provisions can not be used to prohibit the introduction of credible evidence to prove compliance or non-compliance in an enforcement action or to bar its use in compliance certifications. That SIP Call remains important to be consistent with the CE Revisions.

In response to the specific comments, EPA notes first that nothing in part 64 would require stack testing for purposes of certifying compliance. Whether testing should be used to satisfy part 70 monitoring requirements, and if so at what frequency are issues related to implementation of part 70 by a permitting authority. Second, for monitoring under parts 60 and 61, § 64.10 emphasizes that part 64 does not affect the obligation of an owner or operator to comply with underlying monitoring requirements. The provisions for streamlining multiple monitoring requirements in a part 70 permit (see the revisions to § 70.6(a) and Section II.K.1. of the preamble to the final rule) may provide some relief in the situation discussed by the commenter. Third, part 64 creates independently applicable requirements under the authority of section 114(a) and related provisions of the Act, and thus EPA disagrees with comments that part 64 would impermissibly delegate changes to other requirements.

Letter(s): Exxon Company, USA (IV-D-310); Georgia Department of Natural Resources (IV-D-377); Monsanto Company (IV-D-273); National Environmental Development Association (IV-D-334); Texas Natural

Resource Conservation Commission (IV-D-371)

Comment b: One State agency suggested deleting proposed § 64.5(a)(3), which would require permit reopening where the permitting authority and the source do not identify the enhanced monitoring method as the basis for certifying compliance. According to the commenter, the issue is already addressed in part 70, and deleting § 64.5(a)(3) would simplify the rule. In the alternative, if the provision is not deleted the commenter requested that the permit reopening be discretionary rather than mandatory. This would allow for the case-by-case determination of cause specified in title V.

Response: See the previous response to Comment a, above, generally with respect to the reason that this provision is not included in the final rule.

Letter(s): Los Angeles County Sanitation Districts (IV-D-26); Mobil Oil Corporation (IV-D-285); Texas Natural Resource Conservation Commission (IV-D-371)

10.1.5: Miscellaneous Issues

Comment a: Several commenters asked for clarification of the frequency of the required compliance certification. The commenters did not believe that proposed § 64.5(a) sufficiently explained the appropriate frequency of compliance certifications. One commenter supported annual compliance certification, because part 70 accomplishes the compliance certification required under section 114(a)(3) of the Act. Another commenter noted that the annual certification is consistent with section 503(b)(2) of the Act and that annual certifications would help minimize recordkeeping and reporting costs.

Response: The minimum required frequency is annual, as established in part 70. The final rule clarifies this point by revising parts 70 and 71 directly rather than including provisions related to compliance certification in part 64.

Letter(s): Chemical Manufacturers Association (IV-D-301); Monsanto Company (IV-D-273)

Comment b: One change in terminology was also proposed by a commenter: "source" should be replaced with "owner/operator" because sources do not perform

monitoring and reporting activities, owners or operators do.

Response: To the extent still applicable, the final rule uses the terminology appropriately.

Letter(s): Department of Energy (IV-D-358)

Comment c: Finally, one commenter requested that EPA clarify the ramifications of intermittent compliance.

Response: See Sections I.C.5. and II.K. of the preamble to the final rule for a detailed discussion of this issue.

Letter(s): Los Angeles County Sanitation Districts (IV-D-26)

Section 10.2: Timing of Enhanced Monitoring Report (§ 64.4(b))

10.2.1: Reporting Frequency

Comment a: Many commenters stated that quarterly reporting would be too burdensome and/or too costly. Several commenters said that quarterly reporting would conflict with reporting requirements under NSPS and NESHAP subparts. As an example, a commenter noted that reporting NESHAP radionuclide emissions data and dose assessments on a quarterly basis would be impractical because the standard is based on an annual dose. Another commenter stated that since the permitting authority must be notified immediately upon the occurrence of a deviation or malfunction, there would never be any delay of important information to the permitting authority. For example, a commenter said that any significant periods of excess emissions over a certain level will be promptly reported under emergency release reporting regulations developed under hazardous waste laws or the reporting requirements set forth in the operating permit. Lastly, a commenter requested that proposed § 64.5(b) be revised to remove the implication that reports may be submitted more frequently than quarterly.

As a suggested alternative to quarterly reporting, numerous commenters suggested that semiannual reporting, as provided by part 70, be required. Another commenter said that the same information will be reported in

other semiannual reporting required by the Act. A commenter suggested that, if necessary, more frequent reports could be required for specific categories of sources (e.g., NSPS requirements may require more frequent reporting depending upon the circumstances). Another commenter said that an exception to semiannual reporting could be made for deviations that are outside norms established in applicable requirements, an approved enhanced monitoring protocol and the permit. A commenter observed that burdensome reporting requirements will divert compliance and enforcement efforts away from aspects of the rule that can help the environment.

Some commenters suggested that semiannual reporting at least be allowed if the owner or operator demonstrates continuous compliance for specified periods, such as 4 or 8 continuous quarterly reporting periods. Such an approach would create incentives for compliance and relieve the reviewing burden on regulators so that they may address those sources needing the most attention. As a part of this approach, a commenter noted that deviations still would have to be reported promptly under title V requirements. Another commenter recommended requiring detailed reports only for those sources that failed to attain 90% data availability during any six-month period; if a source continued to experience low reliability, quarterly reports could be required. Still another commenter recommended that sources with 95% continuous compliance and satisfactory operation report only semiannually, with abnormal deviations still reported promptly. Lastly, a commenter suggested a reporting requirement similar to that in the proposed hazardous organic NESHAP under 40 CFR part 63, which requires semiannual reporting, but defaults to quarterly reporting for emission units whose monitoring results show that parameter values are frequently outside of the established range.

Other commenters suggested annual or biannual reporting. Annual reporting, some commenters noted, would coincide with the annual certification of compliance required under part 70. Some commenters suggested that reporting frequency be determined by the States, who would have the discretion to impose more frequent reporting if necessary. Finally, a commenter suggested that reporting frequency be based upon the underlying compliance method; thus, if compliance has been historically demonstrated by an annual performance test, then the reporting period should be annual.

Response: The final rule clarifies that the part 64 report is the same as the report

required under part 70. Thus, the minimum semiannual frequency established in part 70 applies to part 64 as well. See Section II.I. of the preamble to the final rule for further discussion.

In response to the additional comments, the Agency does not believe that any additional language is needed to address the issue of how to report on a semiannual basis if either the averaging period for the emission standard is longer than semiannually, or the frequency of monitoring is less frequent than semiannually. Because the rule focuses on documenting proper control device operation and maintenance, the time period for assessing excursions or exceedances will relate to indicating control device operation, which will be a shorter period than semiannually.

Similarly, because of the focus on control device operation, the Agency does not expect that monitoring will be conducted less frequently than semiannually.

Letter(s): ALCOA (IV-D-288); Aluminum Association (IV-D-378); Alyeska Pipeline Service Company (IV-D-360); American Automobile Manufacturers Association (IV-D-538); American Bakers Association (IV-D-465); American Electronics Association, Clean Air Task Force (IV-D-437); American Portland Cement Alliance (IV-D-284); American Textile Manufacturers Institute (IV-D-440); Armco Steel Company (IV-D-395); Ash Grove Cement Company (IV-D-311); Bunge Corporation (IV-D-444); Chemical Manufacturers Association (IV-D-301); Clean Air Implementation Project (IV-D-242); Colorado Association of Commerce and Industry (IV-D-243); Corn Refiners Association, Inc. (IV-D-391); County Sanitation Districts of Orange County, California (IV-D-235); Department of Energy (IV-D-358); Dow Chemical Company (IV-D-260); E.I. DuPont de Nemours and Company (IV-D-329); Eastman Chemical Company (IV-D-347); Eastman Kodak Company (IV-D-333); El Paso Natural Gas Company (IV-D-271); Exxon Chemical Americas (IV-D-339); Exxon Company, USA (IV-D-310); Gas Processors Association (IV-D-227); General Electric Company (IV-D-278); Goodyear Tire and Rubber Company, The (IV-D-292); Kaiser Aluminum & Chemical Corporation (IV-D-295); Kerr-McGee Chemical Corp. (IV-D-385); Kerr-McGee Corporation (IV-D-232); Koch Industries, Inc. (IV-D-332); Los Angeles County Sanitation Districts (IV-D-26); Merck & Co., Inc. (IV-D-443); Mobil Oil Corporation (IV-D-285); Monsanto Company (IV-D-273); National Environmental Development Association (IV-D-334); National Grain and Feed Association (IV-D-312); New Mexico Environment Department (IV-D-247); Occidental Chemical Corporation (IV-D-240); Oklahoma

Department of Environmental Quality (IV-D-463); Pennzoil Company (IV-D-373); Pharmaceutical Manufacturers Association (IV-D-367); Phillips Petroleum Company (IV-D-380); Questar Pipeline Company (IV-D-480); Reynolds Metals Company (IV-D-374); Rubber Manufacturers Association (IV-D-331); Tennessee Valley Authority (IV-D-389); Texas Chemical Council (IV-D-365); Texas Intrastate Natural Gas Pipelines (IV-D-221); Texas Natural Resource Conservation Commission (IV-D-371); United States Sugar Corporation (IV-D-382); Unocal Corporation (IV-D-268); Washington Department of Ecology (IV-D-279); Westinghouse Electric Corporation (IV-D-321); Whirlpool Corporation (IV-D-493)

10.2.2: Timing of Report After End of Reporting Period

Comment a: Numerous commenters requested that the proposed rule be revised to allow more than 30 days after the end of the reporting period to submit a report. Some commenters suggested that the States should be given the discretion to extend the submittal date to up to 60 days following the close of the monitoring period. Other commenters requested that the period be 45, 60 or 90 days. A commenter suggested allowing 60 days, or 30 days after analytical results are available to the facility, whichever is sooner. Reasons given for extending the time to submit a report included the considerable burden of assembling the reports and the necessity of allowing for time to analyze and verify data which, when the data is received from independent laboratories, can take up to 180 days. One commenter also proposed that owners or operators be allowed to negotiate the designation of the beginning and end of the reporting quarter and the report submittal dates.

Response: The final rule relies on the procedural requirements in part 70 for reporting and thus this proposed provision is no longer applicable.

Letter(s): American Automobile Manufacturers Association (IV-D-538); American Electronics Association, Clean Air Task Force (IV-D-437); Bay Area Air Quality Management District (IV-D-402); Clean Air Implementation Project (IV-D-242); Colorado Association of Commerce and Industry (IV-D-243); Department of Energy (IV-D-358); Dow Chemical Company (IV-D-260); Eastman Chemical Company (IV-D-347); Exxon Chemical Americas (IV-D-339); General Electric Company (IV-D-278); Monsanto Company (IV-D-273); National Environmental Development Association (IV-D-334); Oklahoma Department of Environmental Quality (IV-D-463); Pennzoil Company (IV-D-373); People's Natural Gas Company (IV-D-27);

Pharmaceutical Manufacturers Association (IV-D-367); Texaco Inc. (IV-D-357); Union Camp (IV-D-359); Unocal Corporation (IV-D-268); Westinghouse Electric Corporation (IV-D-321)

10.2.3: Commencement of Reporting Duty

Comment a: Several commenters recommended that the starting date of the reporting requirements be revised. Two industry commenters recommended specifying that the first report for a facility is not required until the first enhanced monitoring protocol is approved for the facility. Another commenter suggested that reporting requirements begin after the date on which a permittee receives a letter from the permitting authority accepting the performance verification test results. Still another commenter proposed that the duty to submit reports should begin on the date specified in proposed § 64.8(a).

Response: The EPA acknowledges the concerns of the commenters. Section 64.9(a) of the final rule clarifies that the reporting duty begins after the date on which the owner or operator is required to use part 64 monitoring. That date is the later of: (1) permit issuance that includes the applicable monitoring; or (2) completion of installation or final verification of the monitoring.

Letter(s): Dow Chemical Company (IV-D-260); Exxon Chemical Americas (IV-D-339); Exxon Company, USA (IV-D-310); Union Carbide Corporation (IV-D-293)

Section 10.3: Content of Enhanced Monitoring Reports (§ 64.5(b))

10.3.1: General Issues

Comment a: Several commenters supported the concept of a simple, streamlined summary report. Some commenters recommended use of a summary form similar to the one required under 40 CFR 60.7(d), while others recommended the content and format used by the Texas Natural Resources Conservation Commission. Still other commenters recommended using a format similar to the one included in the draft Enhanced Monitoring Reference Document. One commenter stated that EPA should include this type of recommended summary form as an appendix to the final rule to provide guidance to the States. Some

commenters argued that a summary form should be included so that reporting forms would be consistent in different States. Finally, one commenter requested separate forms by source category so that it would be clear what type of data system should be used for different types of protocols.

Response: Although the final rule relies generally on the part 70 reporting requirements, the rule does include a few specific content provisions to assure that owners or operators are required to submit particular elements for all part 64 monitoring. The EPA has modeled the reporting requirements in § 64.9(a) on the summary report requirements in 40 CFR 60.7(d). In addition, EPA notes that it has not included any specific forms as part of the rule in order to allow for anticipated differences in State programs and data system designs, as well as to allow for rapid development of updated forms without having to reopen rulemaking proceedings. See Section II.I. of the preamble to the final rule for further discussion.

Letter(s): American Portland Cement Company (IV-D-284); Class of '85 Regulatory Response Group (IV-D-338); County Sanitation Districts of Orange County, California (IV-D-235); Georgia Department of Natural Resources (IV-D-377); Mississippi Chemical Corp. (IV-D-179); Monsanto (IV-D-273); Montana Power Company (IV-D-499); Texas Chemical Council (IV-D-365)

Comment b: Commenters recommended that consolidated reporting of general information on a facility-wide basis be allowed, as opposed to separate reporting for each emissions unit.

Response: The EPA agrees with this concept and believes that the part 70 general reporting provisions should be flexible enough to accommodate this approach where appropriate.

Letter(s): Department of Energy (IV-D-358); Exxon Company, USA (IV-D-310); Gas Processors Association (IV-D-227); Texas Intrastate Natural Gas Pipelines (IV-D-221)

Comment c: Commenters included some general comments on report content. One commenter stated that the content should focus on deviations and reduce all other requirements. Other commenters recommended that EPA

provide a reasonableness concept for reporting information that may be difficult to obtain, such as causes of deviations or data unavailability. (See also section 10.3.3 (Part I), below.) Other commenters considered all of the report content to be redundant with part 70 and therefore unnecessary. Finally, certain commenters argued for an incentive system so that sources that demonstrate compliance for some reasonable length of time are required to submit less information. This would enable States to concentrate on sources of the most concern.

Response: The Agency believes that the summary format adopted for part 64 reporting streamlines the required information and clarifies the general content requirements of part 70. As discussed below, the owner or operator can identify "unknown" as the cause for any event if the cause is not reasonably understood.

Letter(s): American Automobile Manufacturers Association (IV-D-538); Amoco Corporation (IV-D-244); Chemical Manufacturers Association (IV-D-301); E.I. DuPont de Nemours and Company (IV-D-329); Pharmaceutical Manufacturers Association (IV-D-367)

10.3.2: Report Content - General Identification Information (§§ 64.5(b)(1)-(6))

Comment a: Commenters proposed revising §§ 64.5(b)(3) - (5) to allow sources to submit the complete range of information in initial reports and then include in subsequent reports only updates to reflect any changes in the information. One commenter proposed a revision to subparagraph (b)(3) to clarify that the source need only provide a brief identifier of an emissions unit, and not a long description. Other commenters suggested revising proposed § 64.5(b)(4) to require only a reference to the applicable permit condition because the remaining information will be accessible with the permit condition reference. Commenters also considered it unnecessary to identify the enhanced monitoring protocol in a report because that information would be available in the permit. One State agency requested that EPA delete the requirement in proposed § 64.5(b)(1) to provide the facility identification code assigned by EPA and clarify that the permitting authority may require the source to provide the State-assigned ID code. This commenter noted that the EPA code would be provided by the State when it provides data to EPA, whereas the more important ID code for the State in processing the source's report will be the State-assigned code.

Response: The final rule relies on the part 70 reporting procedures for these types of procedural elements, and thus the final rule does not include requirements related to facility identification codes or similar issues.

Letter(s): ALCOA (IV-D-288); American Portland Cement Alliance (IV-D-284); Dow Chemical Company (IV-D-260); Monsanto Company (IV-D-273); Oklahoma Department of Environmental Quality (IV-D-463); Texas Natural Resource Conservation Commission (IV-D-371)

Comment b: One commenter requested that the word "pollutant" in proposed § 64.4(b)(3) be changed to "pollutants" in order to clarify that separate protocols and reports are not required for each pollutant.

Response: The EPA anticipates that separate monitoring and thus a separate report would be required for each pollutant, and thus the requested change is not appropriate.

Letter(s): Department of Energy (VI-D-358)

Comment c: A commenter requested that EPA clarify which fugitive emissions points covered by an enhanced monitoring protocol must be identified in proposed § 64.5(b)(3) and when.

Response: The final rule applies solely to emissions units that operate control devices to achieve compliance. The Agency does not believe that this comment remains applicable under the final rule.

Letter(s): Amoco Corporation (IV-D-244)

10.3.3: Report Content - Operating Time (§ 64.5(b)(7))

Comment a: One commenter opposed the requirement that sources provide the total operating hours of each emissions unit subject to part 64. The commenter noted that operating hour information is considered confidential for many emissions units. This is because hours of operation, in concert with other readily available information, can be used to determine what products are manufactured and when and how much is

produced. It can also lead to issues such as plant efficiency and capacity. Therefore, the commenter believed that it is important that hours of operation not be required in enhanced monitoring reports.

To address this issue and still provide a basis for determining percentages of deviations and monitor downtime, the commenter proposed allowing sources to calculate data availability as a percentage of operating hours and allowing sources to calculate the duration of deviations as a percentage of total enhanced monitoring time. The source would then indicate in the enhanced monitoring reports whether or not the limits established by the permitting authority have been met. The commenter argued that this approach is reasonable given that EPA entrusts sources to determine whether or not deviations occur and does not require that raw monitoring data be provided in enhanced monitoring reports.

To implement this proposal, the commenter recommends deleting proposed § 64.5(b)(7) and adding to proposed §§ 64.5(b)(12) and (13) a requirement that an owner or operator specifically indicate whether or not the established limits for total data availability and total duration of deviations have been met.

Response: The final rule relies on the general part 70 reporting requirements on this issue. The Agency notes, however, that a requirement to provide total operating hours is often required in reporting requirements so that the reviewing agency may calculate independently emissions exceedances or protocol downtime as a percentage of operating time. These ratios are commonly used to evaluate the relative compliance status of different sources. Thus, EPA would expect many permitting authorities to require this information as part of their part 70 reporting programs.

Letter(s): Eastman Kodak Company (IV-D-333)

10.3.4: Report Content - Deviation Summary Information (§ 64.5(b)(8))

Comment a: Several commenters opposed the requirement to report all deviations without regard to whether any requirement of the Act is violated. One commenter suggested modifying proposed § 64.5(a)(8) so that all deviations would be recorded in the source's operating record and available to agency personnel for inspection. The quarterly reports would include any deviation that was not corrected within 24 hours, including the

cause of the deviation and plans to correct future deviations. Other commenters recommended exempting from reporting those deviations that occur during exempt periods or when an emissions unit is not operating. One of these commenters argued that reporting deviations during startup, shutdowns, maintenance, and other exempted periods would generate a great deal of paperwork without any environmental benefit.

Response: The Agency first notes that the final rule refers to excursions and exceedances instead of deviations. However, on the basic issue raised in the comments, EPA disagrees because the comments are not consistent with the intent of part 64 or other EPA policies. It is important for the Agency to be able to get a clear picture of the full extent of all excursions/exceedances, including those that may be excused under certain regulations. Excursions and exceedances are not necessarily violations and are to be reported whether or not they are in fact violations of the standards. For example, even if they occur during excused periods such as startup, shutdown, or malfunction, these incidents must be reported, with an indication that the owner or operator believes the excursions/exceedances to be from known causes that are excused under applicable requirements. Most regulations that may excuse certain situations, including the NSPS general provisions, require sources to use good air pollution control practices to minimize excess emissions associated with startup, shutdown, and malfunction periods, and review of summary information on the duration of such events is an important oversight tool to assure that sources are in fact using such practices.

The obligation to report all excursions/exceedances is also consistent with existing monitoring and reporting programs that generally require such reporting, regardless of the cause or whether the incidents are excused. For example, all excess emissions are reported under the general provisions of 40 CFR 60.7. In addition, title V of the Act requires prompt reporting of all deviations without any exception for those deviations that may be excused. This requirement is also necessary to ensure that the reports do not omit any potential violation based on an interpretation made by the owner or operator. Finally, the use of summary reporting under part 64 greatly reduces the burdens associated with reporting all excursions/exceedances, and the Agency does not believe that this requirement will adversely affect the regulated community.

Letter(s): American Textile Manufacturers Institute (IV-D-440); Dow Chemical

Company (IV-D-260); Kerr-McGee Chemical Corp. (IV-D-385); Monsanto Company (IV-D-273); Safety-Kleen Corporation (IV-D-22)

Comment b: One commenter recommended clarifying that where more than one emissions point in a single emissions unit does not meet an emission limitation applicable to the emissions unit, only one deviation or exceedance has occurred.

Response: The EPA believes that no change is necessary or appropriate because a determination of the regulatory compliance consequences in such circumstances will depend on the underlying rule. Part 64 is not intended in any way to modify the compliance obligations of the underlying requirement.

Letter(s): Association of International Automobile Manufacturers (IV-D-264)

Comment c: Some industry commenters explicitly agreed with EPA that generally it is not necessary to report magnitude for each deviation or to provide full supporting documentation for all deviations. However, one State commenter proposed that all deviation reports include information on the duration and magnitude of each deviation rather than just summaries of total duration during the reporting period.

Response: The EPA continues to believe that it is not necessary to require that the magnitude of each individual excursion or exceedance be reported. The EPA studied this topic with State agency personnel prior to EPA preparing the proposed rule and there was no strong consensus from the State agencies that magnitude information should be provided. This approach is also consistent with existing summary reporting programs such as NSPS reports under 40 CFR 60.7(d). Finally, there is no prohibition against States imposing a requirement to report magnitude information pursuant to State legal authority in those cases where reporting magnitude information is considered important.

Letter(s): American Portland Cement Alliance (IV-D-284); Monsanto Company (IV-D-273); Washington Department of Ecology (IV-D-279)

Comment d: One industry commenter recommended deleting the requirement that

sources identify reasons for a deviation. The commenter argued that the Act requires reporting deviations, not the reasons for them, and that sources may not always be able to explain deviations. The commenter stated that requiring explanations for deviations would place owners or operators in a difficult position, especially in light of the criminal sanctions for false material statements and material omissions in section 113(c) of the Act.

Response: The final rule still requires that excursions/exceedances be classified by reason. The EPA continues to believe that specifying a reason for excursions or exceedances is important information that greatly increases the value of compliance reporting as a tool for an agency overseeing the compliance status of a source. As explained in the preamble to the proposed rule, a duty to provide the cause of an excursion/exceedance would include the ability to list "unknown" where information on the cause is not reasonably available. The final rule clarifies explicitly the ability of the owner or operator to clarify causes as "unknown." The criminal sanctions of section 113(c) should not be a concern for this requirement because the Agency is not attempting to force sources to provide a reason where a reason is unknown. Finally, as with many of the reporting requirements, identifying the causes of excursions or exceedances is a well-established aspect of summary reporting programs such as the NSPS summary reports.

Letter(s): American Automobile Manufacturers Association (IV-D-538)

10.3.5: Report Content - Monitor Performance Summary Information (Section 64.5(b)(9))

Comment a: One commenter opposed the implication in proposed § 64.5(b)(9) that all instances of enhanced monitoring protocol downtime would have to be identified as "noncompliance" in the periodic reports. A commenter similarly recommended loosening the standards for being in continuous compliance to allow some minor deviations from established quality assurance procedures. This commenter argued that, although some minor performance deviations may warrant reporting, they should not necessarily prevent the owner or operator from certifying continuous compliance. The commenter stated that any requirements for continuous emission monitoring should specifically allow for 5% downtime without affecting the owner or operator's continuous compliance status.

Response: Although incidents of monitor downtime must be identified in the summary report, there is no implication that such downtime necessarily constitutes non-compliance. Reported incidents of monitor downtime will have to be considered by the permitting authority in determining whether the owner or operator has satisfied any required minimum data availability requirement as well as the general duty for monitor operation in § 64.7(c). The owner or operator likewise will have to consider downtime incidents when certifying compliance with such requirements.

Letter(s): Department of Energy (IV-D-358); Fort Howard Corporation (IV-D-233)

Comment b: A commenter recommended allowing a source that has met its QA/QC and monitor performance standards for the first four quarters of the first year of enhanced monitoring protocol operation to thereafter report only deviation information. In general, this commenter would support requiring only deviation reporting, with all records and QA/QC information kept on site.

Response: The EPA believes that the summary reporting required under this rule, coupled with the shift to semiannual reporting, reduces the burden on sources to report this information while still providing the reviewing agency with information to assess the performance of a source's monitoring and to target sources that show potential problems with monitor performance as time progresses. The Agency also notes that summary reporting of monitor performance data is consistent with existing regulations such as the NSPS general provisions.

Letter(s): ALCOA (IV-D-288)

Comment c: A commenter recommended substituting "minimum reliable and timely data" for "minimum data accuracy and precision requirements" to describe the concept of monitor downtime.

Response: The final rule refers to monitor downtime incidents without further qualification. Any period in which monitoring is required to operate consistent with § 64.7(c) but does not provide valid data will constitute a downtime incident.

Letter(s): Phillips Petroleum Company (IV-D-380)

Comment d: A commenter proposed a text revision to proposed § 64.5(b)(9) so that a source would report on steps taken to correct monitor failures and, if applicable, steps planned to avoid recurrence of monitor failure. This comment related to a revision proposed by the commenter with respect to the monitor failure reporting requirements in the proposal.

Response: This comment is no longer applicable because the monitor failure provisions have been deleted (see section 9.9 (Part I), above).

Letter(s): Monsanto Company (IV-D-273)

10.3.6: Report Content - Compliance Summary Information (§ 64.5(b)(10))

Comment a: Several industry commenters opposed including a compliance status summary in an enhanced monitoring report. Commenters noted that § 64.5(b)(10) is redundant with § 70.6(c)(i)-(iv), which requires certification of compliance to the permitting authority. Others argued that the enhanced monitoring report is not a § 64.5(a) compliance certification, and that enhanced monitoring reporting schedules should be consistent with part 70, with a compliance certification required only on an annual basis.

Response: The EPA agrees with the commenters' concerns and this proposed requirement is not included in the final rule.

Letter(s): American Automobile Manufacturers Association (IV-D-538); E.I. DuPont de Nemours and Company (IV-D-329); Union Carbide Corporation (IV-D-293)

Comment b: Another commenter argued that requiring a compliance status summary on the basis of enhanced monitoring is improper because it changes what constitutes compliance for an underlying emission limitation or standard without a rulemaking to modify the specific requirement.

Response: The EPA does not agree that requiring a compliance status summary in an enhanced monitoring report changes what constitutes compliance for an underlying emission limitation or standard. However, as discussed above, this provision has been deleted because the Agency believes it is

unnecessary.

Letter(s): Exxon Chemical Americas (IV-D-339)

Comment c: One commenter recommended at least deleting the requirement concerning compliance on the last day of the reporting period because the last day of the reporting period is no more important than any other day, and information for the last day of the reporting period will be included in a separate compliance certification if deviations occur. This commenter argued that requiring sources to indicate the compliance status as of the last day of the reporting period is arbitrary.

Response: This comment is no longer applicable because this provision has been deleted as explained above.

Letter(s): Monsanto Company (IV-D-273)

10.3.7: Report Content - Records Submittal Requirements (§ 64.5(b)(11)-(13))

Comment a: A few commenters opposed any requirement to submit records with reports. Some of these commenters noted that because records are necessary only to support enforcement, a permitting authority can request records if it decides to pursue enforcement. One commenter suggested that records should be retained on-site for four consecutive reporting periods and submitted to the permitting authority only if requested to do so. One commenter specifically opposed the requirement to submit records for all periods of deviations.

Several commenters expressed general agreement with EPA's decision to not require submittal of records for all situations, but most of those commenters provided proposed revisions to further reduce the potential burdens of submitting records. Some commenters recommended allowing the permitting authority to decide whether the records should be submitted with the quarterly report or whether they should be maintained so that the permitting authority can inspect them upon request. One commenter recommended allowing permitting authorities to establish a percentage threshold, not to exceed 10%, for not including full documentation, while another noted that the proposed 5% maximum appears to conflict with thresholds set in underlying applicable

requirements (e.g., 40 CFR part 60, subpart BB appears to set an opacity exceedance de minimis level at 6%). Another commenter recommended combining proposed §§ 64.5(b)(11) and (12) and setting the total duration of allowed deviations at a 5% minimum unless the permitting authority deems a higher percentage appropriate. The same commenter also recommended deleting the reference to § 64.6(a)(3)(v) in proposed § 64.5(b)(12) and allowing sources to submit only the summary records in proposed § 64.6(a)(3)(i). For the same reason, this commenter recommended deleting the reference to § 64.6(a)(3)(iv) in proposed § 64.5(b)(13).

Finally, one commenter recommended using missing data procedures similar to the Acid Rain Program in place of records submittal requirements.

Response: In response to these comments, the requirements in the proposed rule to submit records have been deleted. The Agency believes that the ability to require submittal of such records upon request in accordance with the Act will allow for a permitting authority and EPA to have access to supporting records without the burden of the proposed provisions that would have required automatically submitting records in some instances.

Letter(s): American Portland Cement Alliance (IV-D-284); Colorado Association of Commerce and Industry (IV-D-243); Department of Energy (IV-D-358); Exxon Company, USA (IV-D-310); Kerr-McGee Chemical Corp. (IV-D-385); Mobil Oil Corporation (IV-D-285); Monsanto Company (IV-D-273); South Coast Air Quality Management District (IV-D-524); Tennessee Department of Environment and Conservation (IV-D-399); Texas Natural Resource Conservation Commission (IV-D-371); Tosco Refining Company (IV-D-316); Union Carbide Corporation (IV-D-293)

Comment b: One commenter recommended defining how the percentages for periods of deviation and for data availability in proposed §§ 64.5(b)(12)-(13) will be calculated for sources with multiple emission points that are independently subject to enhanced monitoring. The commenter proposed that sources calculate percentages on the basis of all emissions units subject to part 64 monitoring combined.

Response: This comment is no longer applicable because the final rule does not require calculation of these percentages. Consistent with many existing

reporting programs, EPA expects that permitting authorities will specify how these types of percentages must be calculated under the general part 70 reporting provisions.

Letter(s): Dow Chemical Company (IV-D-260)

10.3.8: Report Content - Other Required Compliance Activities (§ 64.5(b)(14))

Comment a: There were a few comments received that generally opposed § 64.5(b)(14) as proposed and requested specific revisions if it was to be retained in the final rule. One commenter objected to this type of general catch-all provision and proposed either deleting the provision altogether or specifying what information is required in the enhanced monitoring report. Two commenters recommended that this provision be used solely to report on enhanced monitoring protocol requirements and not emission limitation or standard compliance issues. One commenter proposed specific text revisions to accomplish this result. Finally, a State agency requested clarification of what the phrase "any other required activity" encompasses (e.g., does it include stack tests, fuel analyses, etc.).

Response: Because the final rule relies generally on the part 70 reporting provisions, this proposed provision has been deleted as redundant with the general authority of permitting authorities to specify these types of additional content requirements under part 70.

Letter(s): Armco Steel Company (IV-D-395); Dow Chemical Company (IV-D-260); Michigan Department of Natural Resources (IV-D-438); Monsanto Company (IV-D-273)

Section 10.4: Signature Requirements (§ 64.5(c))

10.4.1: Revision of the Signature Requirements

Comment a: Numerous commenters proposed deleting or revising the signature requirements in the proposed rule. Section 64.5(c) of the proposed rule would require a responsible official to include with the signature on a report a certification that the official has personally examined and is familiar with the information contained in the report. The official also would have to certify that, based on inquiry of the individuals responsible

for obtaining the information, the statements in the report are true and complete, and that the official is aware of the penalties for submitting false information or omitting required information. The primary concern among commenters was the requirement that the responsible official personally examine and be familiar with the contents of the report. Many commenters stated that the certification assumed a level of familiarity with operational details that should not be expected from senior officials who would be signing. It was said that senior officials do not have personal knowledge of each piece of data and, therefore, cannot personally certify that no deviations occurred. One commenter asserted that it would be physically impossible for the responsible official to personally examine the required documents and that the documents should be examined by persons with expertise in the specific areas of the documents. In the alternative, it was proposed that the due date for the reports be extended. Another commenter stated that the rule should only require a "reasonable" inquiry and should not require inquiry of particular persons. Similarly, one commenter sought clarification regarding whether responsible officials could act in reliance on competent staff when signing the certification. Some commenters suggested that the signature requirement be the same as the requirement under part 70.

Several commenters also objected to the language stating that the responsible official is aware of the penalties for submitting false information or omitting required information. One commenter said that such language was highly confrontational and unnecessary. Others sought clarification that penalties would only be assessed for knowingly or intentionally providing false information, and not for honest mistakes or clerical errors where reasonable QA procedures are in place. One commenter provided a specific test for determining whether a violation of the material omission language occurs: A certifier should only be liable if she knew (1) that the information existed and was not included in the report, and (2) that the information was required to be submitted.

Other commenters objected to holding the responsible official personally liable for violation of the certified statements. It was proposed that the rule expressly permit the certifier to certify compliance "on behalf of" a corporation rather than in an individual capacity.

Response: Part 70 already specifies signature and certification requirements for all reports submitted under part 70. Thus, these proposed requirements have been deleted because they are unnecessary.

Letter(s): American Automobile Manufacturers Association (IV-D-538); Amoco Corporation (IV-D-244); Association of International Automobile Manufacturers (IV-D-264); Chemical Manufacturers Association (IV-D-301); Clean Air Implementation Project (IV-D-242); Dow Chemical Company (IV-D-260); Eastman Chemical Company (IV-D-347); Exxon Chemical Americas (IV-D-339); Exxon Company, USA (IV-D-310); Merck & Co., Inc. (IV-D-443); Mobil Oil Corporation (IV-D-285); Monsanto Company (IV-D-273); National Environmental Development Association (IV-D-334)

10.4.2: Electronic Submittal of Reports

Comment a: One commenter questioned how the signature requirement could be satisfied if the enhanced monitoring report was submitted electronically. The commenter proposed that the Acid Rain Program procedures be followed.

Response: The EPA believes that the language in part 70 is broad enough to allow for a form of electronic signature. The Agency will work with permitting authorities and sources to adopt procedures for this type of signature, as necessary.

Letter(s): Michigan Department of Natural Resources (IV-D-438)

Section 10.5: Confidentiality (§ 64.5(f))

Comment a: Several commenters expressed their general support for the inclusion in part 64 of the confidentiality provisions of section 114(c) of the Act. One commenter proposed expanding that protection to include all confidential information encompassed within the Freedom of Information Act exemption under 40 CFR part 2. Another commenter sought additional protection for company information and incorporated lengthy comments on a Federal Register notice concerning disclosure of emission data claimed as confidential under sections 110 and 114(c) of the Act (56 FR 7042, February 21, 1991). Included within the types of information that should be able to be claimed as confidential on a case-by-case basis (even though EPA's earlier policy statement identified these general types of information as being in data fields that contain information not protected under the Act) are: (1) details on process equipment that emit pollutants;

(2) expressions of emission constituents relative to each other; (3) process design capacity information; (4) detailed calculations and other information related to an emission estimation method; and (5) hourly maximum design rates for processes.

Response: Part 70 specifies confidentiality protections related to permit applications and reports. Thus, the final rule has deleted specific part 64 provisions on this topic because they are unnecessary. See Section II.1.4. of the preamble to the final rule for further discussion.

Letter(s): Dow Chemical Company (IV-D-260); Monsanto Company (IV-D-273); National Environmental Development Association (IV-D-334)

Section 10.6: General Reporting Issues

10.6.1: Simplification and Reduction of Reporting Requirements

Comment a: Some commenters proposed further investigating the reporting process in order to prevent overlaps. For example, one commenter suggested that rather than submitting separate reports for SIP, NSPS, PSD, Acid Rain, and enhanced monitoring purposes, owners or operators should be allowed to submit one consolidated report and should only have to submit it to the local or State permitting authority, not EPA. Another commenter suggested that the Acid Rain Program report could satisfy enhanced monitoring. Another added that sources should be responsible for identifying applicable requirements and submitting them in the permit application, then the permitting authority could identify duplication and work with the source to streamline reporting. One source simply concluded that anything beyond the part 70 requirements is unnecessary if the purpose of enhanced monitoring is to have a means to certify compliance and, therefore, § 64.5 should be deleted altogether.

Response: As suggested in the final comment, part 64 generally relies on the part 70 reporting procedures. The final rule identifies only a few specific summary data elements that must be included in a part 70 report that covers part 64 monitoring. Any further streamlining of multiple reporting requirements is an issue properly addressed through part 70, not part 64. See, for instance, the discussion of streamlining multiple requirements in part 70 permits that is included in White Paper 2 (docket item A-91-52-VI-I-2).

Letter(s): Colorado Department of Health (IV-D-209); County Sanitation Districts of Orange County, California (IV-D-235); Department of the Navy (IV-D-206); Dow Chemical Company (IV-D-260); Montana Power Company (IV-D-499); Synthetic Organic Chemical Manufacturers Association (IV-D-362); Washington Department of Ecology (IV-D-279)

Comment b: Several commenters argued that the reporting requirements were unnecessary or excessive, and they proposed revisions. One commenter provided data on the amount of time required for reporting on each monitor at a source and observed that the requirements appeared to be an excuse for imposing punitive sanctions on the regulated community without any environment benefit. Another argued that because permitting authorities already have the authority under section 114 of the Act to request information to support enforcement actions, the enhanced monitoring reporting requirements are redundant and unnecessary. One commenter suggested requiring reporting of deviations on a quarterly basis and waiving the reporting requirement where no deviation has occurred, and a second commenter opposed requiring reporting of obvious equipment or computer errors in enhanced monitoring protocol results.

Response: The EPA generally disagrees that the reporting requirements are excessive and does not believe they should be eliminated. Although tailored to be consistent with part 70 reporting requirements, the information required to be reported under § 64.9 is necessary in order to assure that an owner or operator is in compliance with the requirements of part 64.

Letter(s): American Automobile Manufacturers Association (IV-D-538); Chemical Manufacturers Association (IV-D-301); Council of Industrial Boiler Owners (IV-D-319); E.I. DuPont de Nemours and Company (IV-D-329); Fort Howard Corporation (IV-D-233); Lubrizol Corporation, The (IV-D-306); National Grain and Feed Association (IV-D-312); Pennzoil Company (IV-D-373)

Comment c: One commenter noted that the reporting requirements do provide adequate information for enforcement purposes.

Response: The EPA agrees with this comment.

Letter(s): Department of the Navy (IV-D-206)

10.6.2: Electronic Submissions

Comment a: Many commenters expressed their support for allowing electronic submission of enhanced monitoring reports. Most thought that electronic reporting would facilitate the review and handling of data. However, several commenters asked for clarifications or provided ways to improve the process, including the following: requesting that EPA provide standardized reporting formats and requirements for electronic submissions; clarifying whether § 64.5(d) requires physical postmarks (which would be impossible in the case of electronic submissions); and suggesting that the written report requirement be deleted where a source has a direct data link with the permitting authority. One commenter also proposed that EPA implement data security measures in order to protect trade secrets.

Several commenters expressed opposition to requiring the electronic submittal of reports, with one supporting the presumption of electronic submission. One State agency opposed a presumption in favor of electronic reporting, unless EPA provides software and training to States for implementation. Some commenters felt that the permitting authority and the source should determine the reporting method.

One commenter noted that not all sources will be able to use electronic reporting, and those that do will want to choose which data fields are applicable to their reports, instead of being required to complete all fields.

Response: The EPA wants to emphasize that although electronic reporting is encouraged, it is not required by part 64. With respect to the comment regarding a standardized electronic reporting format, the Agency may consider developing one or more sample summary form specifically designed for electronic reporting, although differences in State data system designs may make development of any single form impractical.

In response to the concern about "postmarks" for electronic reports, the final rule deletes the proposed provision that referred to a "postmark" because part 64 relies on the general part 70 reporting requirements for these procedural issues.

Letter(s): ALCOA (IV-D-288); American Automobile Manufacturers Association (IV-D-538); American Portland Cement Alliance (IV-D-284); Colorado Department of Health (IV-D-209); Council of Industrial Boiler Owners (IV-D-319); County Sanitation Districts of Orange County, California (IV-D-235); Department of Energy (IV-D-358); Department of the Navy (IV-D-206); ENRON Operations Corp. (IV-D-390); Exxon Company, USA (IV-D-310); General Electric Company (IV-D-278); Kingsford Products Company, The (IV-D-246); Los Angeles County Sanitation Districts (IV-D-26); Monsanto Company (IV-D-273); Oklahoma Department of Environmental Quality (IV-D-463); Questar Pipeline Company (IV-D-480); Texas Chemical Council (IV-D-365); Texas Natural Resource Conservation Commission (IV-D-371); Unocal Corporation (IV-D-268); Washington Department of Ecology (IV-D-279)

Comment b: One commenter opposed telemetry reporting because the information is not presented in a summarized form, it is not always in the proper format, it has not been validated by the source, and it cannot be "signed" by a responsible official.

Response: Telemetric reporting is not required or necessarily appropriate for the summary report obligations of § 64.9. However, the Agency does not intend that existing State efforts to implement telemetry reporting where they consider it appropriate be adversely affected by the implementation of part 64.

Letter(s): Westinghouse Electric Corporation (IV-D-321)

10.6.3: Relationship to Title IV Reporting

Comment a: One commenter representing a group of utilities asked for clarification on how data would be merged for title IV and title V sources. The commenter felt that the most costly and difficult aspect of the title IV monitoring program has been the data acquisition and handling system (DAHS). It was suggested that the title V DAHS be simple and follow a format similar to that required under title IV in order to reduce costs and allow others to learn from the experience gained under title IV.

Response: The EPA believes that if an owner or operator of an emissions unit subject

to both part 64 and the Acid Rain Program wishes to use the Acid Rain Program DAHS for part 64 purposes, it may do so. However, like any other element of part 64 monitoring, the use of the DAHS is subject to approval by the permitting authority as part of its overall review and approval of the operating permit and proposed part 64 monitoring. The critical issue will be to assure that the Acid Rain Program DAHS software produces data in terms of the appropriate emission limitations or standards as required under § 64.3(d).

Letter(s): Class of '85 Regulatory Response Group (IV-D-338)

Section 11: Recordkeeping (§ 64.6)

Section 11.1: Records to be Maintained (§ 64.6(a))

11.1.1: The Recordkeeping Requirement Generally

Comment a: Many commenters objected to the burdens imposed by the proposed recordkeeping requirements. Numerous commenters argued that the requirements were too detailed and more than necessary to demonstrate compliance with other provisions of the rule. Some commenters argued that owners could be cited for needless paperwork violations because of the excessive detail. Some commenters proposed that the inadvertent loss of records not be treated as a violation.

Commenters said that the recordkeeping requirements will burden both regulatory agencies and sources, particularly small sources, and also could divert compliance and enforcement efforts away from the parts of the rule that help to protect the environment. A commenter recommended that the recordkeeping requirements be coordinated with other submittals of compliance information, such as the operating permits program. Several commenters stated that the recordkeeping requirements will provide little environmental benefit.

Response: The Agency disagrees that the recordkeeping requirements are generally excessive or too burdensome. Part 70 already establishes that "all" monitoring records be retained. As such, the requirements in § 64.9 merely provide further clarification as to what the concept of "all" records entails. In addition, the recordkeeping requirements are consistent with similar general provisions for NSPS and NESHAP sources.

Letter(s): Chemical Manufacturers Association (IV-D-301); Council of Industrial Boiler Owners (IV-D-319); Eastman Chemical Company (IV-D-347); Lubrizol Corporation, The (IV-D-306); National Grain and Feed Association (IV-D-312); Occidental Chemical Corporation (IV-D-240); People's Natural Gas Company (IV-D-27); Rubber Manufacturers Association (IV-D-331); South Coast Air Quality Management District (IV-D-524); Total Petroleum, Inc (IV-D-354); Washington Department of Ecology (IV-D-279)

Comment b: One commenter suggested that EPA clarify its recordkeeping proposal

and specify that conditions which exceed these requirements, such as those adopted through State regulations, are not federally-enforceable and should not be included in the title V permit.

Response: The issue of whether State regulatory recordkeeping requirements that may be more stringent than those in part 64 are federally-enforceable will depend on the legal status of the State regulations. If the regulations are adopted as part of the SIP for the applicable State or are part of a delegated State program such as PSD regulations, then the regulations will be federally-enforceable. If the regulations are promulgated solely pursuant to State law and are not part of the SIP, then the regulations would be State-only requirements that would have to be identified as such in the title V permit pursuant to 40 CFR 70.6(b).

Letter(s): Tosco Refining Company (IV-D-316)

Comment c: One commenter suggested that the recordkeeping requirements begin on a date specified in the permit, not from the effective date of the rule.

Response: The Agency disagrees. The rule is clear that the duty to maintain records is triggered by having to perform a required activity related to a part 64 obligation. The Agency believes this requirement is sufficient and will not require the owner or operator to retain records that are unrelated to required activities. The Agency notes that some required activities could occur prior to permit issuance.

Letter(s): Dow Chemical Company (IV-D-260)

11.1.2: Records and Data to be Retained

Comment a: Many commenters suggested that only certain data be retained, such as those records necessary to demonstrate compliance and enforcement. Several commenters favored deleting the requirement that "all" records be retained, and one favored explicitly defining which records should be kept. Others said that either only records necessary for compliance and enforcement be required to be retained, or only "applicable" or "required" records be retained. Another commenter recommended requiring that only the compliance summaries submitted to the permitting authority need to be kept, because they detail compliance and deviations. One

commenter recommended establishing recordkeeping requirements that are consistent with existing requirements of current regulations for major sources. This commenter also suggested requiring only emissions data and data necessary to ensure the accuracy of the reported emissions; keeping other data (e.g., monitor maintenance or repair records) could be optional for each facility. Lastly, an industry commenter engaged in seasonal operations suggested clarifying that no records are required when control systems are not operating.

With respect to deviations, some commenters suggested that records of deviations be required only where there is a potential for excess emissions. Other commenters also suggested that, in order to make deviations and calculation factors and equations useful, calculations should also be required to be maintained for possible submittal. It was also suggested the language of proposed §§ 64.6(a)(3)(i)(D) and (iii)(D) be revised to remove the presumption that all deviations require a corrective action by requiring descriptions of "any," not "the," corrective action taken.

With respect to other data, it was suggested that the calibration, quality control and related data of proposed §§ 64.6(a)(2) and (3)(iv)-(vii) not be required to be kept. A commenter proposed requiring retaining records of calibration checks only if the monitoring method requires daily calibration checks. There was also opposition to requiring the retention of monitoring data when the data values were within desired limits, and to requiring backup data. Another commenter suggested that the proposed rule clarify that records for control system monitoring need not be developed when the control system is not operating.

A commenter recommended allowing the permitting authority discretion to determine the amount of recordkeeping required and to determine the completeness of required records. Another commenter recommended revising the proposed rule to allow recordkeeping requirements to be specified in the protocol. In addition, a commenter noted that recordkeeping requirements could be specified in enhanced monitoring plans.

Response: Part 70 already requires all records to be retained and the Agency disagrees with attempting to provide any form of exception to those provisions in this rule. The list of records to be retained in § 64.9 is intended only to provide further guidance on what types of records are

included already in the general requirements of part 70.

Letter(s): Amoco Corporation (IV-D-244); Bunge Corporation (IV-D-444); Chemical Manufacturers Association (IV-D-301); Corn Refiners Association, Inc. (IV-D-391); Council of Industrial Boiler Owners (IV-D-319); Dow Chemical Company (IV-D-260); E.I. DuPont de Nemours and Company (IV-D-329); Eastman Chemical Company (IV-D-347); Exxon Chemical Americas (IV-D-339); Exxon Company, USA (IV-D-310); Kerr-McGee Chemical Corp. (IV-D-385); Monsanto Company (IV-D-273); National Petroleum Refiners Association (IV-D-276); Occidental Chemical Corporation (IV-D-240); Pavilion Technologies, Inc. (IV-D-309); Texas Chemical Council (IV-D-365); Texas Natural Resource Conservation Commission (IV-D-371); Total Petroleum, Inc (IV-D-354)

11.1.3 Electronic Data Storage

Comment a: Several commenters supported the idea of storing data in a form other than paper by electronic means (e.g., computerized recordkeeping, including data compression) or in a format such as microfiche. Electronic data storage, a commenter indicated, would reduce recordkeeping burdens and costs.

Response: The Agency specifically encourages the use of electronic recordkeeping, provided appropriate safeguards are adopted to insure the integrity and accessibility of the data over time. Section 64.9(b)(2) provides specific recognition that records may be retained in non-paper media.

The use of data compression is subject to the underlying requirements in other standards, if applicable. For records required solely because of part 64, the Agency believes that the general recordkeeping provisions in Part 70 are sufficiently flexible to allow for approval of data compression on a case-by-case basis.

Letter(s): Association of International Automobile Manufacturers (IV-D-264); County Sanitation Districts of Orange County, California (IV-D-235); Dow Chemical Company (IV-D-260); Exxon Chemical Americas (IV-D-339); Exxon Company, USA (IV-D-310); Monsanto Company (IV-D-273); National Environmental Development Association (IV-D-334); Texas Chemical Council (IV-D-365)

11.1.4: Data Retention Period

Comment a: Although a few commenters proposed that only "required" data be retained for five years, many commenters suggested that the retention period be reduced from five years. Some commenters said that the five year retention period was excessive; a commenter estimated that this requirement would force the source to maintain over 600 miles of strip chart records for one large facility. Other reasons given for reducing the retention period included cost and lack of environmental benefit.

Some commenters favored a three year retention period, which would be consistent with the Acid Rain Program. Many other commenters suggested a two year retention period. A commenter recommended specifying that raw data, such as strip charts, may be discarded after two years. Another commenter said that all records will have been reported on in the semiannual report and the records also should be reviewed in yearly inspections and that there is no need to keep records which have already been reviewed and inspected for three extra years.

Other commenters suggested that the retention period be limited to a reasonable period shorter than five years, or at least for periods where there were no deviations. For example, several commenters favored a five year data retention period only for deviation periods; some commenters recommended a retention period of five years only for deviation period records and two years for all other records. Another commenter recommended requiring the retention of data for one quarter past the submittal of the emission report, or for one quarter past submission of the certification statement; after this allowance of one quarter for agency response, the record could convert to documentation of excess emission periods or documentation of deviations in excess of established limitations.

Response: The EPA has established the record retention period at five years to be consistent with the requirements in 40 CFR 70.6, which would apply in the absence of any explicit time period requirement in part 64. It is important to note that the 5 year requirement established in part 70 has already changed the record retention time for NSPS and similar provisions, and thus EPA finds requests to adopt the time periods specified in those sections unpersuasive. The only monitoring data under the part 70 process that will not be retained for 5 years are Acid Rain Program

monitoring data for which recordkeeping is limited to 3 years under specific provisions in the Acid Rain Program that override the general part 70 requirements. Title IV of the Act grants EPA authority to establish Acid Rain Program requirements that override inconsistent part 70 permit requirements. The rationale for overriding part 70 recordkeeping retention requirements in the Acid Rain Program rests on the unique circumstances of how the Acid Rain Program will be managed and enforced, including direct electronic reporting of most hourly and QA data to EPA Headquarters. No similar justification for overriding part 70 is present with respect to part 64, under which only limited summary data will have to be reported. The Agency also notes that if an owner or operator uses a monitoring system approved under the Acid Rain Program to achieve compliance with part 64, the general 5 year record retention requirement would apply with respect to all monitoring records relevant to the use of the monitoring system for part 64 purposes as opposed to solely Acid Rain Program purposes.

Letter(s): American Automobile Manufacturers Association (IV-D-538); American Electronics Association, Clean Air Task Force (IV-D-437); Amoco Corporation (IV-D-244); Armco Steel Company (IV-D-395); Chemical Manufacturers Association (IV-D-301); Corn Refiners Association, Inc. (IV-D-391); Council of Industrial Boiler Owners (IV-D-319); Dow Chemical Company (IV-D-260); Eastman Chemical Company (IV-D-347); Exxon Company, USA (IV-D-310); Gas Processors Association (IV-D-227); Kerr-McGee Chemical Corp. (IV-D-385); Kerr-McGee Corporation (IV-D-232); Kingsford Products Company, The (IV-D-246); Monsanto Company (IV-D-273); National Environmental Development Association (IV-D-334); National Petroleum Refiners Association (IV-D-276); Occidental Chemical Corporation (IV-D-240); Phillips Petroleum Company (IV-D-380); Texas Chemical Council (IV-D-365); Texas Intrastate Natural Gas Pipelines (IV-D-221); Tosco Refining Company (IV-D-316); Total Petroleum, Inc (IV-D-354)

Section 11.2: Availability (§ 64.6(b))

11.2.1: The Requirement to Maintain Records

Comment a: A commenter suggested that the requirement that records be maintained so that they may be submitted expeditiously to the permitting authority or the Administrator be deleted because the requirement is burdensome. The commenter recommended requiring that records be readily available

for inspection.

Response: The Agency agrees and the final rule requires that records must be maintained so as to allow expeditious inspection and review. The Agency notes that under section 114, EPA may require the owner or operator to submit records in accordance with the requirements of that section of the Act. As discussed below in section 11.2.3 (Part I), the ability to submit records to EPA in an expeditious manner is an important element in ensuring that the public's right to review monitoring information is not hindered.

Letter(s): Monsanto Company (IV-D-273)

11.2.2: Location of Records

Comment a: Commenters supported allowing owners or operators to decide where facility records would be kept. Requiring on-site storage, a commenter said, would produce no environmental benefit and would be no more convenient for regulators. A commenter suggested that the source specify the location in the permit application. Several commenters stated that sources should be able to keep records off-site without having to obtain permitting authority approval since most facilities can not handle the storage of the data required by the rule. It was noted that many industries use centralized control systems to maintain data like EM records. Another commenter proposed that off-site storage be allowed for records covering periods beyond the last four reporting periods.

Response: The Agency believes that the permitting authority is in the best position to balance the need to have records maintained on-site to support on-site inspections versus the burdens of on-site storage to the owner or operator. For instance, the determination may involve an assessment by the permitting authority of how to coordinate a source's recordkeeping practices with the agency's inspection program. Therefore, the final rule is silent on this issue so that the proper location of the records can be established in accordance with general part 70 procedures.

Letter(s): American Automobile Manufacturers Association (IV-D-538); Dow Chemical Company (IV-D-260); Mobil Oil Corporation (IV-D-285); National Environmental Development Association (IV-D-334); People's Natural Gas Company (IV-D-27); Pharmaceutical Manufacturers Association

(IV-D-367); Questar Pipeline Company (IV-D-480)

11.2.3: Public Access to Raw Monitoring Data

Comment a: Several environmental groups and other commenters stated that the public needs to have access to all monitoring data, including raw data, so that there is a practical mechanism for assessing compliance and in order to allow for enforcement through citizen lawsuits. Environmental groups noted that quarterly summary reports may be insufficient for these purposes. Some commenters requested that the rule specify the procedure for the public to obtain such data. Other commenters suggested that EPA collect all of the data in a national computer database. At the November 19, 1993 public hearing, an environmental group suggested that AIRS, the Toxic Release Inventory, or a separate system be used for the database. Another commenter at the public hearing also supported the national database concept and said that EPA should assure that part 64 data be linkable to other systems and that online access to such data be widely available. The commenter also said that if EPA urges and mandates widespread dissemination of monitoring data, the enforcement aspects of the program will be improved at a relatively low cost.

Some commenters said that allowing private parties access to monitoring data would be unlawful. These commenters cited section 114(a)(1) of the Act, which vests the EPA Administrator, not private parties or States, with the authority to require reports or records from sources; section 114(a)(2), which vests the EPA Administrator with a right of access to sources' property and records; and Buckley v. Valeo, 424 U.S. 1 (1976) for the proposition that neither the Constitution nor the Act allows federal authority, such as the authority vested in the EPA Administrator to examine sources' records, to be given directly or indirectly to persons who are not officers of the United States or their delegates.

Response: The Agency shares the concerns raised by citizen groups that the rule should fulfill the legitimate interests of citizens to assess compliance with the Act and to seek redress through citizen suits where they believe the Act is being violated. Section 114(c) provides that members of the public shall have access to the information, reports and records obtained under section 114, with the exception of certain confidential business information. In addition, section 114(a)(3) provides that monitoring data and compliance certifications shall be subject to the public accessibility

provisions of section 114(c). Still, the Agency is concerned about creating excessive reporting burdens on affected industry sources. The following discussion describes the actions EPA has taken in the final rule and will take in the future to further the goal of making monitoring information available to the public while limiting the amount of information that owners or operators must submit on a routine basis.

Consistent with section 114(a)(3) and (c) and the Freedom of Information Act, EPA will make available upon request all records, reports, compliance certifications, data, or other information obtained by EPA under section 114(a) subject to the trade secret protection requirements of section 114(c).

Concerning citizen requests for unreported monitoring data, EPA first notes that the Agency expects that citizens will most likely be interested in obtaining and evaluating the monitoring summary reports in most instances, rather than unreported monitoring data. In those relatively few cases where the citizen believes reviewing the unreported information is important, EPA encourages the requesting citizen and the owner or operator to discuss and determine what information is needed in order to limit unnecessary production of information and to discuss the most efficient or convenient method of delivery for both parties (electronic format or delivery of hard copy, for example). If the citizen is unable to obtain the monitoring information from the owner or operator, the citizen may request that the State or EPA assist in obtaining the monitoring information sought and then forward the requested information to the citizen. As a matter of policy, EPA intends to respond and expects the States to respond to reasonable requests by requiring the source or sources affected by the citizen request to produce the requested unreported monitoring records, pursuant to, for example, section 114 authority or applicable State authority. In this context, EPA intends to use its authority under section 114 to make monitoring data publicly available only for reasonable requests and for any monitoring data and compliance information required by section 114(a). The EPA believes this process of making unreported information available to the public addresses the industry concerns of authorizing direct access by citizens to sources' records, while still encouraging voluntary direct access whenever possible.

If the source has electronically recorded or otherwise encoded monitoring-related documents or records, the source may provide this

information to the requestor in the electronic version so long as there is also provided clear instruction and a readily available process for converting these electronic documents to a readable form. The EPA encourages the use of electronic recordation of information generally. Because this issue has broad ramifications, EPA expects to consider further ways in which such information could be made available in electronic form (e.g., a publicly accessible electronic bulletin board). The EPA may in the future take additional steps to take advantage of advances in technology and to achieve the overall goal of making this monitoring information readily available to citizens and government agencies in the most cost-effective manner for all affected groups.

Finally, EPA believes that most part 64 monitoring data will not be subject to claims of confidentiality since emissions data cannot be considered confidential (see 40 CFR part 2, subpart B, which implements the Agency's confidentiality procedures and § 2.301 specifically). However, for any claims of confidentiality that may apply, existing protections in EPA regulations will apply.

Letter(s): American Automobile Manufacturers Association (IV-D-538); Appalachian Mountain Club, Northern New England Regional Office (IV-D-5); General Electric Company (IV-D-278); Natural Resources Defense Council, et al. (IV-D-225 and IV-F-5); Sierra Club, Lone Star Chapter (IV-D-364); Sierra Club, Pennsylvania Chapter (IV-D-23); Unison Institute (IV-F-7)

Section 12: Permit Application and Content Issues (§§ 64.7-64.8)

Section 12.1: Relationship to Part 70 Permitting, Generally

Comment a: Some commenters recommended deleting one or both of §§ 64.7 and 64.8 because they duplicate part 70. A commenter suggested that if these sections cannot be deleted, they should merely require compliance with the applicable provisions in part 70 (§§ 70.5 and 70.6), while another proposed that any necessary enhanced monitoring protocol application requirements be added as conforming amendments to part 70. Another commenter urged that any permit application requirements in part 64 mirror and be consistent with the part 70 provisions.

Response: As discussed in Section II.D.1. of the preamble to the final rule, the Agency has replaced the detailed permit application provisions discussed in the comments with the more streamlined provisions in § 64.4 of the final rule. With respect to permit content, EPA believes that it is important to specify in part 64 exactly which elements of part 64 monitoring should be incorporated into a permit. Thus, § 64.6 of the final rule specifies these elements, similar to § 64.8 of the proposed rule. The Agency believes that these provisions respond effectively to numerous comments received that were concerned about the potential for too much detail being incorporated into permits as a result of part 64.

Letter(s): Monsanto Company (IV-D-273); Oklahoma Department of Environmental Quality (IV-D-463); Public Service Company of Oklahoma (IV-D-477); Texas Natural Resource Conservation Commission (IV-D-371)

Section 12.2: Permit Application Requirements, Generally

Comment a: Some commenters recommended allowing similar emissions units applying the same strategies or equipment to submit a single enhanced monitoring protocol under § 64.7(a).

Response: The final rule allows for this type of streamlined submittal process in §§ 64.4(f) and (g).

Letter(s): County Sanitation Districts of Orange County, California (IV-D-235); Los Angeles County Sanitation Districts (IV-D-26)

Comment b: Some commenters suggested that proposed § 64.7(a) be clarified with respect to how the requirements apply to preconstruction permits, operating permits and permit modifications. A commenter suggested that the final rule explain that for preconstruction permits issued under parts C and D of title I of the Act, only new or modified units need enhanced monitoring protocols; for initial and renewal part 70 permits, an entire protocol should be required; and for part 70 permit modifications, only new or modified emissions units should require protocols. Another commenter said that the rule should clarify whether the term "permit" means a preconstruction permit, title V operating permit, or both. Another commenter recommended clarifying which types of permits are subject to part 64.

Response: The EPA has significantly revised and clarified how part 64 will be implemented. Most importantly, the rule will be implemented through title V operating permits only. As part of this revised approach, § 64.5 now clarifies when and how a particular owner or operator will be required to comply with the rule. See Section II.E. of the preamble to the final rule for further discussion.

Letter(s): Arkansas Department of Pollution Control and Technology (IV-D-3); Michigan Department of Natural Resources (IV-D-438); Union Carbide Corporation (IV-D-293)

Comment c: A commenter also suggested changing proposed § 64.7(d) to state that compliance with an approved enhanced monitoring method shall be deemed compliance with all other monitoring requirements to ensure that a single emissions unit is not subject to more than one monitoring requirement.

Response: The EPA has retained § 64.7(d) of the proposed rule in new § 64.10 of the final rule. This section provides that the requirements of part 64 will not affect the owner or operator's obligation to comply with any other monitoring, recordkeeping, testing or reporting requirements that exist under the Act. However, the Agency notes that under part 70, it is possible to streamline multiple monitoring requirements into a single requirement in some situations. See Sections II.K.1. of the preamble to the final rule for further discussion.

Letter(s): Phillips Petroleum Company (IV-D-380)

Comment d: Certain State agency and industry commenters stated that the rule should clarify and distinguish between enhanced monitoring protocol permit application requirements for those proposed protocols that are established monitoring and those that are not. Generally, the commenters believed that it was unnecessary for detailed justifications and supporting data in such circumstances.

Response: These suggestions are no longer applicable given the changes to the monitoring selection process adopted in the final rule.

Letter(s): Illinois Environmental Protection Agency (IV-D-518); Michigan Department of Natural Resources (IV-D-438); Reynolds Metals Company (IV-D-374)

Comment e: One commenter said that the proposed rule failed to state clearly the role of the permitting authority in approving a proposed enhanced monitoring protocol.

Response: The EPA believes that § 64.6 of the final rule clearly explains that the permitting authority approves part 64 monitoring as part of the title V operating permit approval process. See Section II.F. of the preamble to the final rule for further discussion.

Letter(s): Michigan Department of Natural Resources (IV-D-438)

Comment f: Two commenters recommended that the permit application and content provisions in the final rule should provide for a period during which sources can work with their enhanced monitoring protocols to ensure their proper operation outside of the actual performance and verification process.

Response: The EPA does not believe that an explicit provision for such a break-in period is necessary given that the rule provides for up to six months to complete any necessary installation and verification requirements after approval of the monitoring.

Letter(s): American Automobile Manufacturers Association (IV-D-538);
Pharmaceutical Manufacturers Association (IV-D-367)

Comment g: Other commenters suggested that, because much of the detailed information regarding new monitoring systems, such as parametric relationships, cannot be submitted prior to installation or permit issuance, proposed § 64.7 should be amended to provide that when a source installs an enhanced monitoring protocol beyond existing monitoring, it need only submit information that is readily available prior to installation, or allow sources to modify other information provided as needed before and after performance testing. Other commenters suggested that the type of technical detail required in proposed § 64.7(b) be deferred until after the application when the permitting authority and the source can discuss and refine the monitoring approach, and modify enhanced monitoring protocols after applications are submitted if necessary.

Response: The final rule does not adopt the approach suggested by the commenters directly, but does provide for submittal of an implementation schedule detailing activities to be completed prior to the use of the monitoring after permit approval. See Section II.D.1. of the preamble to the final rule for further discussion.

Letter(s): American Automobile Manufacturers Association (IV-D-538);
Pharmaceutical Manufacturers Association (IV-D-367); Tosco Refining
Company (IV-D-316)

Comment h: Another commenter recommended that the information required in permit applications be reasonably available to sources.

Response: The final rule has deleted the proposed requirement to list all technologically feasible monitoring methodologies, which could have been a difficult application requirement to satisfy. The Agency believes that all of the remaining elements of information required to be submitted under the final part 64 should be reasonably available.

Letter(s): Pharmaceutical Manufacturers Association (IV-D-367)

Comment i: One commenter proposed that a facility with more than five required enhanced monitoring protocols be allowed up to 90 days after the

application deadline to submit all required enhanced monitoring protocol information, with the application to include a schedule for subsequent submittals.

Response: Because of the extended schedule for implementing the final rule, EPA does not believe that the implementation approach suggested by the commenter is necessary. For a general discussion of the implementation approach, see sections 8.1 and 8.3 (Part I), above. See Section II.E. of the preamble to the final rule for further discussion.

Letter(s): Tosco Refining Company (IV-D-316)

Comment j: One industry commenter suggested that EPA develop standardized forms and protocols for enhanced monitoring protocol proposals in permit applications. This approach would relieve burdens on the regulated community and simplify State and EPA review.

Response: Given the wide variety of sources and monitoring methodologies covered by part 64, EPA believes that a guidance approach best addresses the standardization suggested by the commenter.

Letter(s): Westinghouse Electric Corporation (IV-D-321)

Section 12.3: Permit Renewal Applications (§ 64.7(c))

Comment: Many commenters recommended deletion of proposed § 64.7(c), which requires permittees to identify new methodologies that have become available since approval of their enhanced monitoring protocols. Some commenters said that this provision would essentially amount to a top-down enhanced monitoring analysis at least every five years. Many commenters stated that the requirement exceeds statutory authority, is unnecessarily burdensome to both sources and permitting authorities, is costly while providing little environmental benefit, could force sources to replace enhanced monitoring protocols that are performing adequately, will discourage pollution prevention initiatives that could require early permit renewal, will require an increase in permit fees, and will not help determine the sufficiency of the proposed monitoring system. Some commenters said that proposed § 64.7(c) should not apply if a source selected established monitoring. Other commenters stated that if a

current enhanced monitoring protocol meets necessary requirements, it should not have to be further analyzed.

A commenter asserted that proposed § 64.7(c) was inconsistent with the design of the Enhanced Monitoring Program. Some commenters also stated that the issue of permit renewal applications is addressed in 40 CFR 70.5 and that therefore part 64 should specify only that satisfying the requirements of § 70.5 satisfies § 64.7(c). A commenter said that the proposed rule provides no criteria by which to qualitatively or quantitatively evaluate the technological feasibility, cost-effectiveness and appropriateness of alternative monitoring methodologies. Another commenter suggested that the permit reopening clause in proposed § 64.4(f) should be sufficient to ensure that permittees maintain acceptable monitoring systems. Many commenters made suggestions for limiting the burdens of this provision or relying on other approaches, such as the Enhanced Monitoring Reference Document, to achieve the apparent purposes of this provision.

A commenter suggested that, if § 64.7(c) is not revised, then the RIA cost analysis should be revised to reflect a 5-year life for an enhanced monitoring protocol, rather than a 15-year life. Revision of the RIA cost analysis would also be necessary to reflect major protocol development and burden costs that would arise every five years. Lastly, a commenter requested clarification of whether permitting authorities must consider enhanced monitoring protocols de novo at the time of permit renewal.

Response: Consistent with these comments, this proposed requirement has been deleted because the Agency does not believe that the provision in the proposed rule is necessary to achieve the goals of part 64. So long as the minimum requirements of part 64 are satisfied, the owner or operator may continue to use previously approved part 64 monitoring regardless of whether new, potentially applicable monitoring methods have been developed.

Letter(s): ALCOA (IV-D-288); Air Compliance Total Services (ACTS) (IV-D-19); Alabama Department of Environmental Management (IV-D-453); Aluminum Association (IV-D-378); American Automobile Manufacturers Association (IV-D-538); American Bakers Association (IV-D-465); Amoco Corporation (IV-D-244); Bay Area Air Quality Management District (IV-D-402); Chemical Manufacturers Association (IV-D-301); Class of '85 Regulatory Response Group (IV-D-338); Clean Air Implementation Project

(IV-D-242); Corn Refiners Association, Inc. (IV-D-391); Council of Industrial Boiler Owners (IV-D-319); County Sanitation Districts of Orange County, California (IV-D-235); Department of Energy (IV-D-358); Dow Chemical Company (IV-D-260); E.I. DuPont de Nemours and Company (IV-D-329); Eastman Chemical Company (IV-D-347); Eastman Kodak Company (IV-D-333); Eli Lilly and Company (IV-D-349); Exxon Chemical Americas (IV-D-339); Exxon Company, USA (IV-D-310); Fort Howard Corporation (IV-D-233); Gas Processors Association (IV-D-227); General Electric Company (IV-D-278); Georgia Department of Natural Resources (IV-D-377); Houston Lighting & Power (IV-D-322); Illinois Environmental Protection Agency (IV-D-518); Illinois Power Company (IV-D-274); International Business Machines Corporation (IV-D-238); Kaiser Aluminum & Chemical Corporation (IV-D-295); Kaiser Aluminum & Chemical Corporation, Primary Prod. Div. (IV-D-368); Lower Colorado River Authority, et al. (IV-D-256); Mobil Oil Corporation (IV-D-285); Monsanto Company (IV-D-273); Motorola Inc. (IV-D-302); National Environmental Development Association (IV-D-334); New Mexico Environment Department (IV-D-247); Pavilion Technologies, Inc. (IV-D-309); People's Natural Gas Company (IV-D-27); Pharmaceutical Manufacturers Association (IV-D-367); Phillips Petroleum Company (IV-D-380); Public Service Electric and Gas Company (IV-D-282); Reynolds Metals Company (IV-D-374); Southwestern Public Service Company (IV-D-272); Texas Chemical Council (IV-D-365); Texas Intrastate Natural Gas Pipelines (IV-D-221); Total Petroleum, Inc (IV-D-354); Union Carbide Corporation (IV-D-293); Utility Air Regulatory Group (IV-D-489)

Section 12.4: Permit Application Content Requirements for Enhanced Monitoring Protocols (§ 64.7(b))

Comment a: A commenter recommended modifying proposed § 64.7(b) to require only that permit applicants demonstrate that the chosen monitoring method meets enhanced monitoring requirements. The commenter added that the revised § 64.7(b) then should be deleted from part 64 and added to § 70.5(c). Another commenter proposed that proposed §§ 64.7(b)(2)-(6) be deleted because they are unreasonable and wasteful.

Response: As discussed in Section II.D.1. of the preamble to the final rule, the Agency has replaced the detailed permit application provisions discussed in the comments with the more streamlined provisions in § 64.4 of the final rule. Consistent with these comments, the owner or operator is required

to submit only those materials necessary to document that the proposed monitoring satisfies the criteria in § 64.3 and, if applicable, documentation related to a compliance schedule for final verification after approval of the monitoring.

Letter(s): Exxon Chemical Americas (IV-D-339); Monsanto Company (IV-D-273)

Comment b: With respect to particular content requirements, some commenters opposed requiring "all" information, specifications, and other items delineated in proposed § 64.7(b) in permit applications as too burdensome. Commenters favored instead describing the protocol in general terms and referencing the detailed description, justification, procedures, and specifications to applicable regulations that detail the monitoring proposed. Based on that suggestion, some commenters proposed substantial revision to proposed §§ 64.7(b)(1) and (3) in particular.

Response: As discussed in Section II.D.1. of the preamble to the final rule, the Agency has replaced the detailed permit application provisions discussed in the comments with the more streamlined provisions in § 64.4 of the final rule. The final rule provisions do allow for cross-referencing existing requirements, as suggested by the commenters.

Letter(s): Dow Chemical Company (IV-D-260); Exxon Chemical Americas (IV-D-339); Gas Processors Association (IV-D-227); Houston Lighting & Power (IV-D-322); Lower Colorado River Authority, et al. (IV-D-256); Mobil Oil Corporation (IV-D-285); Pavilion Technologies, Inc. (IV-D-309); Texas Chemical Council (IV-D-365); Texas Intrastate Natural Gas Pipelines (IV-D-221); Tosco Refining Company (IV-D-316)

Comment c: Certain commenters opposed the justification requirements of proposed § 64.7(b)(3). One commenter said that the requirements would be too burdensome. Some commenters requested that this requirement to justify proposed monitoring be revised to exclude established monitoring from such a requirement.

Response: The owner or operator must demonstrate that the monitoring it proposes can satisfy the requirements of part 64. As discussed in Section II.D.1. of the preamble to the final rule, the Agency has replaced the detailed permit application provisions discussed in the comments with the more

streamlined provisions in § 64.4 of the final rule. The final rule does allow the owner or operator to justify proposed monitoring in part on existing requirements that establish the monitoring, and the final rule also lists certain types of monitoring that are presumptively acceptable.

Letter(s): Houston Lighting & Power (IV-D-322); Lower Colorado River Authority, et al. (IV-D-256); Michigan Department of Natural Resources (IV-D-438); Tosco Refining Company (IV-D-316)

Comment d: Several commenters opposed the requirement in proposed § 64.7(b)(4) to list all feasible monitoring methodologies in a permit application and suggested that this requirement be deleted. A commenter said that the requirement is a severe economic penalty with no environmental benefit. Some commenters said that only reasonable enhanced monitoring protocols should have to be listed. Other commenters said listing any other methodologies is unnecessary if the proposed enhanced monitoring protocol meets the technical criteria.

Response: The EPA has deleted the requirement to list all feasible monitoring methodologies in a permit application because the Agency does not believe it is necessary to achieve the goals of part 64.

Letter(s): Corn Refiners Association, Inc. (IV-D-391); E.I. DuPont de Nemours and Company (IV-D-329); Eastman Chemical Company (IV-D-347); Eastman Kodak Company (IV-D-333); Exxon Chemical Americas (IV-D-339); Exxon Company, USA (IV-D-310); Fort Howard Corporation (IV-D-233); Goodyear Tire and Rubber Company, The (IV-D-292); Illinois Power Company (IV-D-274); Kerr-McGee Corporation (IV-D-232); Merck & Co., Inc. (IV-D-443); Monsanto Company (IV-D-273); National Environmental Development Association (IV-D-334); Tosco Refining Company (IV-D-316)

Comment e: Some commenters suggested that proposed § 64.7(b)(5) be deleted as unnecessary and burdensome. Another commenter recommended that the relationship of proposed paragraphs (4) and (5) of § 64.7(b) be clarified, and asked why paragraph (4) was limited to monitoring identified in § 64.4(e)(2) and did not include established monitoring. This commenter also asked whether the proposed requirement to document all monitoring methodologies evaluated included those that were infeasible. In addition, the commenter asked whether a source would have to

document all other monitoring evaluated if it used best established monitoring.

Response: As discussed in the comment and response above, the requirement of proposed § 64.7(b)(4) to list all technologically feasible monitoring in a permit application has been deleted. Consistent with this revision, § 64.7(b)(5) of the proposed rule also was deleted.

Letter(s): Eastman Chemical Company (IV-D-347); Eastman Kodak Company (IV-D-333); Exxon Chemical Americas (IV-D-339); Michigan Department of Natural Resources (IV-D-438)

Comment f: Several commenters opposed the requirement in proposed § 64.7(b)(6) that sources explain how proposed enhanced monitoring protocols best determine compliance. A commenter said that the rule should require an explanation of how the proposed enhanced monitoring protocol is capable of determining whether a deviation occurs in order to determine whether compliance is continuous or intermittent. Another said that any system that can be shown to meet enhanced monitoring requirements and demonstrate continuous compliance should be acceptable.

Response: The requirements of proposed § 64.7(b)(6) have been revised consistent with these comments. Section 64.4 of the final rule requires that the owner or operator explain how the proposed monitoring is able to satisfy part 64. The EPA believes that this is a reasonable requirement since the owner or operator has the burden of demonstrating that the proposed protocol satisfies the requirements of part 64. See Section II.D.1 of the preamble to the final rule for further discussion.

Letter(s): Eastman Kodak Company (IV-D-333); National Environmental Development Association (IV-D-334); People's Natural Gas Company (IV-D-27); Texas Chemical Council (IV-D-365)

Comment g: A commenter supported the concept that owners or operators choose the appropriate specifications and verification procedures, which may vary among enhanced monitoring protocols, and suggested that proposed § 64.7(b)(7) be revised to refer to "applicable" performance verification tests.

Response: As noted above, the final rule has been revised to streamline the submittal requirements. See Section II.D.1 of the preamble to the final rule for further discussion.

Letter(s): Dow Chemical Company (IV-D-260)

Comment h: A commenter proposed that part of the application submittal be preventive maintenance and abatement plans to minimize downtime.

Response: See Section II.C. of the preamble to the final rule for a discussion of the quality assurance provisions of § 64.3 in the final rule. The Agency does not believe, however, that this type of detailed information is necessary for all proposed monitoring. The permitting authority may require this type of information in particular circumstances where the potential for excessive monitor downtime is a concern.

Letter(s): Michigan Department of Natural Resources (IV-D-438)

Section 13: Prohibitions (§ 64.9) and Violations

Section 13.1: Generally

Comment a: Commenters said that unless enhanced monitoring is established as a reference test method by separate rulemaking, EPA should confirm that enhanced monitoring data will only be used to establish violations of enhanced monitoring requirements, but not constitute a violation of the underlying emission standard. A State agency suggested that enhanced monitoring requirements be enforced only in conjunction with a full compliance evaluation based on other air pollution requirements.

Response: The provisions of § 64.9 of the proposed rule are not included in the final rule. The Agency believes that the rule should focus on what is required to comply with the rule, not the consequences of a failure to comply. However, EPA disagrees with the comments that part 64 monitoring can not be used to determine a violation of an applicable requirement. As discussed in Section II.J. of the preamble to the final rule, § 64.10 of the final rule states that nothing in part 64 will interfere with enforcement of violations of applicable requirements. In addition, under the CE Revisions rulemaking, part 64 data, like any other credible information, may be used to prove a violation in appropriate circumstances. See Section I.E.3. of the preamble to the final rule for further discussion of enforcement issues.

Letter(s): American Bakers Association (IV-D-465); Clean Air Implementation Project (IV-D-242); Tennessee Department of Environment and Conservation (IV-D-399)

Comment b: Some commenters asked that the enforcement consequences of failing to obtain enhanced monitoring data be clarified. For example, a commenter said that if emission standards are revised to make enhanced monitoring the reference test method for a source, failing to collect required enhanced monitoring data would become a violation of the underlying standard. Such a violation should not constitute a separate violation of part 64, and proposed § 64.9 should not apply, since that would only multiply the number of offenses due to a single failure.

Response: The failure to satisfy the general duty provision in § 64.7(c) of the final rule

(related to monitor operation) or a specific data availability requirement, if applicable, would constitute a violation separate from any underlying applicable requirements.

Letter(s): Boeing Company, The (IV-D-337); Chemical Manufacturers Association (IV-D-301)

Comment c: Some commenters said that, contrary to stated EPA policy, § 64.9 will create enforcement actions for paperwork violations and monitor deviations even where no emission requirement is violated.

Response: The provisions of proposed § 64.9 are not included in the final rule as discussed above. However, EPA notes that an owner or operator may violate a requirement of part 64 without violating an emission limitation or standard. Such requirements and the violations that may follow are not unlike similar existing monitoring, reporting and recordkeeping requirements in NSPS, NESHAP, or any other set of applicable requirements. Whether such violations will result in an enforcement action is, as it always has been, a matter of prosecutorial discretion.

Letter(s): Armco Steel Company (IV-D-395); Questar Pipeline Company (IV-D-480); Whirlpool Corporation (IV-D-493)

Comment d: One commenter noted that the proposed reporting requirements and the ability to use data for direct enforcement would expand greatly the potential liability of sources, especially to bounty hunter citizen suits.

Response: One of the primary purposes of title VII of the Clean Air Act Amendments of 1990 was to improve the ability to determine compliance with Clean Air Act requirements and to improve enforceability. The requirements of part 64 effectuate that purpose. The requirement to certify compliance may increase an owner or operator's exposure for violations that occur as a result of the more comprehensive and accurate monitoring data being obtained. However, the exposure to liability will not be increased for those owners or operators who are and continue to be in compliance with applicable requirements.

Letter(s): Consolidated Natural Gas Company (IV-D-350)

Section 13.2: Ability to Determine Which Violations Warrant Enforcement

Comment a: Some State agency commenters proposed allowing States to use targeting criteria based on the severity of noncompliance for direct enforcement on the basis of enhanced monitoring. Commenters said that the large number of emissions units covered by part 64 will make direct enforceability of enhanced monitoring data impracticable and that State and local air pollution agencies will not have the resources to make a formal enforcement response to every enhanced monitoring violation. Another commenter said that formal enforcement responses are unnecessary for every violation that could be reported, such as short duration, unintentional, or non-repeat violations. Another commenter recommended setting specific standards to determine when a violation warrants a formal enforcement response. Commenters said that this would focus limited resources on the most serious violations that threaten public health and the environment.

Response: The monitoring required under part 64 may identify excursions and exceedances that will have to be reported as possible exceptions to compliance in a compliance certification. Whether those conditions represent an actual violation of an applicable requirement will involve a case-specific evaluation. Permitting authorities and EPA would be expected to target their resources on evaluating those possible exceptions that appear to be of the most environmental significance or that meet similar targeting criteria. This approach is not significantly different than current approaches to prioritizing the use of compliance and enforcement resources.

Letter(s): NESCAUM (IV-D-253); Regional Air Pollution Control Agency (IV-D-532); State and Territorial Air Pollution Program Administrators, et al. (IV-D-439)

Comment b: Several industry commenters suggested that some de minimis level of deviation be established that would not constitute noncompliance. Reasons offered in support of this suggestion were that even the best run sources will have some minor level of excess emissions, especially from opacity, and that this would be consistent with the practice for pH monitoring under the Clean Water Act. Another commenter asked that EPA recognize and allow States to develop State regulations that are designed to resolve de minimis deviations.

Response: The EPA has determined that part 64 should not establish a de minimis level of deviation because part 64 should not be used to change the stringency of underlying requirements. The EPA believes that the better approach is to continue to allow permitting authorities to exercise prosecutorial discretion in determining the enforcement approach to be taken in a particular case.

Letter(s): KBN Engineering and Applied Sciences, Inc. (IV-D-475); Mobil Oil Corporation (IV-D-285); Synthetic Organic Chemical Manufacturers Association (IV-D-362); Tennessee Department of Environment and Conservation (IV-D-399)

Section 13.3: Acts That Should be Exempt

Comment a: Several commenters suggested that certain acts be exempt from violation, such as inadvertent errors; monitoring errors because they do not have impacts on emissions; situations where a source is unable to achieve manufacturer guarantees for a monitoring device, assuming the source was not at fault, because the source should not be penalized for the miscalculations or overoptimism of vendors of monitoring technology; and an inadvertent loss of records. Commenters also suggested that sources be allowed instead to take remedial actions such as, where applicable, allowing the source to reopen its permit and negotiate a feasible enhanced monitoring protocol, or allowing sources to explain why data was lost and be allowed to reconstruct the data base from alternative records such as strip charts or other logs. Another commenter suggested adding language to proposed § 64.9 which would protect a source from being in violation if the source submits a revised enhanced monitoring protocol within 120 days of discovering that the first proposed (and, if applicable, approved) enhanced monitoring protocol is found to be insufficient to satisfy part 64.

A commenter suggested that EPA structure the rule to provide leniency for operators that act in good faith and make efforts to correct problems. The commenter also suggested that some form of incentive provision, such as an emission fee credit, be used to encourage achieving good emission rates.

Response: Part 64 establishes the minimum criteria that must be achieved to satisfy

part 64, and includes several additional requirements related to submitting proposed monitoring, operating approved monitoring, submitting reports, and maintaining records. Most of these requirements are based on similar requirements in existing federal rules. The owner or operator is required to achieve compliance with those requirements. If an owner or operator fails to comply, EPA believes that the best approach for addressing any such failure is to continue to allow permitting authorities to exercise prosecutorial discretion in determining the enforcement approach to be taken in a particular case.

Letter(s): American Automobile Manufacturers Association (IV-D-538); American Electronics Association, Clean Air Task Force (IV-D-437); Eastman Chemical Company (IV-D-347); Eli Lilly and Company (IV-D-349); Mobil Oil Corporation (IV-D-285); Questar Pipeline Company (IV-D-480)

Section 13.4: Penalties

Comment a: A commenter proposed deleting § 64.9, which appears to provide that any violation warrants a per-day penalty. The commenter added that other rules have imposed per-day penalties for only severe violations. The commenter suggested that the rule should distinguish among the severity of violations and should not apply per-day penalties for every type of violation. Rather, severe penalties, including the \$25,000 per day penalty, should be reserved for violations that actually affect the environment. The commenter added that applying these harsh penalties to data collection and recordkeeping rules exalts form over substance.

Response: Section 64.9 of the proposed rule is not included in the final rule. The penalty provisions of the Act are sufficiently clear to establish that EPA may seek penalties of up to \$25,000 per day for continuing violations of applicable requirements. See section 113 of the Act.

Letter(s): Dow Chemical Company (IV-D-260)

Section 13.5: Miscellaneous Issues

Comment a: A commenter opposed the presumption of daily noncompliance inherent in § 64.9, and said that § 64.9 should state explicitly that no presumption of noncompliance exists unless evidence for a specific day exists.

Response: The proposed § 64.9 has been deleted in the final rule. The Agency believes that part 64 need only state what is required to comply with part 64. Section 113 of the Act includes appropriate provisions related to what penalties may be sought in the event of noncompliance and what presumptions may apply with respect to continuing violations (see e.g., section 113(e)(2)).

Letter(s): Kerr-McGee Corporation (IV-D-232)

Comment b: Another commenter suggested that § 64.9 violates the permit shield by making enhanced monitoring violations separately enforceable violations from violations of the applicable requirements in a source's permit.

Response: Although § 64.9 is not included in the final rule, EPA notes that part 64 monitoring requirements will be applicable requirements in an owner or operator's permit that exist independently of other applicable requirements.

Letter(s): General Electric Company (IV-D-278)

Section 14: Conforming Amendments to Preconstruction Permit Program Requirements (40 CFR 51.165, 51.166 and 52.21)

Comment a: Some commenters suggested lessening the amount of detail required in preconstruction permit applications, because in many cases the permit application will be submitted months to years before detailed information is available. A few commenters recommended deleting the word "detailed" from §§ 51.166(n)(2)(iii) and (iv). A commenter also recommended requiring preconstruction permit applications to specify only the sources and their emissions, because the operating permit applications should include the detailed information required. A federal agency recommended that enhanced monitoring be required for all emission limitations or standards developed under part C of title I rather than just section 160. This would ensure that all emission requirements designed to protect Class I areas will have monitoring to determine compliance. A commenter said that the proposed revisions to parts 51 and 52 should be withdrawn because EPA can accomplish the same objectives through a SIP Call which requires States to fix deficient monitoring. States could then adopt a mix of regulatory initiatives and use of the title V permit process to address such deficiencies. In all events, however, enhanced monitoring could not be used to determine compliance unless the current test method is changed through rulemaking (or permit revision for permit-specific emission limits). Commenters recommended clarifying that monitoring requirements under part 63 satisfy enhanced monitoring requirements for sources subject to part 63, and proposed substituting "part 63 or part 64" for "part 64" in sections 51.166(j)(5), 52.21(j)(5) and 52.21(n)(2)(iv). A commenter proposed deleting "continuous" from §§ 51.166(n)(iv) and 52.21(n)(iv), because, although the Act calls for continuous compliance, part 64 calls for whatever frequency of monitoring will enable a determination of continuous compliance. In addition, a commenter recommended replacing "source" with "owner/operator" in §§ 52.21(j)(5), (n)(2)(iii), and (n)(2)(iv) because the owner/operator, not the "source," monitors, keeps records, and provides reports.

Response: The proposed revisions to 40 CFR 51.165, 51.166 and 52.21 are not included in the final action because EPA has decided to implement enhanced monitoring solely through title V operating permits. See response to comments under section 8.3 (Part I), above, for further discussion.

Letter(s): Chemical Manufacturers Association (IV-D-301); Department of Energy (IV-D-358); Dow Chemical Company (IV-D-260); Exxon Chemical Americas (IV-D-339); Exxon Company, USA (IV-D-310); Monsanto Company (IV-D-273); Texaco Inc. (IV-D-357); United States Department of the Interior (IV-D-537)

**Section 15: Conforming Amendments -- Credible Evidence Revisions (40 CFR
Parts 51, 52, 60 and 61)**

The summaries of comments on credible evidence were incorporated into the Credible Evidence Revisions Response to Comment Document and responses were provided in that context. (See Docket Item A-91-52-V-C-2.)

**Section 16: Conforming Amendments -- Compliance Certification Revisions
(40 CFR Parts 51, 52, 60 and 61)**

Comment a: A commenter recommended deleting the requirement that data be gathered through approved monitoring methods incorporated into a federally-enforceable document, because federal enforceability is irrelevant if data are valid. Commenters also recommended replacing "part 64" with "part 63 or part 64" in the compliance certification provisions in §§ 51.212(b), 52.30(a), 60.11(g), and 61.12(e) and (f).

Response: After considering these proposed provisions, the Agency believes that the provisions are unnecessary for purposes of implementing the part 70 compliance certification provisions. See Section II.K. of the preamble to the final rule for the Agency's position on how part 64 monitoring data relates to determining and certifying compliance for purposes of the compliance certification requirement.

Letter(s): Chemical Manufacturers Association (IV-D-301); Dow Chemical Company (IV-D-260); Exxon Chemical Americas (IV-D-339); Monsanto Company (IV-D-273)

Section 17: Conforming Amendments -- FIP Provisions (40 CFR 52.30)

Comment a: Commenters recommended clarifying the discussion of the timing of FIP and SIP revisions that was included in Section IV.K. of the preamble to the proposed rule.

Response: The provisions concerning federal implementation plans and the interrelationship with compliance certifications and credible evidence were addressed by EPA in promulgating the CE revisions. See Sections II.A. and II.C. of the preamble to the final rule for the CE Revisions rulemaking.

Letter(s): Los Angeles County Sanitation Districts (IV-D-26); Monsanto Company (IV-D-273)

Section 18: Conforming Amendments -- Parts 60 and 61, Generally

Comment a: A commenter opposed any modifications to parts 60 or 61 on the basis that any changes to part 60 compliance and monitoring requirements in individual subparts must be accomplished in individual rulemakings (see related comments in section 3.2, above).

Response: The revisions to parts 60 and 61 were promulgated in connection with the CE Revisions rulemaking. In the enhanced monitoring context, the Agency disagrees that individual NSPS or NESHAP subpart rulemakings are required in order to require enhanced monitoring at emissions units affected by NSPS or NESHAP requirements. See section 3.2 (Part I), above, for further discussion.

Letter(s): Exxon Company, USA (IV-D-310)

Section 19: Performance Specifications (Appendix A)

Section 19.1: Measurement Frequency (App. A, sec. 2)

Comment a: Some commenters proposed text revisions to section 2.1 of proposed appendix A to clarify that continuous compliance can be demonstrated with less than continuous measurements. Another commenter noted that the enhanced monitoring rule should not require measurement frequency more stringent than that required by applicable SIPs.

Several commenters objected to tying measurement frequency to the averaging period in emissions standards. One commenter pointed out that standards, their test methods, and their monitoring protocols were developed through rulemaking that allowed all technical and operational limitations relevant to the affected source categories to be considered. Another commenter observed that fuel sampling and analysis programs can provide quality compliance determination when run less frequently than the averaging time of the applicable emission standard.

Commenters approved of the proposed rule's efforts to provide flexibility. A commenter expressed support for the provision that emissions units with low potential variability of emissions may measure less frequently. However, several commenters requested that the final rule clarify sections 2.3 and 2.3.2 of proposed appendix A by listing more specific criteria for reducing the frequency of measurement.

Commenters also recommended making the applicability of the section more specific. One commenter noted that measurement frequency does not apply to monitoring methods such as recordkeeping, engineering, and emission factor monitoring. Another commenter recommended deleting "monitor" from section 2.3.1 of proposed appendix A because not all monitoring systems are classified as monitors.

Finally, one commenter specifically requested including a new section 2.3.3 specifying that cost-effectiveness will be considered. In some cases, an enhanced monitoring protocol that provides data for each monitoring period will not be feasible or will be so expensive to develop that the environmental benefit from more frequent monitoring will not be cost-effective.

Response: The final rule moves the monitoring frequency requirement from the

proposed appendices to § 64.3(b)(4). The reason for this change is that the proposed appendices and much of the detail included in them have been eliminated from the final rule. Provisions relating to critical criteria such as monitoring frequency have been included in the body of the final rule. See Section II.C.2.d of the preamble to the final rule for further discussion of monitoring frequency.

Letter(s): Amoco Corporation (IV-D-244); Distilled Spirits Council of the United States (IV-D-300); Dow Chemical Company (IV-D-260); Exxon Company, USA (IV-D-310); Georgia Department of Natural Resources (IV-D-377); Monsanto Company (IV-D-273); Pavilion Technologies, Inc. (IV-D-309); Texas Intrastate Natural Gas Pipelines (IV-D-221); Union Camp (IV-D-359)

Comment b: One commenter requested that section 2.1 specify the minimum number of data points required to calculate an emission rate using gas chromatographic (GC) CEMS. This commenter noted that GC CEMS require longer averaging times than other CEMS to determine emission rates, and recommended revising appendix A to take into account this inherent limitation.

Response: Proposed PS 102, section 4.9, would have required a GC CEMS to have a measurement frequency capability as specified in the appropriate regulation or permit. As noted in section 19.8 (Part I), below, EPA promulgated revised versions of proposed PS 101 and PS 102 in conjunction with a NESHAP standard under 40 CFR part 63 for the magnetic tape industry. (59 FR 64580, December 15, 1994) The appropriate measurement frequency was addressed in that action.

Letter(s): Monsanto Company (IV-D-273)

Comment c: One commenter suggested an addition to section 2.3.1 of proposed appendix A that would allow an exception for repair periods for unforeseeable events.

Response: The final rule relies on the general duty requirement of § 64.7 which requires operation of the monitoring at all times except for periods of malfunctions, associated repairs, calibration checks, and required zero and span adjustments. In addition the final rule requires that all data

collected be used to assess the operation of the controls and provides that a minimum data availability may be specified if desired or required under separate rule. The criteria for monitoring frequency when the monitoring is operational are addressed in § 64.3(b).

Letter(s): Dow Chemical Company (IV-D-260)

Section 19.2: Relative Accuracy (App. A, sec. 3)

Comment a: Several commenters recommended specific modifications to the relative accuracy provisions. A State agency suggested including a relative accuracy procedure comparing COMS and visible emissions data. The procedure could be conducted by comparing COMS data with visible emissions observation data instead of with in-stack opacity data, because permit conditions concerning opacity will be more likely to regulate visible emissions than in-stack opacity. Another commenter recommended adding a new section 3.1.2 to section 3 of proposed appendix A to allow for different measurement uncertainty involving low NO_x emission rates similar to the relief provided in the final Acid Rain rules for low NO_x emission rates. Another commenter proposed modifying the relative accuracy equation to allow sources to use either average reference value or the applicable emission standard. This flexibility would be necessary where standards are low and sources emit at low levels. Another commenter recommended allowing variances from the 20% relative accuracy requirement for certain types of process situations and allowing relative accuracy to be determined as part of protocol development.

Response: The final rule does not include relative accuracy provisions. For CEMS or PEMS, existing relative accuracy specifications may apply and would have to be satisfied.

Letter(s): Dow Chemical Company (IV-D-260); Exxon Chemical Americas (IV-D-339); Pennsylvania Department of Environmental Resources (IV-D-15); Solar Turbines (IV-D-7)

Comment b: Two commenters objected to requiring sources to attain 20% relative accuracy in the parametric relationship as a condition for using parametric monitoring. The commenters stated that the proposed 20% relative accuracy requirement is based on the operation of CEMS. Less data

may be available for testing the accuracy of parametric monitoring systems. The commenters recommended decreasing the stringency of the required relative accuracy, e.g., to 30%, or basing the confidence coefficient on a lower degree of confidence, e.g., 95% instead of 97.5%.

Response: As discussed above, the final rule does not include relative accuracy provisions. The final rule does not include the type of correlation testing for parameter monitoring that would have been required by the proposed rule.

Letter(s): KBN Engineering and Applied Sciences, Inc. (IV-D-475); Sugar Cane Growers Cooperative of Florida, et al. (IV-D-252)

Comment c: One commenter pointed out that the relative accuracy provisions do not apply to noninstrumental monitoring techniques, while another commenter recommended specifying in section 3.2 of proposed appendix A that the relative accuracy requirement should be the applicable relative accuracy requirement only for gas CEMS. Another commenter recommended allowing sources to develop methods for determining the accuracy of parametric monitors that do not have reference methods.

Response: As discussed above, the final rule does not include relative accuracy provisions.

Letter(s): Distilled Spirits Council of the United States (IV-D-300); Dow Chemical Company (IV-D-260); Union Camp (IV-D-359)

Section 19.3: Calibration Error (App. A, sec. 4)

Comment a: Several commenters expressed concern that monitoring systems that do not use CEMS or COMS will not be able to achieve the calibration requirements, and recommended generally that the rule provide greater flexibility for establishing appropriate calibration requirements. (See related comments in sections 9.1 and 9.2, above.) Commenters noted that section 1.3 of Appendix A requires monitoring protocols that use recordkeeping and protocols for multiple fugitive emissions points to meet requirements for calibration error, but the calibration error procedure that follows pertains to gaseous emission or, in some situations, parameter monitoring systems. One commenter noted that an example protocol in

the Reference Document includes a pressure drop demonstrated compliance parameter level for baghouses, and the calibration error specification in section 4.2 would require daily calibration checks of the pressure monitor. The commenter objected to this requirement, stating that it is costly and unnecessary and that it was not included in the RIA. Another commenter recommended specifying in section 4.2 of proposed appendix A that owners and operators are required to specify proposed calibration error levels and calibration error checking procedures only where applicable, because not all monitoring methods require calibration checks. Another commenter recommended including details such as test measurement ranges in reference test specifications instead of in permits.

A final commenter recommended generally that the appendices should provide increased flexibility for calibration of parameter monitoring.

Response: The final rule does not include detailed calibration procedure requirements. The quality assurance provisions of the final rule reflect the fact that many types of monitoring which satisfy the rule will not be based on the type of sophisticated equipment that is prone to calibration drift and loss of data quality over time. See Section II.C.2.c. of the preamble to the final rule for further discussion.

Letter(s): American Automobile Manufacturers Association (IV-D-538); Bay Area Air Quality Management District (IV-D-402); Coalition for Clean Air Implementation (IV-D-304); Distilled Spirits Council of the United States (IV-D-300); National Environmental Development Association (IV-D-334); Pavilion Technologies, Inc. (IV-D-309)

Comment b: One commenter recommended modifying section 4.2 of proposed appendix A to reference the performance specifications when discussing the different calibration gas measurement levels, because "low," "medium," and "high" can have different meanings for different types of monitoring protocols. Another commenter recommended changing the required measurement ranges in section 4.2 from low, mid, and high levels to "appropriate levels to cover the range to be measured." The commenter noted that measurement ranges at low, mid, and high levels are not practical for testing incinerators or for testing low-level emissions. If the rule must require measurement ranges at low, mid, and high levels, the commenter requested that the rule clarify that the requirement applies only to constituents of inlet and outlet gases with concentrations exceeding 500 parts per million.

Response: As discussed above, the final rule does not include these detailed calibration requirements.

Letter(s): American Automobile Manufacturers Association (IV-D-538); Dow Chemical Company (IV-D-260)

Comment c: Several commenters discussed the definition of "calibration error." One commenter proposed defining calibration error as a percentage of span value to be consistent with 40 CFR part 75. Another commenter recommended revising the definition to be the same as the definition in appendix B of 40 CFR part 60, and recommended specifying that the definition applies only to COMS. Some commenters recommended clarifying the difference between "calibration error" in section 4 of proposed appendix A and "calibration drift" in 40 CFR part 60. One commenter was uncertain whether sources using CEMS would be required to show that their CEMS can meet the requirements for both calibration error and calibration drift.

Response: For CEMS, COMS, and PEMS the final rule will rely on existing specifications and thus address these concerns. For other types of monitoring, the final rule does not use the term "calibration error."

Letter(s): Monsanto Company (IV-D-273); South Coast Air Quality Management District (IV-D-524); Texas Natural Resource Conservation Commission (IV-D-371); Westinghouse Electric Corporation (IV-D-321)

Comment d: One commenter objected to the wording of the last sentence of section 4.1 of proposed appendix A. The commenter stated that EPA clearly means that no single response shall deviate more than $\pm 5\%$ from the reference value. The commenter also could not determine EPA's basis for the $\pm 5\%$ figure.

Response: The Agency has omitted any minimum specification for instrument accuracy in the final rule in recognition that the appropriate level of accuracy will be dependent on the type of instrumentation involved. See, for instance, the various accuracy specifications under NSPS regulations for parameter monitoring (summarized in Appendix B of the 1993 Draft Enhanced Monitoring Reference Document, docket item A-91-52-II-A-7).

Letter(s): Amoco Corporation (IV-D-244)

Comment e: Another commenter recommended amending section 4.1 of proposed appendix A to specify that the average response, instead of any single response, is to be considered in the calibration error test.

Response: This comment is no longer applicable given the provisions in the final rule.

Letter(s): Dow Chemical Company (IV-D-260)

Comment f: One commenter requested clarifying when the rule requires sources to demonstrate calibration error. The commenter recommended modifying proposed section 4.3 to require demonstration of the calibration error of an enhanced monitoring protocol to be conducted "as close as reasonably possible" but not "immediately" before or after any relative accuracy demonstration.

Response: As discussed above, the final rule does not include detailed calibration test procedure requirements. The quality assurance provisions of the final rule reflect the fact that many types of monitoring which satisfy the rule will not be based on the type of sophisticated equipment that is prone to calibration drift and loss of data quality over time. See Section II.C.2.c. of the preamble to the final rule for further discussion.

Letter(s): Dow Chemical Company (IV-D-260)

Section 19.4: Instrument Span (App. A, sec. 5)

Comment a: Commenters recommended changing the term "span" to "range." Several commenters noted that the term "span" has been defined differently in different regulations and suggested substituting "range" to reduce confusion. One commenter identified specific provisions where the commenter recommended substituting "range." One commenter recommended exempting parameter monitoring systems from the proposed measurement span requirements, stating that as long as a parameter system is capable of showing whether a source is in compliance, it is irrelevant whether the system meets the span

specifications in an existing regulation or a range beyond the permitted emission standard. For predictive parameter monitors, the measurement span is determined by the range of operation chosen for the performance verification test.

Response: For CEMS, COMS or PEMS, this issue will be addressed by relying on existing performance specifications for these systems. The terminology is not generally relevant to other monitoring approaches, and is not used in the final rule.

Letter(s): Dow Chemical Company (IV-D-260); Exxon Company, USA (IV-D-310); Michigan Department of Natural Resources (IV-D-438); Pennsylvania Department of Environmental Resources (IV-D-15)

Section 19.5: Response Time (App. A, sec. 6)

Comment a: One commenter observed that response time does not apply to non-instrumental monitoring. Another commenter noted that section 6.2 of proposed appendix A requires owners or operators to specify a proposed response time but does not provide any basis for determining what constitutes an acceptable response time, and thus proposed section 6.2 actually is not a specification.

A commenter suggested amending the definition of "response time" in proposed section 6.1 to change the final value displayed by the data acquisition and handling system from 95% to 90% to make the definition consistent with the definition in Method 21, 40 CFR part 60, appendix A.

Response: For CEMS, COMS or PEMS, any response time requirements in existing performance specifications will apply. The issue of response time generally is not necessary to address for other monitoring approaches, and thus the final rule contains no explicit response time requirements.

Letter(s): Distilled Spirits Council of the United States (IV-D-300); Exxon Company, USA (IV-D-310); Texas Chemical Council (IV-D-365)

Section 19.6: Parametric Relationship Limits (App. A, sec. 7)

Comment a: Several commenters recommended revising section 7.2.1 of proposed

appendix A to allow sources to verify and modify submissions after enhanced monitoring protocols have been installed and tested. One commenter requested that the rule clarify that parametric relationship limits are to be included in the final EMP approved by the permitting authority and are not to be included in the proposed EMP. Another commenter provided proposed text revisions that would specify that protocols using parametric monitoring would be subject to verification and modification after completing performance tests. This commenter also recommended changing "known relationship" in section 7.2.1 to "projected relationship."

Response: The final rule addresses this concern by allowing for indicator ranges to be established after permit issuance. See § 64.4, and Section II.D.2. of the preamble for further discussion.

Letter(s): American Automobile Manufacturers Association (IV-D-538); Amoco Corporation (IV-D-244); Exxon Company, USA (IV-D-310)

Comment b: One commenter requested that the final rule specify that computer programs may be used to describe correlations in enhanced monitoring protocols, pointing out that predictive emissions monitoring systems are usually computer programs.

Response: The final rule contains specific PEMS provisions that should address this concern.

Letter(s): Pavilion Technologies, Inc. (IV-D-309)

Comment c: A commenter recommended expanding section 7.2.1 of proposed appendix A to allow studies of similarly designed emission units at other sites to form the basis of a known relationship. This change would be consistent with the validation requirements of proposed appendix C, section 7.

Response: Under the final rule, site-specific testing is presumed appropriate for establishing indicator ranges. However, an owner or operator can rely on any other information to supplement site-specific testing, or in place of site-specific testing in some situations. See Section II.D.2. of the preamble to the final rule for further discussion.

Letter(s): Reynolds Metals Company (IV-D-374)

Section 19.7: Measurement Technique Procedures (App. A, sec. 8)

Comment a: One commenter pointed out that the meaning of "measurement technique procedures" is unclear, and stated that listing examples from 40 CFR part 60 does not provide a sufficient definition. Another commenter stated that procedures such as the ones listed in section 8 do not apply to non-instrumental monitoring.

A commenter recommended revising section 8.2 to include the Protocol for Determining the Daily Volatile Organic Compound Emission Rate of Automobile and Light-Duty Truck Topcoat Operations as an example of a measurement technique procedure.

Response: The applicable terminology is not used in the final rule.

Letter(s): American Automobile Manufacturers Association (IV-D-538); Distilled Spirits Council of the United States (IV-D-300); Exxon Company, USA (IV-D-310)

Section 19.8: Performance Specifications for Volatile Organic Compound CEMS and Gas Chromatographic CEMS (PS 101 and 102)

Comment a: Numerous commenters raised general and specific objections to the proposed PS 101 and PS 102. One commenter explicitly recommended withdrawing Performance Specifications 101 and 102 to allow additional comments. The commenter stated that the methods in these performance specifications are new and have been proposed for the first time and that the short comment period did not allow detailed analysis of the proposed methods.

Response: The Agency has promulgated specifications for these type of monitoring systems, based on proposed PS 101 and 102, as part of the magnetic tape NESHAP under 40 CFR part 63 (see 59 FR 64580, December 15, 1994). The proposed NESHAP had relied on proposed PS 101 and 102. Because of the timing of promulgation of that NESHAP action and part 64, the Agency considered it necessary to finalize these specifications as part

of the magnetic tape NESHAP. The final specifications are included as PS 8 and 9 of 40 CFR part 60, appendix B. All technical comments on the proposed part 64 PS 101 and 102 were evaluated and addressed in the magnetic tape NESHAP final rule action. See the background information document for the magnetic tape NESHAP, entitled Hazardous Air Pollutant Emissions from Magnetic Tape Manufacturing Operations -- Background Information for Promulgated Standards (EPA-453/R-94-074b), and located in EPA Air Docket A-91-31. If an owner or operator intends to use this type of monitoring for purposes of complying with part 64, the owner or operator will have to comply with the requirement in § 64.3(d) that all CEMS generally follow existing specifications in order to be considered presumptively acceptable.

Letter(s): Air Compliance Total Services (ACTS) (IV-D-19); American Automobile Manufacturers Association (IV-D-538); Amoco Corporation (IV-D-244); Bay Area Air Quality Management District (IV-D-402); Center for Process Analytical Chemistry (IV-D-318); Dow Chemical Company (IV-D-260); Eli Lilly and Company (IV-D-349); Exxon Chemical Americas (IV-D-339); Goodyear Tire and Rubber Company, The (IV-D-292); Koch Industries, Inc. (IV-D-332); Michigan Department of Natural Resources (IV-D-438); Monsanto Company (IV-D-273); Ohio EPA (IV-D-283); R.J. Reynolds Tobacco Company (IV-D-258); Scott Specialty Gases, Inc. (IV-D-236); South Coast Air Quality Management District (IV-D-524); Southwestern Public Service Company (IV-D-272); Texas Chemical Council (IV-D-365); Texas Natural Resource Conservation Commission (IV-D-371)

Section 19.9: Appendix A Performance Specifications--General Issues

Comment a: Commenters generally supported the flexibility in the rule that allows sources to choose appropriate monitoring systems. Several commenters approved of allowing source owners or operators to choose appropriate specifications and verification procedures, which may vary among enhanced monitoring protocols. However, many commenters expressed a desire for more flexibility and less emphasis on instrumental monitoring systems. One commenter pointed out that appendix A, section 1 lists elements that may be included in enhanced monitoring protocols, but does not state that protocols may include EPA reference methods that are not CEMS or COMS. The commenter stated that this constitutes an unfair bias. Another commenter recommended that the specifications in appendix A apply only to CEMS or to other equipment that lends itself to such performance requirements. Another commenter stressed the need

for the rule to clearly articulate that flexibility in applying the appendix A requirements exists and must be recognized by permitting authorities in implementing enhanced monitoring. Finally, commenters proposed

several specific text changes to clarify that not all performance specification and verification tests apply to all protocols.

Commenters suggested ways of making the use of non-instrumental monitoring systems easier. One commenter recommended adding performance specifications that are general guidelines on process parameter monitoring to show that alternative monitoring approaches can have appropriate performance specifications as well as CEMS. For example, a process parameter performance specification could establish that once the protocol has been shown to be reliable, the level of information on some parameters could be reduced, requiring reporting of only the parameters necessary to show compliance with emission limits. Another commenter recommended including predictive emissions monitoring systems in the lists of approved monitoring methodologies in sections 1 and 1.4 of proposed appendix A. This commenter also recommended developing a performance specification for predictive emissions monitoring systems. One commenter also recommended specific ways of making appendix A more applicable to non-instrumental monitoring. The commenter recommended deleting appendix A and the corresponding sections of the reference document and developing performance specifications on a protocol-by-protocol basis, to the extent that the rule retains the permit-by-permit implementation approach. If appendix A remains in the rule, the commenter recommended emphasizing that instrumental monitoring is not favored and clarifying which requirements apply to non-instrumental monitoring.

Response: The final rule lists several performance and operating criteria that part 64 monitoring must achieve but does not attempt to include particular performance specifications similar to the proposed rule. See Section II.C. of the preamble to the final rule for further discussion.

Letter(s): ALCOA (IV-D-288); American Textile Manufacturers Institute (IV-D-440); Distilled Spirits Council of the United States (IV-D-300); Dow Chemical Company (IV-D-260); Kaiser Aluminum & Chemical Corporation, Primary Prod. Div. (IV-D-368); Pavilion Technologies, Inc. (IV-D-309); Pharmaceutical Manufacturers Association (IV-D-367)

Comment b: One commenter recommended modifying section 1.1 of proposed appendix A to allow verification of protocols during the permitting process, instead of only after a permit is issued. Allowing verification during permitting would allow sources to begin monitoring as soon as their permits are issued.

Response: Nothing in the final rule would prohibit this type of testing.

Letter(s): Air Compliance Total Services (ACTS) (IV-D-19)

Comment c: One commenter recommended clarifying the differences among gas CEMS, VOC CEMS, and gas chromatographic CEMS. This commenter proposed modifying section 1.4.1 of proposed appendix A to specify that it refers to gas CEMS and COMS. Another commenter proposed amending section 1.4.1 to allow the use of CO and oxygen CEMS installed under 40 CFR part 266, appendix A, and amending section 1.4.2 to allow the use of VOC CEMS installed under 40 CFR part 266, appendix A. Finally, a commenter proposed adding "as applicable" in section 1.3 between "address" and "the following aspects."

Response: These comments are no longer relevant given the changes to the rule.

Letter(s): Dow Chemical Company (IV-D-260); Texas Chemical Council (IV-D-365); Texas Natural Resource Conservation Commission (IV-D-371)

**Section 20: Equipment, Installation and Calibration Gas Specifications
(Appendix B)**

Section 20.1: Equipment Specifications (App. B, sec. 2)

Comment a: One commenter suggested requiring only new systems to be designed to allow for checking the entire system for calibration changes and requiring only new parameter monitoring systems and CERMS to allow the detection of changes in the instrument calibration and applicable accuracy requirements. It was argued that this technology has only recently become available, and it would be an enormous burden to retrofit existing equipment. Furthermore, the requirement is unnecessary, because sources could monitor their systems daily to ensure that they are responding or could perform a daily zero check.

Response: For CEMS, COMS and PEMS, the final rule relies on existing performance specification requirements so that part 64 will be implemented consistently with existing requirements for those systems.

Letter(s): E.I. DuPont de Nemours and Company (IV-D-329)

Comment b: Another commenter proposed deleting the requirement in section 2.3 of appendix B that a CEMS be capable of reading negative calibration error (i.e., reporting a negative value during zero level calibration checks). According to the commenter, because many CEMS available today do not have that capability, retaining the requirement would mean that currently installed CEMS would have to be modified or replaced and many CEMS currently on the market would have to be redesigned.

Response: See previous response to Comment a, above.

Letter(s): Dow Chemical Company (IV-D-260)

Comment c: One commenter suggested revising section 2.3 of proposed appendix B to state that calibration determinations shall be conducted as soon as possible following installation but prior to commencement of a regulated operation, instead of prior to installation.

Response: See previous response to Comment a, above.

Letter(s): Union Carbide Corporation (IV-D-293)

Comment d: One commenter considered the daily calibration requirements excessive if applied to all types of CEMS and suggested less frequent calibration or daily checks at only one level. For parameter monitoring, another commenter recommended replacing the "as frequently as practicable" requirement with a simplified requirement that CE determinations be conducted in accordance with the approved EMP. Another commenter noted that vendors recommend calibrating flow type meters once per quarter for parameter type monitors, and therefore the appendix should require calibrations only at that ongoing frequency unless significant variances are found. The frequency could then be adjusted until the unreliable condition is found and corrected. The commenter stated that doing otherwise would require process shutdowns or the installation of on-line spares, which would be an unfair economic penalty.

Response: Section 64.3(b) does not require specific intervals for this type of quality control check. For CEMS, § 64.3(d) would require that existing specifications be followed in order for the CEMS to be considered presumptively acceptable for part 64.

Letter(s): Amoco Corporation (IV-D-244); E.I. DuPont de Nemours and Company (IV-D-329); Monsanto Company (IV-D-273)

Comment e: One commenter recommended amending section 2.3 of proposed appendix B to refer to the performance specifications when discussing the different calibration gas levels. The commenter reasoned that "low," "medium," and "high" are confusing because the meaning of those terms vary for different EMP types. Another commenter recommended adding "PEMS" to that section to explicitly point out the calibration error determination for PEMS. Finally, one typographical error was detected: "educator" should be substituted for "educator" in section 2.1.2 of appendix B.

Response: These comments are no longer applicable given the changes in the final rule.

Letter(s): Dow Chemical Company (IV-D-260); Texas Chemical Council (IV-D-365)

**Section 20.2: Installation and Measurement Location Specifications
(App. B, sec. 3)**

Comment a: One commenter suggested clarifying the last sentence in section 3 of proposed appendix B by stating that the specifications are guidelines where a reference method test is required and that the specifications do not apply when no reference method test is required. A State agency recommended requiring, not merely suggesting, stratification testing.

Response: These comments are no longer applicable given the changes in the final rule.

Letter(s): Dow Chemical Company (IV-D-260); Texas Natural Resource Conservation Commission (IV-D-371)

Section 20.3: CEMS Calibration Gases (App. B, sec. 4)

Comment a: Some commenters raised technical concerns with the proposed calibration gas requirements in appendix B and others objected to changing calibration gas specifications from what is required in existing CEMS regulations.

Response: No calibration gas specifications are included in the final part 64. Instead, § 64.3(d) requires that a CEMS meet existing specifications in order to be considered presumptively acceptable for part 64.

Letter(s): Eastman Chemical Company (IV-D-347); Los Angeles County Sanitation Districts (IV-D-26); Monsanto Company (IV-D-273); Scott Specialty Gases, Inc. (IV-D-236)

Section 21: Performance Verification Tests (Appendix C)

Section 21.1: Performance Verification Test Periods (App. C, sec. 3)

Comment a: Certain commenters recommended ways of making the applicability of the performance verification test requirements more definite. One commenter provided proposed language to specify in section 3.3 of proposed appendix C that its requirements apply to CEMS and CERMS and to specify in section 3.4 of proposed appendix C that the requirements of that section apply to parameter monitoring systems. Another commenter suggested amending section 3.4 of proposed appendix C to include predictive emissions monitoring systems in the discussion of parameter monitoring systems.

Response: The final rule relies on existing requirements with respect to CEMS, COMS or PEMS (see § 64.3(d)). For other approaches, indicator ranges are to be set during performance testing, unless the owner or operator documents that the ranges can be established without such testing.

Letter(s): American Automobile Manufacturers Association (IV-D-538); Pavilion Technologies, Inc. (IV-D-309)

Comment b: One commenter opposed the broad discretion granted to permitting authorities in establishing the conditions required for conducting relative accuracy tests. This commenter pointed out that permitting authorities can set conditions for relative accuracy tests that are more stringent than a unit's actual use; meeting these conditions may be expensive. The commenter provided proposed text revisions that would allow owners or operators to conduct relative accuracy tests while the affected unit is operating at no less than 50% of its permitted capacity or as specified in an applicable subpart.

Response: This comment is no longer applicable given the changes in the final rule.

Letter(s): Air Compliance Total Services (ACTS) (IV-D-19)

Comment c: One commenter recommended requiring only three reference method test runs or samples as a way to reduce the burdens of the proposed

verification requirements. The commenter stated that the February 5, 1993 draft enhanced monitoring rule required a minimum series of three reference method test runs or samples, and three should be sufficient. The commenter also recommended revising section 3.4.2 of proposed appendix C to exempt from the requirements of uninterrupted operation short interruptions and minor maintenance, repairs, and adjustments that would not adversely affect the outcome of a test. This commenter pointed out that the proposed section 3.4.2 seems unnecessarily restrictive. Finally, another commenter recommended specifying in section 3.6 of proposed appendix C that when an enhanced monitoring protocol fails, only the tests being conducted during the failure need to be repeated.

Response: The need for and extent of compliance method testing to assist in establishing indicator ranges is discussed in Section II.D. of the preamble to the final rule. The final requirements are designed to limit testing to the minimum necessary to establish appropriate indicator ranges

Letter(s): American Automobile Manufacturers Association (IV-D-538); Dow Chemical Company (IV-D-260)

Section 21.2: Calibration Error Tests (App. C, sec. 4)

Comment a: One commenter recommended referring to the performance specifications in discussions of calibration gas levels in sections 4.1 and 4.2 of proposed appendix C. The terms "low," "medium," and "high" are confusing because they are different for different types of enhanced monitoring protocols.

Response: This comment is no longer applicable given the changes in the final rule.

Letter(s): Dow Chemical Company (IV-D-260)

Comment b: A commenter objected to requiring sources to conduct three reference method stack tests per year for each emissions monitoring unit. The commenter found this requirement unduly burdensome because reference method stack testing has limited accuracy, and the initial and periodic certification, together with daily calibration, that is required under the proposed rule is sufficient. The commenter added that requiring

reference method stack tests to be conducted at low operating rates would be inappropriate where engines are operated at or near their maximum design rates, and would disrupt normal operations to produce irrelevant data that do not represent normal emissions. The commenter also stated that conducting three reference method stack tests would cost over \$2 million per year and would be impossible to complete.

Response: The final rule contains no requirements for annual stack testing.

Letter(s): El Paso Natural Gas Company (IV-D-271)

Comment c: One commenter noticed an inaccuracy in equation 1 in section 4.3 of proposed appendix C. The denominator should be "Rs," signifying span value, instead of "Rv." An instrument's accuracy is given as a percentage of the span value, not as a percentage of the bottle concentration.

Response: This equation is not included in the final rule and thus the comment is no longer applicable.

Letter(s): American Automobile Manufacturers Association (IV-D-538)

Section 21.3: Response Time Tests (App. C, sec. 5)

Comment a: Commenters primarily recommended clarifying the applicability of the test requirements. One commenter proposed specifying in section 5.1 of appendix C that the requirements apply only to CEMS, and specifying in section 5.3 that its requirements apply to parameter monitoring systems and CERMS. The commenter recommended specifying in section 5.3 that "other enhanced monitoring protocols" includes recordkeeping.

Another commenter recommended including predictive emissions monitoring systems in section 5.2 as a type of monitoring system that in most circumstances does not require a response time test. One commenter pointed out that the calibration gas levels discussed in section 5.1.1 are confusing because "low," "medium," and "high" can have different meanings for different types of monitoring protocols. The commenter recommended referring to the performance specifications to make the meanings more clear.

Commenters also recommended ways to make conducting the response time tests easier. One commenter recommended amending section 5.1.3 so that, where the stack effluent is close in concentration to the low-level or high-level gas, the mean response time of the other calibration gas may be taken as the system response time. Another commenter recommended deleting the requirement in section 5.2 that owners or operators evaluate each monitor and justify to the permitting authority that a response time test is not necessary. This commenter pointed out that parameter monitoring systems and CERMS have such rapid response times that tests are unnecessary and sources should not have to justify not conducting them.

Response: This test procedure is not included in the final rule.

Letter(s): American Automobile Manufacturers Association (IV-D-538); Dow Chemical Company (IV-D-260); Pavilion Technologies, Inc. (IV-D-309); Texas Chemical Council (IV-D-365)

Section 21.4: Relative Accuracy Tests (App. C, sec. 6)

21.4.1: General Comments on Relative Accuracy Test Requirements

Comment a: One commenter recommended allowing sources that use parametric monitoring systems to use portable emissions analyzers to conduct relative accuracy tests. The commenter stated that several State agencies allow portable analyzers to be used in conducting periodic compliance tests, and portable analyzers are cost-effective and reliable. The commenter added that if portable analyzers were used, EPA may need to develop a strict calibration/operation protocol, but the cost savings would make developing such a protocol worthwhile. An industry coalition group pointed out that requiring parameter monitors to be evaluated using procedures developed for CEMS is inappropriate and unjustified.

Response: The use of portable analyzers to assist in establishing appropriate indicator ranges is permissible under the final rule and could be one method of avoiding more expensive reference method testing to establish appropriate ranges (such as in situations where a large margin of compliance exists).

Letter(s): Coalition for Clean Air Implementation (IV-D-304); Northwest Pipeline

Corporation (IV-D-270)

Comment b: Another commenter recommended emphasizing in section 6.5 of proposed appendix C the importance of performing a stratification test before measuring relative accuracy and including in section 6.5 a protocol to be followed when stratification is found in the effluent stream.

Response: This comment is no longer applicable as the referenced section contained notes applicable only to CEMS and CERMS. Existing specifications for such systems must be met where these systems are used to satisfy part 64.

Letter(s): Texas Chemical Council (IV-D-365)

Comment c: One commenter proposed specifying predictive emissions monitoring systems in section 6.2.2 of proposed appendix C, since the relative accuracy of these systems is determined by comparing the system output with concurrent reference method results.

Response: Relative accuracy requirements for PEMS will be addressed through any specific requirements for these systems

Letter(s): Pavilion Technologies, Inc. (IV-D-309)

21.4.2: Feasibility of Relative Accuracy Test Requirements

Comment a: One commenter recommended that the reference method allow for compositing samples to improve the degree of correlation with such advanced analytical techniques as process mass spectrometry or FTIR where emission periods are relatively short in duration and the composition of emissions varies widely (i.e., batch processing). This commenter also objected to requiring sources to compare VOC CEMS or GC instruments to the reference method in the relative accuracy test in all cases, and recommended instead allowing sources using these types of CEMS to follow the specifications for relative accuracy audits in Performance Specifications 101 and 102, which provide for using audit gases.

Another commenter recommended providing for an alternative relative accuracy test in appendix C, because the relative accuracy test in section 6 will not always be accurate. The commenter cited other rules that have provided alternative relative accuracy tests for situations such as testing low emission levels where the standard relative accuracy test is not appropriate. The commenter suggested using an alternative similar to that provided in 40 CFR part 266, appendix IX (section 2.1.9). This commenter also recommended amending section 6.2.2.1 to allow emissions units to perform relative accuracy tests at standard parameter ranges only if it is reasonably possible to run the emissions unit at those values.

One commenter recommended amending section 6.2.1 of proposed appendix C to require sources to report only the data used to calculate the relative accuracy, instead of requiring sources to report all data, including rejected data. Since the rule limits sources to three failed tests, there is no need to report data from failed tests. Another commenter recommended modifying section 6.2.1 to require a minimum of three reference method test runs, or a flexible number, instead of a minimum of nine, and to provide that the owner or operator may reject one test measurement instead of up to three test measurements. Another commenter provided proposed text language that would allow a source to use fewer than nine runs, so long as the number used provides sufficient assurance that the monitoring protocol can be used to certify compliance.

Finally, an industry coalition group noted that EPA has failed to account for the fact that there is no assurance that the relative accuracy specifications could be met in certain situations, such as low emission, clear stack sources where COMS results are compared to Method 5 data.

The commenter questioned whether two Method 5 trains at such sources compared against each other could meet the relative accuracy specifications. The commenter noted that Method 5 has poor precision, especially at low grain loadings, and that it may be impossible to qualify any parameter monitoring correlation with Reference Method 5.

Response: These comments are no longer applicable given the changes to the final rule.

Letter(s): ALCOA (IV-D-288); American Automobile Manufacturers Association (IV-D-538); Coalition for Clean Air Implementation (IV-D-304) Dow Chemical Company (IV-D-260); Eastman Chemical Company (IV-D-347)

21.4.3: Technical and Typographical Errors

Comment a: Some commenters pointed out specific technical or typographical errors in section 6. Some commenters noted that the table in section 6.4.3 should specify the value for point 10 as "2.262," instead of as "2.662." A commenter also stated that the terms "d" and "CC" in equation 5 of section 6.4.4 are incorrectly defined. The correct equation and definitions of these terms appear at 40 CFR part 60, appendix B.

Certain commenters noticed that the equation in section 6.4.2 calculating the standard deviation is different from the one used in 40 CFR parts 60 and 75 to calculate essentially the same value. One commenter pointed out that the correct equation is shown in section 2.2 of Specification 2, appendix B, part 60.

A commenter noted that an equals sign should appear between the "d" and the "1/n" in section 6.4.1.

Certain commenters also noted an error in section 6 of proposed appendix C. Enhanced monitoring protocols excluded from the relative accuracy specification are discussed in section 3.1.1, not section 3.2, of appendix A.

Response: These comments are no longer applicable.

Letter(s): Amoco Corporation (IV-D-244); Dow Chemical Company (IV-D-260); Monsanto Company (IV-D-273)

21.4.4: Requests for Clarification

Comment a: Commenters requested clarification of particular points in section 6 of proposed appendix C. Some commenters requested clarifying whether 21-minute runs, as required for CEMS under part 60, are acceptable in lieu of the 30-minute to 60-minute runs required in section 6.2.1 of proposed appendix C. Another commenter recommended allowing each set of reference method test runs to be conducted for 30 to 60 minutes or the average of emissions over one complete operating cycle. One commenter recommended specifying merely that reference methods

should be followed for whatever time the reference method requires when relative accuracy tests are performed as specified in proposed section 6.2. Another commenter requested further definition of the term "differs greatly" in proposed section 6.5.

Response: These comments are no longer applicable.

Letter(s): ALCOA (IV-D-288); Amoco Corporation (IV-D-244); Exxon Company, USA (IV-D-310); South Coast Air Quality Management District (IV-D-524); Texas Natural Resource Conservation Commission (IV-D-371)

Section 21.5: Parameter Monitor Validation (App. C, sec. 7)

21.5.1: Parameter Monitoring Verification Requirements in General

Comment a: Certain commenters raised general concerns about the specificity of the parameter validation requirements. One commenter recommended expanding the description of standards for parametric monitoring systems, so that permitting authorities and owners or operators can better understand what an acceptable parametric monitoring program requires. Another commenter recommended allowing owners or operators to specify operating levels and conditions in the correlation test plans that they submit to permitting authorities and allowing owners or operators to negotiate data collection requirements with permitting authorities. Finally, one commenter recommended establishing minimum documentation requirements to demonstrate that a parametric relationship for one emissions unit may be used for other, similar emission units.

Response: Section 64.4 of the final rule specifies what documentation and testing is required to establish appropriate indicator ranges for parameter monitoring approaches. Generally, these requirements are consistent with existing provisions for establishing baseline levels for indicators of compliance. See Section II.D. of the preamble to the final rule for further discussion.

Letter(s): Amoco Corporation (IV-D-244); Enviroplan (IV-D-372); Rocky Mountain Oil and Gas Association (IV-D-183)

Comment b: Some gas industry commenters recommended encouraging the use of portable monitoring systems to verify the operation of parameter

monitoring systems, instead of requiring reference method tests.

Response: As discussed above in response to Comment a, section 21.4.1 (Part I), the Agency believes this approach may be useful in some circumstances.

Letter(s): American Gas Association (IV-D-265); Arkla Energy Resources Company (IV-D-343); Mississippi River Transmission Corp. (IV-D-344); Northwest Pipeline Corporation (IV-D-270)

21.5.2: Ability to Use Existing Correlation Information and Test Data

Comment a: One commenter recommended allowing facilities to use previous performance verification tests to meet the proposed appendix C requirements. With respect to parameter monitoring involving demonstrated compliance parameter levels, this commenter suggested that facilities that have used performance verification tests to demonstrate compliance with regulations such as NSPS should be allowed to use these compliance test data to establish the DCPL instead of being required to conduct the tests required in section 7.2.1 of proposed appendix C. (See the related comments from other commenters in section 9.3.3, above.) The commenter noted that this would allow facilities to demonstrate compliance without performing unnecessary tests to prove correlations that have already been proven.

Response: Section 64.4(b) of the final rule provides for the use of existing test data to support proposed indicator ranges except where changes have occurred since the test data were obtained that could significantly affect the conditions for which the ranges were established. See Section II.D.2. of the preamble to the final rule for further discussion.

Letter(s): Monsanto Company (IV-D-273)

Comment b: Commenters opposed requiring duplicative testing for establishing predictive parameter relationships. Several commenters recommended expanding section 7.1.1 of proposed appendix C to allow correlations to be drawn from sources other than site-specific testing. The commenters pointed out that the current requirement that correlations be drawn only from site-specific testing conflicts with section 7.2.1 of proposed appendix A. One commenter stated that testing performed at emission units with

similar design and operating conditions should be accepted in place of site-specific data. Another commenter opposed the site-specific fugitive emissions validation testing required under section 7.1.1 of proposed appendix C. This commenter recommended that section 7.1.1 allow for some type of pilot plant or laboratory analysis instead of requiring actual on-site testing.

One commenter recommended deleting section 7 of proposed appendix C entirely. This commenter stated that section 7 would require extensive verification of correlations, even though most correlations are well known or are included in underlying standards. The commenter pointed out that where an underlying standard specifies a parameter monitor, requirements such as those in section 7 cannot be added without rulemaking. This commenter noted that section 7 appears to be an attempt to force sources to use CEMS. If section 7 is not deleted, this commenter recommended moving these sections to the body of the rule and then applying the validation requirements only where a permitting authority determines that the parameter or the DCPL is not established by the applicable underlying standard and that testing is the only way to demonstrate the appropriateness of the proposed parameter monitoring system. This commenter also recommended that the rule allow permitting authorities to waive the requirements of appendix C for established correlations where the paperwork and correlation testing requirements would be unnecessary.

Response: Section 64.4(d) provides that where site-specific data are not available a test plan and schedule must be submitted unless the owner or operator proposes to rely on engineering assessments and other data and provides documentation to demonstrate that the use of site-specific data is not necessary. See Section II.D.2. of the preamble to the final rule for further discussion.

Letter(s): Exxon Chemical Americas (IV-D-339); Fort Howard Corporation (IV-D-233); National Petroleum Refiners Association (IV-D-276); Rocky Mountain Oil and Gas Association (IV-D-183); Society of the Plastics Industry, Inc. (IV-D-287); Total Petroleum, Inc (IV-D-354)

21.5.3: Predictive Parameter Monitoring System Requirements in General

Comment a: Some commenters recommended that EPA provide States with specific guidance regarding certification requirements so that States do not impose excessively strict requirements on stationary internal combustion engines.

Also, commenters were concerned that requiring test runs at "low," "mid," and high" load levels and requiring testing at "representative points over a maximum potential range" for other emission-influencing parameters is so general that it would make certifying any EMP difficult.

Response: These specific requirements are not included in the final rule. In addition, the final rule, similar to analogous provisions in 40 CFR part 63, states that testing is not required over the entire anticipated operating range.

Letter(s): Arkla Energy Resources Company (IV-D-343); Mississippi River Transmission Corp. (IV-D-344); Windrock, Inc. (IV-D-405)

Comment b: Certain commenters recommended amending section 7.1.2 of proposed appendix C to require owners or operators to identify process or operating conditions that may reasonably be expected to affect the parameter relationship, instead of requiring owners or operators to identify any process or operating conditions that may affect the parametric relationship.

Response: The provisions in proposed section 7.1.2 have been deleted, consistent with changes made to proposed § 64.4(f) (see section 9.8.3 (Part I), above).

Letter(s): Dow Chemical Company (IV-D-260); Exxon Company, USA (IV-D-310); Pavilion Technologies, Inc. (IV-D-309)

Comment c: Finally, some commenters requested amending sections 7 and 7.1 of proposed appendix C to specifically mention predictive emissions monitoring systems.

Response: The final rule requires that a PEMS satisfy existing Federal/State requirements for a PEMS if used to satisfy part 64.

Letter(s): Amoco Corporation (IV-D-244); Pavilion Technologies, Inc. (IV-D-309)

21.5.4: Predictive Parameter Monitoring System Test Conditions

Comment a: Commenters opposed requiring tests at "low," "mid," and "high" process operating loads for predictive parameter validation. One commenter observed that emissions units have different load varying abilities, and conducting tests at extremes may not generate data that would justify its cost. This commenter provided revisions to section 7.1.2 of proposed appendix C that would require measurements at process operating loads that are representative of the unit's normal operation. One commenter argued that the site-specific testing requirements are unnecessary, and the testing requirements force large operating units to operate at unusual conditions, which raises safety and environmental risk concerns, and to operate outside their permitted operating range, which increases emissions and could expose sources to enforcement. Finally, another commenter provided revisions to section 7.1.2 of proposed appendix C specifying that the requirement to collect data at the low, mid and high operating levels applies only if it is reasonably possible to run the emissions unit at those levels; if not, then the source should be able to substitute other information.

Several commenters also recommended that section 7.1.2 allow reference method testing at either normal operating or maximum design loads for parameters that are known to have a positive correlation with emission rates of regulated constituents. As an example, commenters discussed the correlation between the production of thermal NO_x and increasing excess oxygen from a combustion source. The commenters stated that regulated facilities should have the option to use either empirical studies or accepted engineering principles to demonstrate positive correlation. Several commenters also recommended that the rule not require relative accuracy tests for reciprocating engines below 50% of the maximum or permitted emission levels, whichever level is lower. Finally, another commenter also recommended modifying section 7.2.1 to allow facilities to extrapolate testing results to determine compliance at maximum capacity, as long as the correlation is reasonable.

Response: See responses to sections 21.5.2 and 21.5.3 (Part I), above.

Letter(s): Air Compliance Total Services (ACTS) (IV-D-19); Arkla Energy Resources Company (IV-D-343); Dow Chemical Company (IV-D-260); Exxon Chemical Americas (IV-D-339); Exxon Company, USA (IV-D-310); Mississippi River Transmission Corp. (IV-D-344); Monsanto Company (IV-D-273); National Petroleum Refiners Association (IV-D-276); Rocky Mountain Oil and Gas Association (IV-D-183); Total Petroleum, Inc

(IV-D-354); Windrock, Inc. (IV-D-405)

Comment b: One commenter opposed requiring calibration after each test run required by section 7.1 of proposed appendix C. Collecting data continuously and doing periodic calibrations would be more efficient than calibrating every 30 minutes. Also, continuous operation would provide information about transition periods for the process unit instead of providing data only at the three operating levels.

Response: This comment is no longer applicable given the changes in the final rule.

Letter(s): Amoco Corporation (IV-D-244)

21.5.5: DCPL Testing and Verification Requirements

Comment a: Commenters stated that the requirements for setting the DCPL are too stringent. One commenter pointed out that DCPL testing will be extremely expensive, and that the proposed rule would require at least three tests. These burdensome requirements would prevent many companies from using parametric monitoring. Another commenter stated that engineering calculations and certification should be sufficient. One commenter provided proposed language to amend section 7.2.2 of proposed appendix C to require owners or operators to identify other process or operating conditions that may reasonably be expected to significantly affect the parametric relationship, instead of requiring owners or operators to identify any process or operating conditions that may affect the parametric relationship. This commenter also provided proposed revisions to section 7.2.1 of proposed appendix C specifying that the requirement to collect data at the specified parameter levels for the DCPL applies only if it is reasonably possible to run the emissions unit at those levels; if not, then the source should be able to substitute other information to demonstrate the correlation.

Response: See response to section 21.5.2 (Part I), above.

Letter(s): American Portland Cement Alliance (IV-D-284); Dow Chemical Company (IV-D-260); Texaco Inc. (IV-D-357)

Section 21.6: Performance Verification Tests - Other (App. C Generally)

Comment a: Some commenters had general comments on the proposed performance verification test requirements. One commenter recommended deleting proposed appendix C, because the extensive performance verification requirements are inappropriate and wasteful. Another commenter noted that the performance verification test procedures in proposed appendix C almost exclusively apply only to CEMS.

A commenter suggested amending section 1.1 of proposed appendix C to require sources that use CEMS or COMS in their enhanced monitoring protocols to follow the performance specification test procedures provided in appendix B of part 60 or appendix A of part 64, instead of only requiring them to use the procedures listed in appendix B of part 60.

Finally, one commenter requested that predictive emissions monitoring systems be mentioned in appendix C wherever other monitoring systems are mentioned. This commenter also requested that the introduction of appendix C include predictive emissions monitoring systems in the list of monitoring systems used in enhanced monitoring protocols.

Response: In response to these comments, the final rule deletes proposed Appendix C and instead relies on the general submittal requirements in § 64.4. See Section II.D. of the preamble to the final rule for further discussion.

Letter(s): Dow Chemical Company (IV-D-260); Exxon Chemical Americas (IV-D-339); Pavilion Technologies, Inc. (IV-D-309); Total Petroleum, Inc (IV-D-354)

Section 22: Quality Assurance Requirements (Appendix D)

Section 22.1: QC Checks/Error Assessments

Comment a: Some commenters suggested allowing more flexibility in the frequency of quality assurance/quality control (QA/QC) checks, including allowing owners or operators to negotiate the required frequency with permitting authorities and not requiring daily checks but instead determining the frequency as needed, consistent with the instrument specifications in question. A commenter suggested modifying the requirement that data forms be checked daily to see that "all" required information is recorded correctly because a daily check of zero and span, combined with spot checks, should be adequate for the quality control program. The commenter also suggested that a daily spot check of representative information be conducted and a detailed review of "all" information be required if a monitoring system downtime is greater than 5% of the unit's operating time.

Response: The final rule adopts the approach suggested in these comments, and increases the flexibility to develop QA/QC requirements that are appropriate for the monitoring being used. See Section II.C. of the preamble to the final rule for further discussion.

Letter(s): Armco Steel Company (IV-D-395); Department of Energy (IV-D-358); Eastman Chemical Company (IV-D-347)

Comment b: A commenter recommended specifying that computerized systems may be used to implement the quality control requirements. This would allow state-of-the-art quality assurance procedures to be used on an automated basis and would improve overall system data quality. Another commenter recommended deleting the example in section 2.2 of proposed appendix D that refers to "all potential leaks," because the example would be impossible to follow since no one can prove that a specific number constitutes all potential leaks.

Response: These comments are no longer applicable given the changes to the final rule, although the Agency believes that computerized systems may be appropriate to support quality assurance procedures where appropriate.

Letter(s): Dow Chemical Company (IV-D-260); Eastman Chemical Company (IV-D-347)

Section 22.2: Data Quality Assessments

Comment a: A commenter said that the proposed QA plan requirements should be modified to encourage sources to use state-of-the-art analytical methodologies. The commenter added that the current requirements are so complex and prescriptive that they would require particular methods which are not necessarily the most efficient. Another commenter proposed allowing use of manufacturer supplied QA/QC testing for periodic QA of recordkeeping data, such as periodic QA of coating records.

Response: The final rule contains significantly less complex or prescriptive QA/QC requirements than the proposed rule. In addition, manufacturer supplied QA/QC testing data could be appropriate in some cases.

Letter(s): Can Manufacturers Institute (IV-D-478); Eastman Chemical Company (IV-D-347)

Comment b: A commenter said that quarterly data quality assessments are too frequent and probably unnecessary. The commenter proposed that assessments be made annually, at the most.

Response: At least some level of QA/QC checks should be made on an ongoing basis, generally more frequently than annually. However, the final rule does not require the same degree of quality assessment as suggested by the proposed rule.

Letter(s): Exxon Company, USA (IV-D-310)

Section 22.3: Data Availability Issues

Comment a: A commenter disagreed that a 5% downtime requirement is appropriate and proposed instead that a 10% downtime requirement be generally used. A commenter also proposed including repair periods for

unforeseeable events and mechanical breakdown in section 2.3 of proposed appendix D. Another commenter said that preventive maintenance and QA/QC checks should not be included in the maximum downtime for CEMS, but should be allowed for separately.

Response: Section 64.7(c) includes the general duty to operate monitoring under part 64. No specific data availability percentage is required. In addition, the provision takes into account the possibility of monitor malfunctions, associated repairs, and required QA activities. See Section II.C.2.e. of the preamble of the final rule for further discussion.

Letter(s): Dow Chemical Company (IV-D-260); Westinghouse Electric Corporation (IV-D-321)

Section 22.4: Reverification of Parametric Relationships

Comment a: A commenter recommended that procedures for reverifying parametric relationships be established. The commenter proposed that the standards be to repeat the validation requirements specified in section 7 of proposed appendix C, or lesser requirements if they will assure the ability of the parametric relationship to determine the compliance status of the source.

Several commenters suggested that the schedule for reverifying parametric relationships be changed. One commenter recommended establishing a minimum schedule for reverification of parametric relationships. Some commenters requested that the rule require compliance verification testing for established parametric monitoring systems no more than once every two years of operation, reasoning that this change would make implementing parametric monitoring systems simpler and less expensive. Environmental groups suggested annual reverification. Other commenters suggested requiring reverification of the parametric relationship only if substantial process changes are made, with a standard reverification required no more frequently than upon permit renewal, or only when requested by the permitting authority based on a substantial need, which would vary depending on the type of parameter EMP. Lastly, a commenter suggested that the reverification requirement be deleted.

The reasons provided by the commenters for revising the proposed rule include: the current scheme would allow large inconsistencies among permit writers and among States regarding reverification schedules included in permits; unnecessary costs would be imposed without environmental benefit; the reverification requirement would effectively undo EPA's decision not to require annual performance testing of parameter monitors; the many existing standards that use parameter monitoring require only one performance test to verify compliance; and most parameter correlations do not change with time.

Response: The final rule deletes this requirement. The extent to which indicator ranges should be reestablished will require case-specific evaluations. Under section 114 of the Act, EPA can always require such reverification when necessary to assume the appropriateness of the monitoring.

Letter(s): American Gas Association (IV-D-265); Arkla Energy Resources Company (IV-D-343); Dow Chemical Company (IV-D-260); E.I. DuPont de Nemours and Company (IV-D-329); Enviroplan (IV-D-372); Exxon Chemical Americas (IV-D-339); Mississippi River Transmission Corp. (IV-D-344); Natural Resources Defense Council, et al. (IV-D-225)

Section 22.5: QA Requirements for CEMS and COMS

Comment a: A commenter recommended amending section 1.1 of proposed appendix D to specify that the section refers to gas CEMS and COMS. Another commenter asked whether the reference in section 1.1 of proposed appendix D to Method 203 in appendix M of part 51 was either a typographical error or a mistaken reference. The commenter said that if appendix F of part 60 contains all of the relevant requirements, appendix D should refer to appendix F of part 60.

A commenter proposed replacing the requirement that sources using gas CEMS conduct relative accuracy test audits once each year with a requirement that sources conduct a cylinder gas audit once each year. The commenter provided data to show that cylinder gas audits are as reliable as relative accuracy test audits but are less costly.

Response: This section is no longer applicable. For a CEMS and COMS the basic QA/QC requirements of the general provisions at Appendix B to part 60 will apply; however, the detailed QA requirements in Appendix F to part 60

are not required for part 64 purposes.

Letter(s): Dow Chemical Company (IV-D-260); Enviroplan (IV-D-372); Monsanto Company (IV-D-273)

Section 22.6: QA Plan Organization

Comment a: A commenter recommended deleting section 4 of proposed appendix D because its requirements are unreasonable and they would add tremendous burdens to the regulator and the regulated without additional environmental benefit. If section 4 is not deleted, the commenter proposed changing the QA plan submission requirement to requiring that the information be available for inspection after the startup of the monitor system, proposed limiting the applicability of section 4 to CEMS, and recommended addressing the cost of the requirement in the final RIA.

A commenter recommended modifying section 4.1 of proposed appendix D to substitute "may include" for "shall include at a minimum." Another commenter proposed amending section 4.1 of proposed appendix D to require checks at the frequency justified to the permitting authority, instead of a general daily requirement that can only be modified by the permitting authority. This approach, the commenter said, is more consistent with flexible EM selection and use of non-continuous methods. Finally, another commenter suggested amending section 4.1 of proposed appendix D to allow owners or operators to supersede manufacturers' preventive maintenance procedures with their own procedures and schedules. The commenter proposed language that would change the preventive maintenance procedures from those specified by the manufacturer to "documented" procedures.

A commenter proposed amending proposed appendix D to clarify that changes of a quality assurance plan do not require amending the operating permit in order to encourage sources to actively improve quality assurance plans. Finally, one commenter recommended eliminating proposed appendix D and incorporating its requirements into the body of the regulation.

Response: This provision has been deleted. The Agency does not believe that a requirement that a source maintain a detailed QA plan is necessary for monitoring designed to satisfy part 64.

Letter(s): Dow Chemical Company (IV-D-260); Exxon Chemical Americas (IV-D-339); Texas Chemical Council (IV-D-365)

Section 22.7: Miscellaneous QA/QC Issues

Comment a: An industry coalition group said that the requirement for QA/QC plans is extrapolated from CEMS requirements applicable to large boilers and other large sources, without regard to the reasonableness of applying them to smaller sources, and that EPA has not specified reasonable QA/QC requirements for sources not using CEMS, and has made no attempt to assess the reasonableness of costs for compliance. Some of the unnecessary and unreasonable requirements in appendix D include expensive periodic relative accuracy test requirements where the predictive parameter monitoring approach is used; annual reference method test requirements where DCPLs are used; periodic reassessment of capture and control efficiencies at VOC sources employing capture and control systems (section 3.5.2 of the September 1993 draft Enhanced Monitoring Reference Document); and independent audit of floating roof tank seals (also in section 3.5.2). This coalition added that appendix F QA/QC requirements are not as stringent as the QA/QC requirements of the rule. Consequently, the commenter argued, an estimate of appendix F costs understates the costs of a QA/QC program for COMS under the rule. The commenter also asserted that some QA/QC requirements would increase the stringency of emission standards (such as proposed appendix D, section 2.2). The coalition argued that EPA must develop a detailed model QA/QC plan for each protocol category under the rule that fully assesses the costs and benefits of such requirements.

A Federal agency recommended including all of the QA/QC requirements of an EPA-approved monitoring method in one subpart. The commenter noted that the QA requirements of part 60, appendix B, duplicate part 64, appendix D, but the program elements and requirements in each appendix conflict. The commenter also suggested including a certification program for personnel responsible for maintenance and calibration in appendix D.

Response: The Agency believes that the changes in the final rule address these comments by eliminating overlap with existing requirements and not applying detailed QA plan requirements.

Letter(s): Coalition for Clean Air Implementation (IV-D-304); Department of Energy (IV-D-358)

Section 23: General Appendix Issues

Section 23.1: General Stringency of Appendices

Comment a: Several commenters stated that the proposed appendices are too detailed, rigid, and costly to fulfill the intent of a flexible, cost-effective enhanced monitoring program. Some commenters stated that such detailed requirements would not allow for innovation or flexibility. One example provided by one commenter is that the specifications for gas chromatography require maintaining the sample train at a certain temperature that is impractical for processes involving corrosive substances. Others argued that the appendices bias the rule toward CEMS and EPA should clearly indicate that the appendices are limited to CEMS, CERMS and COMS applications, particularly for combustion stack applications and are not applicable to non-instrumental monitoring. Commenters also argued that for parameter monitoring the requirements in the proposed appendices are unclear and/or go far beyond current practice and what is reasonable.

Some commenters suggested that EPA provide increased discretion to permitting authorities in the appendices to allow them to work with sources on the appropriate details of performance and QA/QC requirements. One federal agency requested that the appendices allow for looking at manufacturer instructions and recommendations for establishing appropriate specifications.

One commenter explicitly supported the concept of including performance specifications, performance verification test procedures, and quality assurance/quality control requirements as appendices to the rule, although the commenter raised concerns with the proposed requirements.

However, other commenters supported the idea of moving the technical specifications to the Reference Document on the basis that this would allow for changing the specifications as technical advances are made and allow each EMP in the Reference Document to be referenced to a specific, rather than general set of standards.

One commenter objected to the stringency of the recordkeeping and reporting requirements in the appendices and recommended revising them to be more reasonable. This commenter provided as an example the requirement in section 4 of proposed appendix D that sources submit

organization charts, schedules, checklists, data sheets, preventive maintenance procedures, and format and locations of all records. The commenter argued that this requirement conveys no environmental benefit, is not justified and should be deleted.

Response: In response to these comments, the final rule replaces the proposed appendices with general performance and operating criteria that provide the necessary flexibility to implement cost-effective monitoring under part 64. See Section II.C. of the preamble to the final rule for further discussion.

Letter(s): American Automobile Manufacturers Association (IV-D-538); Chemical Manufacturers Association (IV-D-301); Department of Energy (IV-D-358); E.I. DuPont de Nemours and Company (IV-D-329); Eli Lilly and Company (IV-D-349); Energy Efficiency Systems, Inc. (IV-D-255); Exxon Chemical Americas (IV-D-339); Exxon Company, USA (IV-D-310); Gas Processors Association (IV-D-227); Mobil Oil Corporation (IV-D-285); Monsanto Company (IV-D-273); National Environmental Development Association (IV-D-334); Pharmaceutical Manufacturers Association (IV-D-367); Texas Chemical Council (IV-D-365)

Section 23.2: Reorganizing the Appendices

Comment a: Some commenters provided suggestions for revising the structure of the proposed appendices to clarify how the requirements apply to different types of EMPs. Generally, the commenters suggested that the appendices be structured around the type of monitoring employed instead of the current organization by performance specification type. One commenter recommended eliminating appendix D, and all protocol content, reporting and recordkeeping provisions in the various appendices, and incorporating the appropriate requirements from these former appendix provisions into the body of the regulation.

Response: These comments are no longer applicable given the approach adopted in the final rule.

Letter(s): Amoco Corporation (IV-D-244); E.I. DuPont de Nemours and Company (IV-D-329); Eastman Chemical Company (IV-D-347); Exxon Chemical Americas (IV-D-339)

Section 23.3: Adding Specifications for Certain Types of EMPs

Comment a: Several commenters noted that the proposed specifications are often unclear when applied to particular types of EMPs and suggested various additions to the appendices in order to clarify how an EMP can be shown to achieve the requirements of part 64. Commenters suggested adding specifications for EMPs that rely upon engineering calculations and recordkeeping. Commenters also suggested that specifications be developed for various types of parameter monitoring EMPs, as well as GC/MS and FTIR monitoring, and use of periodic portable monitoring.

Response: These comments are no longer applicable given the approach adopted in the final rule.

Letter(s): American Gas Association (IV-D-265); Arkla Energy Resources Company (IV-D-343); Columbia Gas System Service Corporation (IV-D-341); Department of Energy (IV-D-358); Mississippi River Transmission Corp. (IV-D-344); Motorola Inc. (IV-D-302)

Section 23.4: References to Existing Requirements

Comment a: A few commenters found the appendices confusing because they contained specific requirements applicable to CEMS, CERMS and COMS while at the same time requiring compliance with existing specifications through cross-references to existing performance specifications under part 60 and part 75. One commenter recommended deleting the cross-references to the requirements of other rules and adding simple and clear requirements and specifications because the existing specifications have been interpreted in many ways by different agencies. This will create confusion when these cross-referenced requirements are applied to the proposed rule. However, another commenter recommended deleting requirements in part 64 appendices that are already covered in appendix B to part 60 and then requiring that CEMS that measure opacity, SO₂, NO_x, O₂, or CO₂, and CERMS, meet the specifications of appendix B to part 60 on the basis that this would simplify implementation of the EM rule. Another commenter recommended removing from the appendices any requirements that duplicate or conflict with appendix B of 40 CFR part 60. The commenter noted that section 1.4.1 of appendix A requires all CEMs and COMs to follow the performance specifications of part 60, appendix

B. However, appendices B and C of part 64 require the use of calibration error while appendix B of part 60 requires the use of calibration drift.

Response: In response to these comments, CEMS, COMS or PEMS that satisfy existing performance requirements are presumptively acceptable for satisfying part 64, without a need for further specifications imposed under part 64.

Letter(s): Baltimore Gas and Electric Company (IV-D-296); Monsanto Company (IV-D-273)

Comment b: Finally, one commenter recommended that owners or operators be allowed to average CEMS data on a 15-minute or less basis. The commenter believed that if the average must be a 15-minute average, a source automatically loses data availability during automatic span adjustments. For example, if the adjustment takes 10 minutes, the proposed reliance on existing 15-minute averages would not allow the source to include that data point toward data availability.

Response: As noted above, the final rule requires CEMS to meet existing performance requirements, which generally require at least one data point every 15 minutes. Moreover, existing requirements generally allow for less than the minimum of four equally spaced data points to calculate an hourly average if one or two points are unavailable because of required QA activities.

Letter(s): Phelps Dodge Corporation (IV-D-483)

Section 23.5: Ability to Revise Specifications

Comment a: Certain commenters recommended revising the performance standards to expressly allow sources to modify and verify their detailed submissions in applications, in light of performance testing. The commenters stated that a number of the requirements, such as specified parametric relationships, cannot reliably be developed until after a monitoring protocol is in use, and that this revision would allow sources and permitting authorities flexibility to adjust initial calculations in permit applications in light of actual test results, and would streamline permit processing without compromising monitoring quality in any way. One commenter recommended clarifying

section 1.1 of proposed appendix A to specify that proposed performance specifications are subject to verification and modification after performance tests are completed. Accurate parametric relationship limits may be impossible to develop until after a system is installed and a performance test has been run under representative operating conditions.

A commenter also recommended clarifying section 1.4 of proposed appendix A to take into account the difficulty of developing accurate and realistic performance specifications and limits until after the monitoring system has been installed and performance tests have been run under representative operating conditions.

Response: The structure of the final rule addresses these concerns.

Letter(s): American Automobile Manufacturers Association (IV-D-538);
Pharmaceutical Manufacturers Association (IV-D-367)

Section 23.6: Miscellaneous Recommendations

Comment a: One commenter recommended reviewing the appendices to ensure that all equations are accurate. Finally, another commenter recommended clarifying that for certain CEMS applications (e.g., use of VOC CEMS for toxics) off-site analysis of on-site field samples is permissible.

Response: This comment is no longer applicable.

Letter(s): Department of Energy (IV-D-358); Motorola Inc. (IV-D-302)

APPENDIX I-A

LIST OF COMMENT LETTERS FOR RESPONSE (Part I): EPA AIR DOCKET A-91-52

SORTED BY ORGANIZATION

<u>Commenting Organization</u>	<u>Docket No.</u>
A & L Plains Agricultural Laboratories, Inc.* ¹	IV-D-407
Adams, Waylon (Energas Company)*	IV-D-196
Ag-Co, "The Agriculture Company"*	IV-D-176
Agribusiness Association of Iowa**	IV-D-529
Air Compliance Total Services (ACTS)	IV-D-19
Alabama Department of Environmental Management	IV-D-453
Albus, Joyce A.*	IV-D-166
Alcan Rolled Products Company	IV-D-519
ALCOA	IV-D-288
Allegheny County Health Dept., Bureau of Env. Quality	IV-D-484
Allied Signal, Inc.	IV-D-313
Allison, Karen (Energas Company)*	IV-D-189
Aluminum Association, The	IV-D-378
Alyeska Pipeline Service Company	IV-D-360
Amarillo Gear Company*	IV-D-164
American Automobile Manufacturers Association**	IV-D-538
American Automobile Manufacturers Association ²	IV-D-291
American Bakers Association	IV-D-465
<i>American Bakers Association</i> ³	IV-D-506
American Bank of Commerce at Wolfforth*	IV-D-369
American Cyanamid Company	IV-D-201
American Electronics Association, Clean Air Task Force	IV-D-437
American Foundrymen's Society, Inc.	IV-D-294
American Gas Association	IV-D-265

¹ Comment letters marked with a single asterisk have comments summarized under sections 6.9 and 7.13 of the Response to Comment Document. Letters marked with two asterisks have comments summarized under section 7.13.

² This comment letter was superceded by IV-D-538.

³ The use of italics indicates that a letter is a duplicate docket entry. These duplicates are not listed in the lists of commenters that appear in the body of the Response to Comments Document.

<u>Commenting Organization</u>	<u>Docket No.</u>
American Gas Association	IV-F-3
American Petroleum Institute	IV-D-289
American Portland Cement Alliance**	IV-D-284
American Textile Manufacturers Institute	IV-D-440
Amoco Corporation**	IV-D-244
Appalachian Mountain Club, Northern New England Regional Office	IV-D-5
Appling & Kyle Insurance *	IV-D-187
ARCO**	IV-D-396
Arizona Public Service Company	IV-D-18
Arkansas Department of Pollution Control and Technology	IV-D-3
Arkansas Western Gas Company	IV-D-346
Arkla Energy Resources Company	IV-D-343
Armco Steel Company**	IV-D-395
ASARCO**	IV-D-327
Ash Grove Cement Company	IV-D-311
Ashland Petroleum Company	IV-D-307
Asphalt Roofing Manufacturers Association	IV-D-495
Association of International Automobile Manufacturers**	IV-D-264
AT&T	IV-D-361
AT&T	IV-F-1
Atmos Energy Corporation *	IV-D-212
<i>Atmos Energy Corporation</i>	IV-D-400
Aztec Gas, Inc. *	IV-D-30
Babcock & Wilcox	IV-D-398
Bailey, Kim *	IV-D-59
Balderas, Judy *	IV-D-149
Baltimore Gas and Electric Company *	IV-D-296
Bank of the Panhandle *	IV-D-540
BASF Corporation	IV-D-325
Bay Area Air Quality Management District	IV-D-402
Bear Creek Farms, Inc. *	IV-D-420
Bear Creek Farms, Inc. *	IV-D-430
Beauchamp, Howard *	IV-D-55
Beeker, Loyd *	IV-D-47
Bennett, Billy *	IV-D-42
Bezner Cattle & Grain, Inc. *	IV-D-419
Blackmon, Rhonda *	IV-D-110
Blakey, L.B. *	IV-D-127
Blodgett, Raymond C. *	IV-D-102

Commenting OrganizationDocket No.

Boeing Company, The	IV-D-337
Boles Financial Center*	IV-D-412
Bonds, Mr. and Mrs. G.J.*	IV-D-144
Boyd, Thomas H.*	IV-D-100
BP Oil Company	IV-D-315
Bradley, Doris*	IV-D-115
Bradley, M.J.*	IV-D-90
Brain, Kenneth*	IV-D-57
Braintree Electric Light Department	IV-D-178
Breadland Farms, Inc.*	IV-D-429
Breadland Farms, Inc.*	IV-D-432
Brooks, E. Leon (Energas Company)*	IV-D-194
Brown, Billy B.*	IV-D-125
Brown, Lillian*	IV-D-97
Brown, Porter*	IV-D-122
Buffalo Color Corporation	IV-D-466
Buldmans, K.*	IV-D-148
Bunge Corporation	IV-D-444
Burnham Foundry	IV-D-446
Burton, Jacqueline J.*	IV-D-87
Buschman, Alvin*	IV-D-95
Buschman, Mark*	IV-D-168
Buschman, Terry*	IV-D-93
Buschman, Tim*	IV-D-94
C & L Hay, Inc.*	IV-D-516
California Air Resources Board**	IV-D-387
Can Manufacturers Institute	IV-D-478
Canerty, D.*	IV-D-101
Carolina Power & Light Company	IV-D-297
Caterpillar Inc.	IV-D-497
Catherall, Pete (Energas Company)*	IV-D-191
Cattle Town, Inc.*	IV-D-177
Cavitt, Glen*	IV-D-58
Center for Process Analytical Chemistry	IV-D-318
Centerior Energy Corporation	IV-D-352
Chaney, Jim*	IV-D-155
Chase, Hal*	IV-D-39
Chase, Jeff*	IV-D-133
Chemical Manufacturers Association**	IV-D-301
Chesher, Jimmy*	IV-D-130

Commenting OrganizationDocket No.

Chevron**	IV-D-397
Chicago Heights Steel**	IV-D-515
China Clay Producers Association, Inc.	IV-D-254
Cincinnati Gas & Electric Company	IV-D-259
Circle 8 Land Co., Inc.*	IV-D-433
City Bank*	IV-D-427
City Gas Company of Florida	IV-D-184
City National Bank & Trust Company, The*	IV-D-305
City of Floydada*	IV-D-404
City of Slaton*	IV-D-188
Clark, B.*	IV-D-99
Class of '85 Regulatory Response Group	IV-D-338
Clean Air Implementation Project**	IV-D-242
Coalition for Clean Air Implementation	IV-D-304
Cody, Kent*	IV-D-106
Cogentrix Inc.	IV-D-17
Cole, Marguerite*	IV-D-123
Colorado Association of Commerce and Industry	IV-D-243
<i>Colorado Association of Commerce and Industry</i>	IV-D-436
Colorado Department of Health	IV-D-209
Columbia Gas System Service Corporation	IV-D-341
Connecticut Municipal Electric Energy Cooperative	IV-D-226
CONSAD Research Corporation	IV-D-335
Consolidated Natural Gas Company	IV-D-350
Copeland, Bob*	IV-D-154
Corn Refiners Association, Inc.**	IV-D-391
Council of Industrial Boiler Owners	IV-D-319
County Sanitation Districts of Orange County, California	IV-D-235
Cranshaw, Jerry*	IV-D-71
D.K.S. Ranch, L.L.C.*	IV-D-415
Daniel, Albert*	IV-D-117
Davis Gas Processing, Inc.*	IV-D-28
Davis, William H.*	IV-D-141
Delhi Gas Pipeline Corporation	IV-D-351
Delmarva Power	IV-D-16
Department of Energy**	IV-D-358
Department of the Navy	IV-D-206
Dettle, Jack N.*	IV-D-137
Dimmitt Agri Industries, Inc.*	IV-D-450
Dimmitt Equipment Co.*	IV-D-408

<u>Commenting Organization</u>	<u>Docket No.</u>
Distilled Spirits Council of the United States	IV-D-300
Dow Chemical Company**	IV-D-260
Dow Chemical Company	IV-D-526
DuPont Gulf Coast Regional Manufacturing Services	IV-D-534
Duquesne Light	IV-D-375
Duquesne Light	IV-D-13
Durham, Robert*	IV-D-78
E.I. DuPont de Nemours and Company**	IV-D-329
<i>E.I. DuPont De Nemours and Company</i>	IV-D-353
Earl, Jackie*	IV-D-64
East Ohio Gas Company, The	IV-D-355
Eastman Chemical Company**	IV-D-347
Eastman Kodak Company	IV-D-333
Edwards, Almeda*	IV-D-434
Edwards, Percy*	IV-D-61
El Paso Natural Gas Company	IV-D-271
Eli Lilly and Company	IV-D-349
Energas Company*	IV-D-31
Energy Efficiency Systems, Inc.	IV-D-237
<i>Energy Efficiency Systems, Inc.</i>	IV-D-255
Engine Manufacturers Association*	IV-D-490
ENRON Operations Corp.	IV-D-390
<i>ENRON Operations Corp.</i>	IV-D-470
Enserch Development Corp.	IV-D-239
Enserch Processing, Inc.	IV-D-210
Entergy**	IV-D-281
Entex	IV-D-366
Enviroplan	IV-D-372
Equitable Resources, Inc.	IV-D-388
Eubank, Blain*	IV-D-204
Exxon Chemical Americas	IV-D-339
Exxon Company, USA	IV-D-310
Farmers Canal Company*	IV-D-509
Farner, David*	IV-D-40
Fertilizer Institute, The	IV-D-251
Fields, Billy R.*	IV-D-126
First National Bank *	IV-D-384
Flint Rock Land & Cattle Corporation *	IV-D-448
Fort Howard Corporation	IV-D-233
Gas Processors Association	IV-D-227

<u>Commenting Organization</u>	<u>Docket No.</u>
Gas Research Institute	IV-D-303
Gas Service, Western Resource Company *	IV-D-118
General Electric Company	IV-D-2
General Electric Company	IV-D-278
General Electric Company	IV-F-2
General Electric, Power Generation	IV-D-20
Gent, David *	IV-D-48
Georgia Department of Natural Resources	IV-D-377
Gerber, D. *	IV-D-38
Goodyear Tire and Rubber Company, The	IV-D-292
GPM Gas Services Company	IV-D-229
Graham Farms Inc. *	IV-D-413
Grant County Bank *	IV-D-511
Great Lakes Gas Transmission Company	IV-D-474
Greater Cincinnati Chamber of Commerce	IV-D-224
<i>Greater Cincinnati Chamber of Commerce</i>	IV-D-504
Greater Cleveland Growth Association	IV-D-314
Greeley Gas Company *	IV-D-501
Greene, Lenn *	IV-D-37
Gulfside Industries	IV-D-207
Gwen, Ben T. *	IV-D-169
H Bar H Turf Farms L.C. *	IV-D-452
Hahern, Phil *	IV-D-535
Hall, S. Gene *	IV-D-75
Harper County Farms, Inc. *	IV-D-414
Hartman, Carl and Lorene *	IV-D-109
Hartman, Floyd *	IV-D-96
Hazardous Waste Treatment Council	IV-D-392
Henderson, Max *	IV-D-139
High Plains Federal Land Bank Association of Pampa *	IV-D-186
High Plains Underground Water Conservation District No. 1 *	IV-D-308
High Plains Underground Water Conservation District No. 1 *	IV-D-381
Hodges, Roy B. *	IV-D-121
Houston Lighting & Power Company	IV-D-322
Houston Lighting & Power Company	IV-D-530
Howell, Arcilia *	IV-D-82
Hutto, Gayle *	IV-D-104
Illinois Environmental Protection Agency	IV-D-518
Illinois Power Company	IV-D-274
Independent Liquid Terminals Association	IV-D-468

Commenting OrganizationDocket No.

Independent Liquid Terminals Association	IV-F-4
Individual Farmer Letters, 24 Total*	IV-D-494
Individual Farmer Letters, 44 Total*	IV-D-500
Individual Farmer Letters, 60 Total*	IV-D-533
Individual Farmer Letters, 1673 Total*	IV-D-488
Institute of Clean Air Companies	IV-D-379
International Business Machines Corporation	IV-D-238
<i>International Business Machines Corporation</i>	IV-D-386
Iowa Department of Natural Resources	IV-D-4
Iten Industries*	IV-D-219
Jackrin, Charles S.*	IV-D-162
Jackson, Linda *	IV-D-167
Jackson, Linda M.*	IV-D-66
Jackson, Vernon L.*	IV-D-140
Johnson, W.C.*	IV-D-119
Kaiser Aluminum & Chemical Corporation	IV-D-295
Kaiser Aluminum & Chemical Corporation, Primary Prod. Div.	IV-D-368
Kansas AAM, Inc.*	IV-D-406
Kansas City Water and Pollution Control Department*	IV-D-536
KBN Engineering and Applied Sciences, Inc.	IV-D-475
Kenfelil, John*	IV-D-63
Kennecott Corporation	IV-D-262
Kennedy, Danny*	IV-D-36
Kenulty, Diane*	IV-D-112
Kephart, Cecile*	IV-D-65
Kerr-McGee Chemical Corp.	IV-D-385
Kerr-McGee Corporation	IV-D-232
Kimball, Dan*	IV-D-41
Kingsford Products Company, The	IV-D-246
Kirk, Bob*	IV-D-32
Kissinger, Richard L. (Energas Company)*	IV-D-190
KN Energy*	IV-D-459
Koch Industries, Inc.	IV-D-332
Kuehler, Robert*	IV-D-70
Large Public Power Council	IV-D-336
Lawson, Kermit B.*	IV-D-165
Leather Industries of America	IV-D-286
Leighty AG. Appraisal Service*	IV-D-458
Lewis, Wanda*	IV-D-84
Lockney Cooperative*	IV-D-447

<u>Commenting Organization</u>	<u>Docket No.</u>
Lodehoff, Orville*	IV-D-128
Lone Star Energy Company	IV-D-401
Lone Star Gas Company	IV-D-211
Looney, Anthony*	IV-D-34
Los Angeles County Sanitation Districts**	IV-D-26
Los Angeles Water and Power Department	IV-D-245
Louisiana Mid-Continent Oil and Gas Association	IV-D-454
Lower Colorado River Authority, et al.**	IV-D-256
Lowry, Dwayne*	IV-D-52
Lubrizol Corporation, The	IV-D-306
Lust, Houston*	IV-D-171
Macia, J.*	IV-D-85
Maples, Glen and Ruth Mary*	IV-D-73
Marathon Oil Company	IV-D-376
Mart, Jon*	IV-D-113
Martinez, J.S.*	IV-D-80
Maryland Department of the Environment	IV-D-223
Mason, Lahill*	IV-D-83
Mcbane, James O.*	IV-D-56
McClellan Creek Soil and Water Conservation District No. 156*	IV-D-202
McGaugh, Jimmy D.*	IV-D-68
McGaugh, June*	IV-D-67
McWaters, Glen L.*	IV-D-159
Merck & Co., Inc.	IV-D-443
Michigan Department of Natural Resources	IV-D-438
Mid-America Sprayers*	IV-D-451
Mid-America Sprayers*	IV-D-512
Mighty-Mite Inc.*	IV-D-222
Miller, Lyle and Mark*	IV-D-146
Minco Oil and Gas Co.*	IV-D-180
Minnesota Pollution Control Agency	IV-D-469
Mississippi Chemical Corporation	IV-D-179
<i>Mississippi Chemical Corporation</i>	IV-D-393
Mississippi Department of Environmental Quality, State of	IV-D-472
Mississippi River Transmission Corp.	IV-D-344
Mitchell Farms*	IV-D-528
Mitchell, Brian*	IV-D-215
Mitchell, Kenneth*	IV-D-216
Mobil Oil Corporation	IV-D-285
Monsanto Company**	IV-D-273

<u>Commenting Organization</u>	<u>Docket No.</u>
Montana Power Company	IV-D-499
Montana-Dakota Utilities Co.	IV-D-517
Moore Farms, Ltd.*	IV-D-173
Motorola Inc.	IV-D-302
National Association of Manufacturers	IV-D-261
National Environmental Development Association**	IV-D-334
National Environmental Development Association	IV-F-6
National Grain and Feed Association**	IV-D-312
National Oilseed Processors Association	IV-D-267
National Petroleum Refiners Association	IV-D-276
Natural Gas Pipeline Company of America	IV-D-248
Natural Resources Defense Council	IV-F-5
Natural Resources Defense Council, et al.	IV-D-225
Nebraska Grain Gorghum Producers Association*	IV-D-513
Nebraska Grain Sorghum Development, Utilization and Marketing Board*	IV-D-403
NESCAUM	IV-D-253
New Mexico Environment Department	IV-D-247
New Mexico Oil and Gas Association	IV-D-228
New United Motor Manufacturing, Inc.	IV-D-467
<i>New United Motor Manufacturing, Inc.</i>	IV-D-496
New York State Department of Environmental Conservation	IV-D-269
Niagara Mohawk Power Corporation	IV-D-317
Noble, Dave*	IV-D-108
North Dakota Department of Health and Consolidated Laboratories	IV-D-250
North Dakota Department of Health and Consolidated Laboratories	IV-D-471
Northern Illinois Gas	IV-D-249
Northwest Pipeline Corporation	IV-D-270
Nuzrich, Polly*	IV-D-60
O'Neal, Gary*	IV-D-98
Obrecht, P.*	IV-D-542
Occidental Chemical Corporation	IV-D-240
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

<u>Commenting Organization</u>	<u>Docket No.</u>
Ohio Electric Utilities Institute	IV-D-10
Ohio Electric Utilities Institute	IV-D-323
<i>Ohio Electric Utilities Institute</i>	IV-D-441
Ohio EPA	IV-D-283
<i>Ohio EPA</i>	IV-D-356
Ohio Manufacturers Association	IV-D-348
Ohio Power Company	IV-D-14
Oklahoma Department of Environmental Quality	IV-D-463
Oklahoma Farm Bureau*	IV-D-442
Oklahoma Farmer-Stockman*	IV-D-182
Oklahoma Grain and Feed Association	IV-D-485
Oklahoma Panhandle Agriculture & Irrigation*	IV-D-416
Oppliger, Don*	IV-D-198
Osborne, Jack*	IV-D-134
Osborne, James W.*	IV-D-92
Osborne, Thad*	IV-D-203
Owens, Art*	IV-D-51
Pacific Engineering Corporation	IV-D-523
Pacific Gas Transmission Co.	IV-D-234
Painter, Albert*	IV-D-50
Painter, Roy J.*	IV-D-114
Panhandle Ground Water Conservation District No. 5*	IV-D-174
Parks, LaVerne*	IV-D-151
Parks, Lynn*	IV-D-170
Parks, Rosemary*	IV-D-150
Parks, Wade*	IV-D-147
Paul, Dave*	IV-D-33
Pavilion Technologies, Inc.	IV-D-309
Pendleton, Charles*	IV-D-145
Pendleton, W.R.*	IV-D-107
Penka Land & Cattle*	IV-D-502
Pennsylvania Department of Environmental Resources	IV-D-15
<i>Pennsylvania Department of Environmental Resources</i>	IV-D-482
Pennsylvania Department of Environmental Resources	IV-D-464
Pennzoil Company	IV-D-373
People's Natural Gas Company	IV-D-27
Peoples Gas Light and Coke Company, The**	IV-D-527
Peoples Natural Gas*	IV-D-298
Pharmaceutical Manufacturers Association	IV-D-367
Phelps Dodge Corporation	IV-D-483

<u>Commenting Organization</u>	<u>Docket No.</u>
Phillips Petroleum Company	IV-D-380
Plains Cotton Growers, Inc.*	IV-D-461
Plains State Bank, The*	IV-D-299
PQ Corporation, The	IV-D-25
PQ Corporation, The ⁴	IV-D-521
Premier Farms*	IV-D-426
Preston, Alvin H.*	IV-D-103
Printing Industries of America, Inc.	IV-D-473
Procter & Gamble Company	IV-D-330
PSI Energy	IV-D-21
Public Service Company of Oklahoma**	IV-D-477
Public Service Electric and Gas Company	IV-D-282
Public Systems	IV-D-345
Questar Corporation	IV-D-505
Questar Pipeline Company	IV-D-480
R.J. Reynolds Tobacco Company	IV-D-258
R.R. Donnelley & Sons Co.	IV-D-241
Rainey, Jack*	IV-D-91
Ramming, Kelly*	IV-D-157
Ramming, Nita*	IV-D-156
Ramsey, Craig*	IV-D-514
Rapstine, Ben	IV-D-135
Rawhide Agri, Inc.*	IV-D-422
Regional Air Pollution Control Agency	IV-D-532
Reynolds Metals Company	IV-D-374
Reynolds, R.B.*	IV-D-131
Riffe, Bill and Kathy*	IV-D-138
Riley, Linda*	IV-D-29
Roberts, Randall*	IV-D-142
Robinson Land & Cattle Co., Inc.*	IV-D-181
Robinson, Charles*	IV-D-46
Rocky Mountain Oil and Gas Association	IV-D-183
Roesch, Becky L.*	IV-D-111
Roth, Stacy (Energas Company)*	IV-D-195
Rubber Manufacturers Association**	IV-D-331
Safety-Kleen Corporation	IV-D-22
Sageser, Chris and Raynie*	IV-D-129

⁴ Includes correction to page 2 of IV-D-25.

Commenting OrganizationDocket No.

Saper Farms Inc.*	IV-D-539
Schlem, Constance*	IV-D-53
Schowalter Foundation, Inc., The*	IV-D-455
Scott Land Company*	IV-D-423
Scott Specialty Gases, Inc.	IV-D-236
Scott, Tom*	IV-D-120
Self, Weldon H.*	IV-D-163
Servi-Tech, Inc.*	IV-D-503
Sharp, Doug*	IV-D-218
<i>Sharp, Doug</i>	IV-D-220
Shell Oil Company	IV-D-280
Sherman County Soil and Water Conservation District*	IV-D-175
Shields, A.*	IV-D-541
Sierra Club Air Quality Committee	IV-D-12
Sierra Club, Lone Star Chapter	IV-D-364
Sierra Club, Pennsylvania Chapter	IV-D-23
Sims, Laurie*	IV-D-81
Skyview Inc.*	IV-D-410
Smith Potato, Inc.*	IV-D-72
Smith, Nielan*	IV-D-49
Society of the Plastics Industry, Inc., The	IV-D-287
Society of the Plastics Industry, Inc., The	IV-D-6
Solar Turbines	IV-D-7
South Carolina Electric & Gas Company	IV-D-394
South Coast Air Quality Management District**	IV-D-524
South Norwalk Electric Works, The	IV-D-457
Southern California Gas Co.	IV-D-290
Southern Union Gas**	IV-D-8
Southern Union Gas*	IV-D-9
<i>Southern Union Gas</i>	IV-D-481
Southwest Agri Center, Inc.*	IV-D-383
Southwest Kansas Groundwater Management District*	IV-D-205
Southwestern Barge Fleet Service, Inc.	IV-D-476
Southwestern Public Service Company	IV-D-272
Specialty Steel Industry of the United States	IV-D-328
Sprecker Farm, Inc.*	IV-D-507
Stallwitz Farms; Darren, Kent and Eddie Stallwitz*	IV-D-76
Stark, Marla (Energas Company)*	IV-D-193
STAPPA/ALAPCO	IV-D-439
State of Arkansas, Department of Pollution Control and	IV-D-11

Commenting OrganizationDocket No.

Ecology	
Steel Manufacturers Association	IV-D-326
Stone, Carolina*	IV-D-89
Sugar Cane Growers Cooperative of Florida, et al.	IV-D-252
Sun Company, Inc.	IV-D-231
Superior Motor Parts of El Campo, Inc.*	IV-D-411
Swalar Co.*	IV-D-199
Synthetic Organic Chemical Manufacturers Association	IV-D-1
Synthetic Organic Chemical Manufacturers Association**	IV-D-362
T & S Gin Inc.*	IV-D-197
Taylor, Richard L.*	IV-D-77
Taylor, Steve*	IV-D-74
Tenneco Gas	IV-D-263
Tennessee Department of Environment and Conservation	IV-D-399
Tennessee Valley Authority	IV-D-389
Texaco Inc.**	IV-D-357
Texas Agricultural Cooperative Council*	IV-D-460
Texas Chemical Council	IV-D-365
Texas County Farm Bureau*	IV-D-418
Texas County Irrigation and Water Resources Association*	IV-D-417
Texas Intrastate Natural Gas Pipelines	IV-D-221
Texas Mid-Continent Oil & Gas Association	IV-D-435
Texas Natural Resource Conservation Commission*	IV-D-371
Texas Utilities Services, Inc.**	IV-D-257
Thomas, James E.*	IV-D-152
Thomas, Robert F.*	IV-D-217
Three Grains Corporation*	IV-D-498
Thurman, Danny*	IV-D-54
Thurow Cattle Company*	IV-D-409
Toledo Area Chamber of Commerce	IV-D-491
Tombstone, Truman*	IV-D-69
Tosco Refining Company	IV-D-316
Total Petroleum, Inc	IV-D-354
Town of Wallingford, Connecticut	IV-D-275
Tres Palacios Corporation*	IV-D-508
Tri-TAC	IV-D-24
U.S. Steel Group, The	IV-D-340
Union Camp	IV-D-359
Union Carbide Corporation	IV-D-293
Unison Institute	IV-F-7

<u>Commenting Organization</u>	<u>Docket No.</u>
United Parcel Service**	IV-D-320
United States Department of the Interior	IV-D-537
United States Sugar Corporation	IV-D-382
Unocal Corporation	IV-D-268
Unruh, Allison and Ruby*	IV-D-158
Utah Division of Air Quality, State of	IV-D-487
Utility Air Regulatory Group	IV-D-489
Utility Air Regulatory Group ⁵	IV-D-277
Vaughn, Jay	IV-D-153
Vermont Petroleum Association	IV-D-492
Vogl, J.C.	IV-D-79
W.B. Johnston Grain Company	IV-D-486
W.W. Irrigation Engines	IV-D-172
Wainscott, David (Energas Company)	IV-D-192
Walker, Ray	IV-D-200
Walls, C. W.	IV-D-143
Walls, G.M.	IV-D-136
Walter, Bryan	IV-D-43
Warminski, Stephen	IV-D-124
Washington Department of Ecology	IV-D-279
Waukesha Engine Division, Dresser Industries Inc.	IV-D-342
Webb, R.O.	IV-D-105
Webb, Sammy	IV-D-35
Weese, Laura	IV-D-116
Western Kansas Groundwater Management District No. 1	IV-D-520
Westinghouse Electric Corporation	IV-D-321
Whirlpool Corporation	IV-D-493
White Real Estate	IV-D-449
White, Alvin	IV-D-161
White, Pauline	IV-D-160
Widener, Earl	IV-D-45
Wilkinson, Kathy	IV-D-88
Williams Natural Gas Company	IV-D-213
Williams, Billy R.	IV-D-214
Windrock, Inc.	IV-D-405
Winger and Sons	IV-D-421
Winger and Sons	IV-D-431
Wolfe, Jack	IV-D-185
Women Involved in Farm Economics (WIFE)	IV-D-424
Women Involved in Farm Economics (WIFE)	IV-D-425
Women Involved in Farm Economics (WIFE)	IV-D-428

⁵ This comment letter was superseded by IV-D-489.

Commenting Organization

Docket No.

Women Involved in Farm Economics (WIFE)	IV-D-456
Women Involved in Farm Economics (WIFE)	IV-D-510
Women Involved in Farm Economics (WIFE)	IV-D-522
Women Involved in Farm Economics (WIFE)	IV-D-525
Woodlee, Tom	IV-D-86
Woodward, E.	IV-D-62
Wyoming Department of Environmental Quality	IV-D-462
<i>Wyoming Department of Environmental Quality</i>	IV-D-479
Yost Farm Supply Ford & Mercury	IV-D-445
Young, J. Craig	IV-D-132
Young, Jerry	IV-D-44