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January 31, 1994

BY MESSENGER

Docket Clerk
Air Docket (LE-131)
U.S. Environmental Protection Agency
Room M-1500, Waterside Mall
401 M Street, S.W.
Washington, D.C. 20460

Re: Docket No. A-91-52, Enhanced Monitoring Program Under
The Clean Air Act Amendments of 1990 (IL-64-2-5807;
FRL-4787-6; RIN 2060-AD18

Comments of the Clean Air Implementation Project on
EPA's Proposed Enhanced Monitoring Program Regulations

Dear Sir or Madam:

Enclosed for inclusion in the docket for the above-referenced rulemaking are the comments of the Clean Air Implementation Project. I have enclosed an original and two copies for filing. Also enclosed is a duplicate original. Please stamp the cover page of the duplicate with the date of receipt and return it to me by the messenger making this delivery.

As requested, we are also providing the comments in computerized form. The enclosed IBM-compatible diskette was created with the WordPerfect 5.1 software package.

We appreciate your consideration. We would welcome the opportunity to meet with EPA staff to discuss the Project's comments.

Sincerely yours,

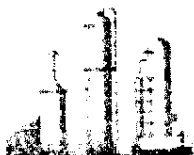


William H. Lewis
Counsel to the Clean Air
Implementation Project

Enclosure

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VEV-501848



NORBERT DEE, Ph. D.
Director, Environmental Affairs

File: CAA Enhanced Monitoring *10 → Jct*

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JAN 1 1993

January 10, 1994

MEMORANDUM

TO: Air Subcommittee

FROM: Norbert Dee 

SUBJECT: Proposed Rule on Enhanced Monitoring - Additional Information & Request for Comments

Enclosed is a summary prepared by API of the major issues associated with the proposed Enhanced Monitoring program, and a newsletter explaining the applicability, monitoring, and reporting requirements of the rule. The proposed rule (58 FR 54648) was sent to you on November 12, 1993.

Gerald Faudel is preparing comments on the proposed rule. **Please provide him your comments (FAX 303-860-6163) by close of business, Wednesday, January 19.** As he will be compiling the text of the comments, bullets or brief remarks on issues of importance will suffice. Any contributions to this effort will be greatly appreciated! Thank you.

Enclosures (2)

cc: Gerald Faudel

VEV-501849

Proposed Regulations for Enhanced Monitoring
of Air Pollutants at Major Stationary Sources
58 Fed. Reg. 54647 (October 22, 1993)

BACKGROUND: Since the passage of the Clean Air Act Amendments in 1970, new stationary sources of air pollutants have been able to show conformance with the emissions standards established by EPA by performing an initial compliance test shortly after starting operations. EPA then relied on surveillance techniques, such as state agency inspections, citizen complaints, or EPA actions, to identify additional compliance problems. The 1990 Clean Air Act Amendments require EPA to promulgate rules for enhanced monitoring of emissions and compliance certification for major stationary sources of air pollutants. The stated purpose of the monitoring program is to ensure continuous compliance with all applicable air quality regulations for each source, such as New Source Performance Standards (NSPS) or State Implementation Plan limitations. In the past, monitoring was required only for NSPS; the proposed rule expands the number of regulations for which monitoring is needed and, in some cases, the frequency of monitoring measurements.

PROBLEMS: The proposed regulations would require enhanced monitoring for all regulated emission units at a major stationary source that exceed certain thresholds ranging from as low as 3 tons per year in the most extreme ozone nonattainment areas to no higher than 30 tons per year in attainment areas. Owners or operators would be required to develop and receive approval of enhanced monitoring protocols through the Title V permitting process. The proposed regulations establish the criteria and procedures that owners or operators must satisfy in evaluating, selecting, and demonstrating enhanced monitoring for a facility. Monitoring may range from parametric monitoring (for example, sulfur content of fuels) to continuous emission monitors. The proposed rule would also add substantial recordkeeping and reporting requirements to allow EPA to determine whether the emission units have been in continuous compliance with the applicable regulations. Hazardous air pollutants (HAPs) for which there is a National Emission Standard for Hazardous Air Pollutants (NESHAP) will be regulated under these regulations; enhanced monitoring requirements for other HAPs will be developed as the MACT requirements are established.

The proposed regulations will require monitoring of SO₂, NO_x, and VOC emissions from petroleum facilities, including E&P facilities, refineries, and terminals at enormous cost. Enhanced Monitoring Protocols will be required for all facilities, prior to the installation of monitoring equipment. Estimated costs for monitoring at E&P facilities are \$156,500,000 (capital) and \$156,200,000 (annual); at refineries: \$206,200,000 (capital) and \$137,600,000 (annual); and at terminals: \$40,800,000 (annual costs, capital costs are estimated to be small). The regulations will also require additional recordkeeping and reporting for all facilities, although the costs associated with these increased requirements have not been estimated.

API has identified numerous problems with the proposed rules, including the following:

1. **Implementation of the Enhanced Monitoring Program Will be Costly, Inefficient, and Threatens to Overburden State Permitting Authorities.** Facilities will have to comply with the requirements of the States' permitting programs, established to comply with the Title V Operating Permits Program established by EPA. The state permitting authorities are already under considerable pressure to simply implement these

programs and issue operating permits within the time-frame established by Congress. The addition of the enhanced monitoring program to the already complex Title V permitting program threatens to bring the State permitting programs to a grinding halt.

2. **The Proposed Rule Would Effectively Increase the Stringency of the Underlying Emissions Limitations and Standards.** EPA asserts that the purpose of the proposed rule is to ensure continuous compliance with the underlying applicable emissions limitations and standards, not to increase the stringency of the underlying limitations and standards. Contrary to EPA's assertions, however, whenever the means of monitoring compliance with an emissions standard or limitation is changed, the stringency of the standard or limitation is also changed. A definite result of the proposed rules will be the increased stringency of any emission limitation or standard that is now not tied to a specific time interval.

3. **The Overly Complicated Enhanced Monitoring Proposal is Completely Unnecessary.** EPA's stated purpose for this proposal is to ensure that major stationary sources of air pollutants remain in continuous compliance with their applicable emission limitations and standards. The Title V Operating Permitting Program provides EPA and the states with the authority to carry out the stated purposes of the proposed Enhanced Monitoring regulations.

4. **Enhanced Monitoring Should Only be Required at Emissions Units that Independently Exceed the Major Stationary Source Thresholds.** EPA proposed that enhanced monitoring would be required at emissions units at major stationary sources of criteria pollutants if the emissions unit exceeds 30 percent of the applicable major stationary source threshold. An accurate assessment of the costs and benefits of enhanced monitoring will show that net benefits would be maximized by limiting the applicability of enhanced monitoring to emissions units that independently exceed the applicable major stationary source thresholds. EPA's own analysis demonstrates that the 30 percent applicability threshold does not maximize net benefits. At the very least, EPA must abandon the proposed 30 percent applicability level.

5. **The Proposed Rule will Severely Limit Emission Trading, Averaging, and Bubbling Applications.** Because of its proposed applicability threshold and its provisions concerning bubbling and netting at facilities, the proposed rule will severely limit emission trading, averaging, and bubbling applications. EPA's proposal would require enhanced monitoring for all emissions units in emissions averaging, aggregating, apportioning, or trading programs, if the total emissions of all emissions units in the program exceeds 30 percent of the applicable major stationary source threshold. Obviously, if the cost of enhanced monitoring at any emissions unit exceeds the benefits of including the emissions unit within the trading, averaging, or bubbling application, the owner or operator will choose to exclude the emissions unit from the program. Thus, clearly, EPA's approach will discourage bubbling applications, which have been a proven technique to substantially reduce air emissions while providing sources with operational flexibility.

6. The Enhanced Monitoring Reference Document is not Considered Part of the Rulemaking Package to be Finalized. The proposed rule places a heavily reliance on the monitoring protocols in the reference document which is not part of the formal rulemaking. The problem with EPA's proposed approach stems from the heavy reliance that state permitting authorities are likely to place on the Enhanced Monitoring Reference Document. Even though the proposed rule ostensibly allows owners and operators to propose something other than "established monitoring" for their enhanced monitoring protocol, the past experience of API's members suggest that they will encounter nearly insurmountable opposition if they propose something other than "established monitoring" to the state permitting authority.

7. Requirements for Facilities in Attainment Areas are as Stringent as Requirements for Facilities in Nonattainment Areas. The applicability requirements apply to facilities regardless of the severity of the air quality in an area. The proposed rule treats facilities in attainment areas as stringently as those in some nonattainment areas (the major source threshold for attainment areas is 100 tons per year, the same that it is for marginal and moderate ozone nonattainment areas).

SOLUTION:

1. Withdraw proposed rule entirely and allow the Title V permit programs set monitoring requirements. The goals of this proposed rule will be achieved through the monitoring provisions of the Title V operating permits rule.
2. If a proposed rule is promulgated:
 - a. Raise applicability emission threshold level to 100% of major source emission level for the area.
 - b. EPA should, at a minimum, ensure that the burden on a source proposing to use something other than "established monitoring" is no more onerous than sources that propose to use "established monitoring." Alternatively, EPA should establish an explicit, and expedited, procedure for adding and removing enhanced monitoring protocols from the reference document.
 - c. A better approach for the proposed rule, which would not discourage emissions trading programs to nearly the same extent as EPA's proposed approach, would be for the Agency to establish a single applicability threshold that would apply to all emissions units at major stationary sources of criteria air pollutants, regardless of whether or not the emissions unit is part of a emissions trading program or bubbling application.
 - d. EPA should explicitly state, and modify the proposed rule, that the implementation of enhanced monitoring protocols do not increase the stringency of underlying regulations and do not apply to underlying regulations with no time interval associated with them until further rulemaking on these underlying regulations is completed.
 - e. To address the applicability element, EPA should consider a two-tier approach: one for areas in which the facility is located which are in nonattainment status for the particular

pollutant, and a second for pollutants for which the area is in attainment status. The applicability threshold for pollutants in nonattainment status would be 100% of the major source emission threshold level established in the Clean Air Act (from 10 tons per year to 100 tons per year). The applicability threshold for pollutants in attainment status would 100% of the Prevention of Significant Deterioration program's definition for major source (100 tons per year of the specified source categories, 250 tons per year for all other source categories).



Air Issues Review is a series of newsletters focusing on permitting and regulatory issues.

In this issue...

- ♦ *New Monitoring Requirements*
- ♦ *Regulatory Update*
- ♦ *Enhanced Monitoring Applicability*
- ♦ *Enhanced Monitoring Selection Process*
- ♦ *Georgia: Ahead of the Title V Game*

New Monitoring Requirements: CEMs Everywhere?

For several years, new sources have been able to show conformance with U.S. EPA emissions standards by performing an initial compliance test shortly after start-up. EPA then relied on surveillance techniques, such as state agency inspections or citizen complaints, to identify additional compliance problems. Now, as part of the Title V operating permit program, facilities must demonstrate continuous compliance with applicable limits and standards. For certain sources, these new enhanced monitoring requirements will mean continuous emissions monitors (CEMs), while other sources will be able to use other acceptable monitoring techniques.

On October 22, EPA published its proposed enhanced monitoring rules in the *Federal Register* (58 FR 54648), which will be located in 40 CFR Part 64 when final. Although Title V is the main vehicle for implementing enhanced monitoring requirements, Title I programs such as NSR (PSD and nonattainment), NESHAP, and NSPS will also be affected.

As proposed, these rules include some of the more costly requirements of the 1990 CAAA. Although EPA projects that some 34,000 emissions units may be affected by the rules, early estimates in Texas alone approach this number.

Program Applicability

The proposed rules are quite specific as to the sources subject to the enhanced monitoring program (see the flowchart on p. 3). Applicability is divided into two categories: hazardous and criteria air pollutants.

Hazardous Air Pollutants (HAPs)

For sources of a regulated HAP, Part 64 will apply if a Title V permit is required and if an emissions unit is subject to existing NESHAP regulations (other than asbestos demolition and renovation). All other HAP regulations under Section 112 of the CAA (i.e., the new MACT standards in 40 CFR Part 63) will contain their own enhanced monitoring requirements.

Criteria Pollutants

For sources of criteria air pollutants, Part 64 will apply to emissions units that meet all of the following conditions:

- ♦ Are located at a major stationary source (as defined in the Title V rule)
- ♦ Have the potential to emit a regulated air pollutant for which the source is classified as major
- ♦ Have the potential to emit an amount equal to or greater than 30 percent of the tons-per-year threshold necessary to qualify the source as major for that pollutant

Note that exemptions apply to certain utility units.

In some cases, emissions from several units may be combined for determining applicability. The proposed rules are vague on this issue, allowing for suggestions during the public comment period (ending December 20) and giving the states flexibility in developing their rules. Current ideas include:

- ♦ A group of emissions units that averages, aggregates, apportions, or trades emissions is subject to Part 64 if collective potential emissions exceed the 30 percent threshold.
- ♦ Fugitive emissions may be combined on a process- or facility-wide basis. If total fugitive emissions from such areas exceed the 30 percent threshold, they are subject to Part 64.

Enhanced Monitoring Protocol (EMP)

For each emissions unit and regulated pollutant subject to the enhanced monitoring rule, a facility must propose an EMP, which requires regulatory approval. In developing an EMP for a particular source, the proposed rules state that the owner or operator must first

Continued on page 2

consider "established monitoring techniques" that exist under several current federal programs, including the NSPS, NESHAP, NSR, and acid rain programs. These techniques will not automatically qualify as enhanced monitoring, and the established program may have to be upgraded (see p. 4 for an overview of the enhanced monitoring selection process).

If there is no established monitoring technique for a particular type of emissions unit, or if a facility chooses not to use established monitoring techniques, it will be necessary to identify all technologically feasible monitoring methodologies and then select the technique that is "best" suited for the unit. The best technique may not be the most technologically sophisticated but must be appropriate when considering such site-specific factors as emissions variability and control system design.

To assist industry in preparing EMPs, EPA has produced the *Enhanced Monitoring Reference Document*. This document contains guidance on EMP development, established monitoring techniques, and example EMPs.

Acceptable Monitoring Techniques

Both the proposed rule and the *Enhanced Monitoring Reference Document* outline a number of techniques that may be accepted as enhanced monitoring, including:

- ♦ Continuous emission/opacity monitoring systems
- ♦ Continuous process or control device parameter monitoring systems (e.g., static pressure drop and liquor recirculation rate on a scrubber)
- ♦ Emission calculations based on accepted engineering estimation techniques (e.g., mass balances in limited situations)
- ♦ Periodic verification of emissions, process parameters, or control device parameters using portable or *in situ* measurement devices (e.g., periodic measurements by portable VOC analyzers on carbon bed systems)
- ♦ Recording program results due to specific operation and maintenance procedures, leak detection, fugitive dust control, or other work practices
- ♦ Any other form of emissions, process parameter, or control device parameter monitoring

Reporting Requirements

The proposed rules require enhanced monitoring data as the basis for an annual compliance certification to be submitted under each state's Title V operating permit program. In addition to this certification, facilities must submit a quarterly enhanced monitoring report for each EMP. Information required in the report includes, but is not limited to, a summary of the monitoring results, a compliance statement, and a summary of the number

and duration of any deviations and monitor downtime. Submitted monitoring results may be used *immediately* by the permitting authority for enforcement purposes, without requiring additional testing.

Other Key Issues

In addition to the applicability issues associated with combining emissions and problems associated with using monitoring data for immediate enforcement action, the proposed rules leave several other unresolved questions and areas for comment, including:

- ♦ **Timing:** Although EMPs are a Title V requirement, states may begin requiring them for Title I (preconstruction) permits.
- ♦ **Grandfathered Sources:** The rules imply that such sources will be covered, but states must decide which (if any) emissions standards apply.
- ♦ **Thirty Percent Threshold:** The thirty percent threshold will draw in far more sources than EPA estimated (e.g., 30 tons per year of CO from any unit or 7.5 tons per year of NO_x or VOCs from any unit in a severe nonattainment area).

A well-designed EMP is crucial to a permit application—it can be cost effective and accurate if appropriate techniques are used. A poor design, on the other hand, can increase operating expenses and compliance costs.

Note—This article is based on the proposed enhanced monitoring rule (subject to change) and the Enhanced Monitoring Reference Document. Δ

Regulatory Update

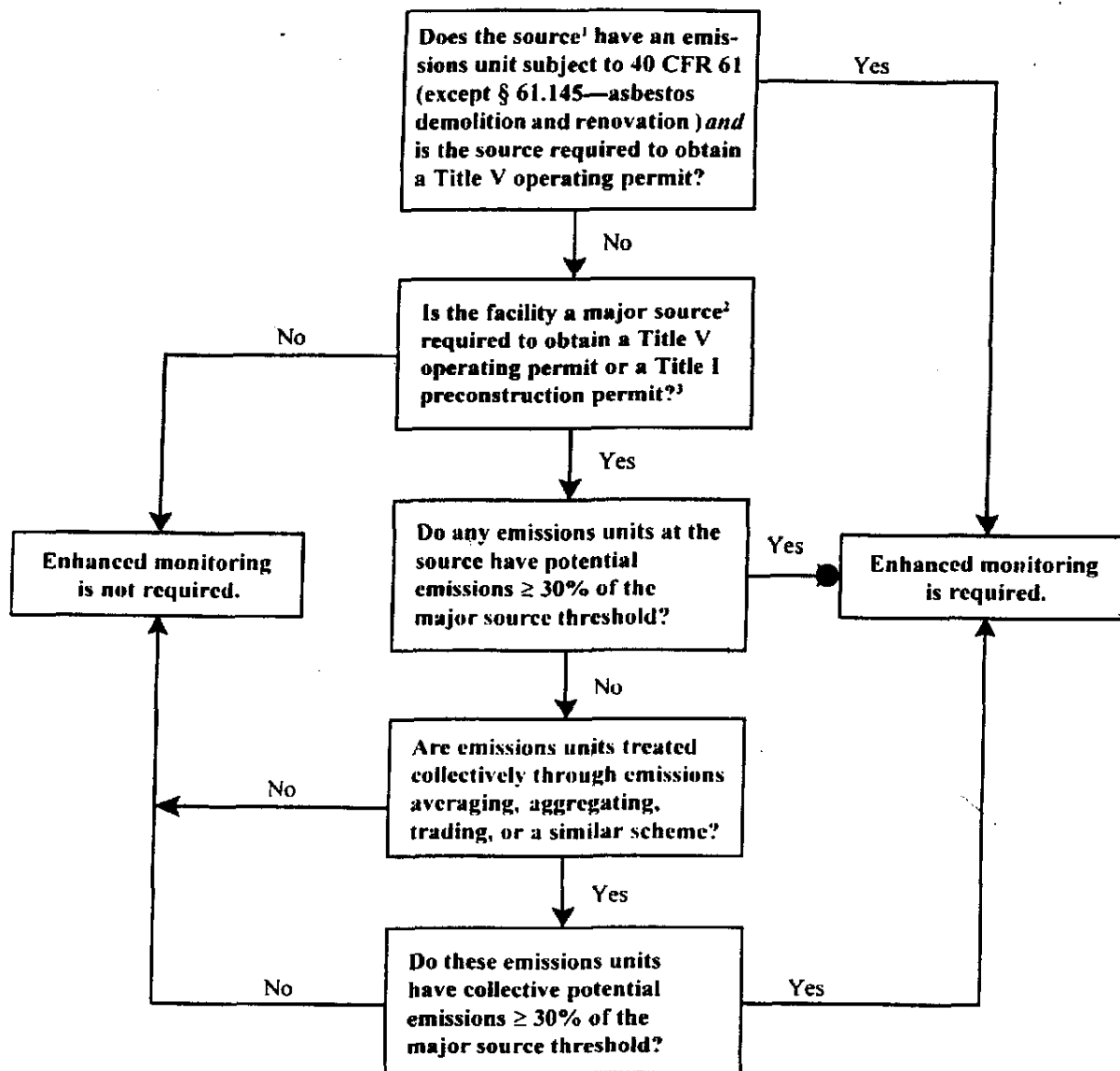
Trinity Consultants continues to track the numerous proposed and final EPA rules implementing the 1990 Clean Air Act Amendments. To keep our clients up to date on the latest regulations, we offer the following:

- ♦ **1990–1993 Summary of EPA Regulations:** Key regulations in the *Federal Register* from November 1990 through November 1993.
- ♦ **AIR Regulatory Update:** Beginning in December 1993, Trinity will publish a monthly supplement to *AIR*, the *AIR Regulatory Update*. This publication will include key *Federal Register* notices published that month.
- ♦ **Technical Papers:** Recent Trinity papers on permitting, regulations, and dispersion modeling.

To obtain any of these items or to be added to the monthly *AIR Regulatory Update* mailing list, please call or return the enclosed response card. Δ



Enhanced Monitoring Applicability Determination



Based on proposed EPA enhanced monitoring rule 58 FR 54648 dated October 22, 1993.

¹ Source refers to the facility as a whole, not to the individual emission points or units.

² For Part 64, a major source is defined as:

- Having the potential to emit 100 tons per year or more of any regulated air pollutant
- Having the potential to emit pollutants in excess of the definition of a major source under the nonattainment provisions of Title I.

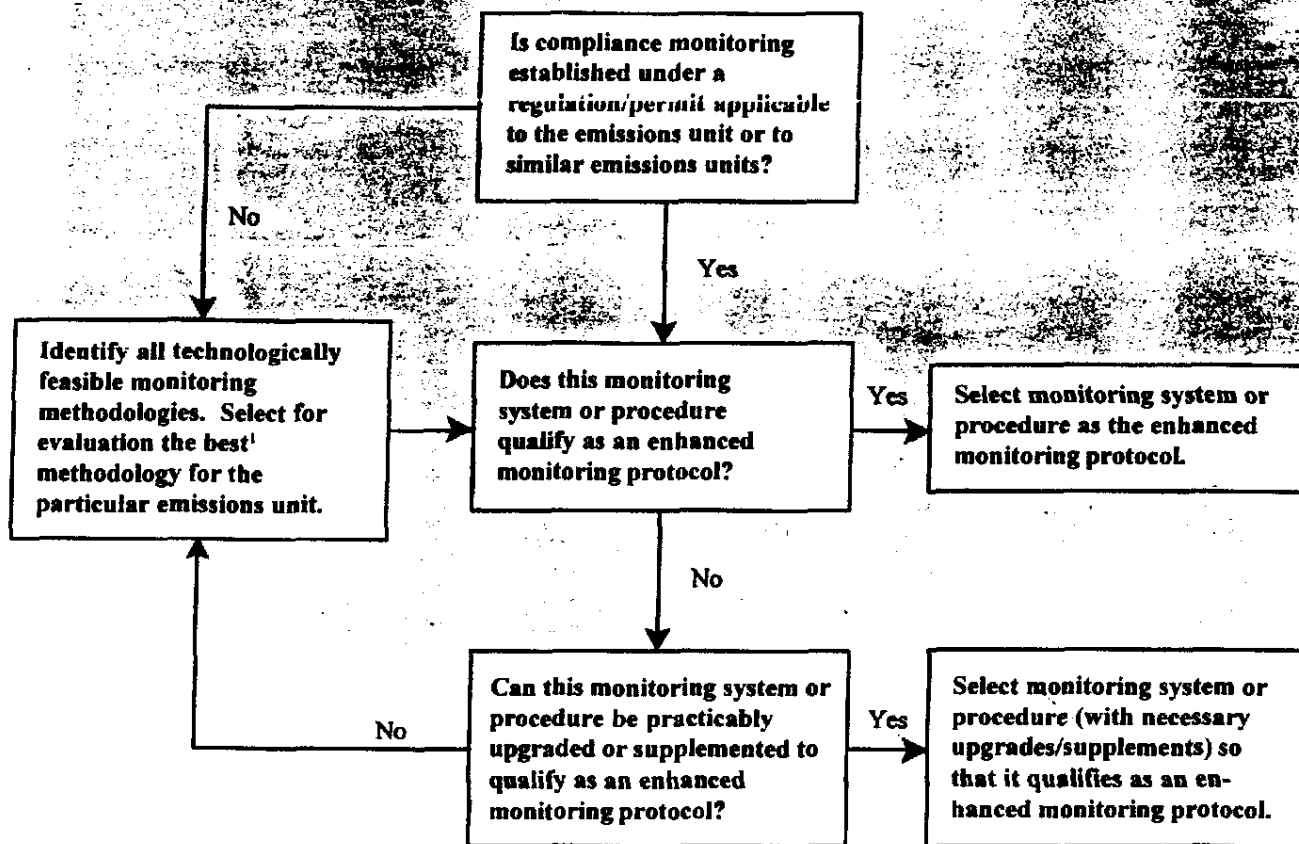
³ Answer this question for each criteria pollutant. Enhanced monitoring is not required for a pollutant if the source is not major for that pollutant.

Examples

Area Status	Pollutant	30% Threshold
Ozone Nonattainment (Extreme)	NO _x or VOC	3.0 tpy
Ozone Nonattainment (Severe)	NO _x or VOC	7.5 tpy
Ozone Nonattainment (Serious)	NO _x or VOC	15.0 tpy
Attainment	NO _x , VOC, SO ₂ , PM ₁₀ , or CO	30.0 tpy



Enhanced Monitoring Selection Process



Based on proposed EPA enhanced monitoring rule 58 FR 54648 dated October 22, 1993.

¹ Best is not intended to require a "top-down" selection process (i.e., best technologically and economically feasible system). Instead, the evaluation should consider site-specific factors such as emissions unit and control system design, operating processes, demonstrated margin of compliance, and the potential variability of emissions.

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Georgia: Ahead of the Title V Game

One of the key provisions of the 1990 Clean Air Act Amendments is the requirement that each state develop an operating permit program by November 15, 1993. With the deadline approaching, the state of Georgia took every measure throughout the year to ensure that its operating permit program would be ready for U.S. EPA submittal on time.

Since early summer, when the first draft of Georgia's Title V operating permit program was released, the state involved both industry and the public in a series of information sessions and workshops. In addition, the Georgia state legislature was the first in Region IV to grant full program authority to the Department of Natural Resources, Environmental Protection Division (EPD), the state's environmental regulatory agency.

Title V Program Provisions

To meet EPA's ambitious schedule for issuing permits, the Georgia EPD may begin accepting operating permit applications as early as July 1994. (See *AIR* No. 2 for a flowchart of sources required to obtain a Title V operating permit.) EPD has also indicated that it will try to stagger application due dates for companies with more than one facility in the state (the schedule is currently under development). Once a permit application has been submitted and deemed complete, the agency has 18 months to issue or deny the permit.

In keeping with the EPA guidelines as outlined in *AIR* No. 2, the Georgia operating permit program will allow three avenues for permit modification:

- Administrative amendments for minor changes or to incorporate state New Source Review (NSR), Prevention of Significant Deterioration (PSD), and nonattainment NSR permits
- Minor modifications for emissions changes that are less than 10 percent of permitted emissions for minor sources (20 percent for major sources) or five tons per year, whichever is less
- Major modifications, requiring extensive review

Permit Fees

Georgia adopted a new fee system on July 1, 1992. The state charges \$25 per ton for emissions of criteria pollutants exceeding 100 tons per year, with a cap of 4000 tons per year. The current fee system is based on actual emissions during the previous calendar year. Under the state's Title V operating permit program, however, emissions fees will be based on permit allowable emissions, and may take into account permitted hours of operation and/or fuel changes.

Under the new program, sources that were previously required to obtain a state operating permit must continue to have a state operating permit, regardless of the source's status under the Title V program. For more information on the Georgia program or on other state or federal air quality rules, call Trinity. Δ

Trinity's Air Quality Professionals

Mark Johnson
Regional Manager



When Mark Johnson became Trinity's first regional manager four years ago, the company was embarking on an expansion that has produced three regional and two district offices to date. As manager of the Kansas City office, Mark uses his wide-ranging

technical and regulatory expertise to help clients in the pulp and paper, electric utility, manufacturing, mineral products, and chemical industries with their air quality permitting needs.

Mark received a B.S. in zoology and chemistry, and an M.S. in animal ecology from Iowa State University. He joined Trinity in 1986 after five years with the Iowa Department of Natural Resources, where he managed air quality monitoring and modeling studies. Mark has been active in the Air and Waste Management Association (AWMA), serving as chair of the Midwest Section and general conference chair for a Boiler and Industrial Furnace (BIF) conference. He is the editor of the Environmental Division newsletter for the Technical Association of the Pulp and Paper Industry (TAPPI) and has chaired sessions on dispersion modeling at TAPPI's annual environmental conference. He is also a member of the Iowa Academy of Science.

Mark's professional experience includes review and evaluation of air emission sources with respect to applicability of NSPS, PSD, and nonattainment area permitting requirements. He looks forward to the challenges of the Title V operating permit program, which will integrate all areas of air quality regulations and permits and provide opportunities for Trinity to assist clients in permitting, strategic planning, and emissions inventory development.

An active sportsman and avid connoisseur of gourmet cooking, Mark lives in Overland Park, Kansas, with his wife Teresa and their two sons. Δ

Consulting News

Trinity recognized for permitting expertise: This year, Trinity was selected as part of the team to be the sole provider of assistance to EPA and the states in implementing the Title V (operating permit) provisions of the 1990 CAAA. As a member of this team, our responsibilities will include: preparing guidance materials, reviewing state operating permit programs, providing training on the Title V program, reviewing permit applications, and reviewing draft permits. Trinity's services will be available to state and local air programs under Level of Effort contracts administered through EPA's Air Quality Management Division.

Region VI: Dr. Hung-Ming Sung, a senior engineer at Trinity, has been selected to serve a two-year term on the Air Quality Advisory Committee of the North Central Texas Council of Governments (NCTCOG). The committee includes local elected officials, government staff, and representatives from the private sector and public interest groups. Committee members provide technical support and policy recommendations to the NCTCOG on issues affecting the attainment of the NAAQS in North Texas. Main activities include reviewing the status of the State Implementation Plan and the Urban Airshed Modeling analysis for the Dallas-Fort Worth ozone nonattainment area. Δ

Timely Training in Air Quality Issues

Virtually all state air quality programs are being revised as required by the 1990 Clean Air Act Amendments. Trinity's courses in federal and state air quality regulations offer a practical, up-to-date overview of the changing regulations and their effects on industry. Because of the success of our courses in Texas and Iowa, we are expanding the program and will be offering courses in several other states over the next year. Currently, we have courses scheduled in Texas, New Mexico, Louisiana, and Arkansas.

State	Date	Location	State	Date	Location
NM	Dec. 2	Albuquerque	LA	Dec. 7	Baton Rouge
TX	Dec. 9	Lubbock	LA	Dec. 14	Lake Charles
AR	Jan. 18	Little Rock	LA	Jan. 11	New Orleans

Trinity also offers the *Fundamentals of Dispersion Modeling and Computer Modeling Laboratory*, two-day courses that set the standard for professional education in dispersion modeling. Δ

Fundamentals	Laboratory	Location
Dec. 6-7	Dec. 8-9	Dallas, TX
Jan. 11-12	Jan. 13-14	Denver, CO
Feb. 7-8	Feb. 9-10	Gainesville, FL
Mar. 1-2	Mar. 3-4	New Orleans, LA
Mar. 8-9	Mar. 10-11	Kansas City, MO



BREEZE PC Software

New ATDM Model for Intermediate Terrain

Trinity's new All Terrain Dispersion Model (ATDM) combines the ISCST2 and COMPLEX I algorithms to provide a one-step solution for modeling in any terrain. ATDM implements EPA's requirement for hour-by-hour comparisons of ISCST2 and COMPLEX I results for intermediate terrain. ATDM also includes ISCST2 program features such as building downwash, emissions variation, source groups, and the ability to model point, area, or volume sources. Also included in ATDM is Trinity's popular, Windows-like data-entry interface.

New HOT SPILLS Program

HOT SPILLS calculates the formation and dispersion of combustion products from burning chemical releases. The model can be used for emergency response planning and to estimate the impact area of chemical releases. HOT SPILLS determines products of combustion, calculates dispersion, and predicts downwind pollutant concentrations. All program features, including generating graphical output, are accessible through user-friendly pull-down menus and data-entry screens.

BREEZE SCREEN2 Released

Trinity's new BREEZE™ version of the EPA SCREEN2 model offers several improvements to the original SCREEN model to allow greater modeling flexibility.

Please contact us for more details on our new enhanced BREEZE dispersion modeling and utility programs. Δ



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compelled to adhere to EPA's position as expressed in the *Federal Register* when it was entitled to rely on Tennessee's correct interpretation, the ALJ said.

"If the principles of statutory construction were otherwise, it would never matter what Congress and the regulations had said," Greene wrote. "Upholding complainant's view of the language in question would amount to nothing less than an amendment to the statute."

Greene said it would be unfair to find Wheland liable and impose a civil penalty when it adhered in good faith to the interpretation of the agency authorized to regulate hazardous waste matters in the state.

Greene said Wheland's reliance on Tennessee's interpretation of the clear and unambiguous statutory language "might well have constituted a defense" if EPA's interpretation had been upheld. Greene declined, however, to expand such a "reliance" defense beyond the specific facts of the case.

Air Pollution

ENHANCED MONITORING PROPOSAL WOULD COVER OWNERS, OPERATORS OF MAJOR POLLUTION SOURCES

Owners and operators of both major stationary sources of non-hazardous air pollutants and of sources subject to existing national emissions standards for hazardous air pollutants would be required to perform enhanced monitoring at "significant emissions units," under a rule proposed Oct. 22 by the Environmental Protection Agency (58 FR 54648).

The proposed rule, which would affect about 34,000 emission units, is published in the Full Text section of this issue. The proposal was first announced Oct. 1 by EPA (24 ER 1060).

Under the new Enhanced Monitoring Program as proposed, data collected would be used to determine the compliance status of affected units with applicable limitations or standards under the Clean Air Act.

The rule would set the criteria and procedures that owners and operators must satisfy in evaluating, selecting, and demonstrating enhanced monitoring, the proposal said.

The proposed rule is a response to the mandate in Section 702(b) of the Clean Air Act Amendments of 1990, EPA said.

According to the proposal, the purpose of enhanced monitoring "is to provide a means for determining and certifying whether compliance is continuous or intermittent."

EPA said a primary benefit of enhanced monitoring would be a reduction in overall emissions "through increased compliance" with the Clean Air Act.

"One of the key elements to assure that reductions are achieved is a self-monitoring program that can quickly alert owners or operators so that they may take corrective or preventative action" to remain in compliance and "to minimize the amount of environmental harm caused," the proposal said.

It also said increased compliance with existing rules would lower the long-term overall cost of air pollution control "by decreasing the need for additional command and control regulations" to obtain emission reductions.

Establishing Baselines For Emissions Trading

An additional benefit, EPA said, would be use of enhanced monitoring data to establish baseline information in areas where economic incentive programs such as emissions trading may be implemented.

The rule would apply to all major emission sources as defined under Title V of the Clean Air Act, EPA said. Those include sources that emit 100 tons or more per year of any criteria pollutant, 10 tons or more of any hazardous air

pollutant, or 25 tons or more of any combination of hazardous pollutants.

Areas that are out of compliance with ambient air quality standards for ozone, carbon monoxide, or particulates would be subject to lower thresholds.

The existing program governing emissions of hazardous air pollutants already contains monitoring requirements, EPA said, which are considered "established monitoring." Sources can use this monitoring "to propose an enhanced monitoring protocol without making substantial additional efforts," EPA said.

Under the proposal, data collected would be directly enforceable, meaning the issuer of a permit—a state, locality, or the federal government—could use the information for enforcement purposes without doing further testing, an EPA official said Oct. 1.

Some states, however, have restrictions on using monitoring data for direct enforcement efforts, according to Marnie Miller, a section chief in the Stationary Source Compliance Division of EPA's Office of Air and Radiation.

EPA will hold a public hearing Nov. 19 on the proposed regulations at the Waterside Mall auditorium at agency headquarters, 401 M St. S.W., Washington, D.C.

The agency said comments should be submitted in duplicate by Dec. 20 to EPA Air Docket (LE 131), Attention Docket No. A-91-52, Room M-1500, Environmental Protection Agency, 401 M St. S.W., Washington, D.C. 20460.

Further information is available from Keith Brown at (703) 308-8676.

Hazardous Waste

TWO COMPANIES, MANAGER TO PAY \$1 MILLION FOR ROLE IN HAZARDOUS WASTE SHIPMENT CASE

ATLANTA—Southwire Corp., the nation's largest wire maker and copper recycler, and Gaston Copper Recycling Corp., operator of a copper recycling plant in Gaston, S.C., were sentenced Nov. 1 on eight misdemeanor counts of violating the Toxic Substances Control Act, according to federal law enforcement officials (*U.S. v. Stoller Chemical Co.*, DC SC, No. CR2:92-289, 11/1/93).

The two companies allegedly shipped 1,000 tons of hazardous baghouse dust to a South Carolina chemical company without manifests and permits required under the Resource Conservation and Recovery Act and without notifying the Environmental Protection Agency under TSCA. Southwire is the majority owner of Gaston Copper. Bruce E. Betterton, a Southwire employee who helped manage the Gaston Copper plant, was sentenced for one count of violating TSCA.

The TSCA counts involve violations of a reporting requirement under TSCA Section 8(e), which requires anyone who obtains information that reasonably supports a conclusion that a substance may present an unreasonable risk to human health or the environment report that information to EPA.

In the plea agreement, entered in December 1992, the companies and Betterton admitted to failing to notify EPA of the shipments to Stoller while they possessed information reasonably supporting the conclusion that the baghouse dust presented such a risk (23 ER 2260).

Gaston Copper was sentenced to pay \$600,000 to the United States and \$200,000 to South Carolina and was placed on probation for two years. Southwire will pay a fine of \$190,000 to the United States and be placed on probation for one year. Betterton will pay a \$10,000 fine to the United States and be on probation for one year. The sentences were handed down in the U.S. District Court for the District of South Carolina by Senior U.S. District Judge Solomon Blatt Jr.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Office of Air Quality Planning and Standards
Research Triangle Park, North Carolina 27711

COMPUTER ACCESS TO INFORMATION ABOUT THE
CLEAN AIR ACT: ENHANCED MONITORING PROGRAM
PROPOSED RULEMAKING

IF YOU HAVE A COMPUTER AND A MODEM

You can call from anywhere in the world to obtain information about EPA's enhanced monitoring program. The EPA's Office of Air Quality Planning and Standards (OAQPS) located in Durham, NC, operates a network of computer bulletin boards that provide information and technical exchange to the public in diverse areas of air pollution control.

This Technology Transfer Network (TTN) can be accessed at all times, except for Monday mornings during routine maintenance, by calling (919) 541-5742 with a personal computer, modem, and any communications software set for any transmission rate up to 14,400 baud. [You need the following communication software parameters for your system to be compatible with the TTN: Data Bits, 8; Parity, N; Stop Bits, 1; Terminal Emulation, VT100]

When you first communicate with the TTN, you will be asked to register as a user by answering a few simple questions. After registration, you will have immediate access to all bulletin boards on the TTN.

A ROADMAP TO RECENTLY SIGNED RULES

Information in regard to the enhanced monitoring program is accessed by communicating with the TTN and navigating through the menus:

- ♦ Beginning at the "Top Menu" of the TTN; select the Clean Air Act Amendments (CAAA) bulletin board system (BBS).
- ♦ From the "Main Menu" of the CAAA BBS, select "Recently Signed Rules."
- ♦ Scan the list of items on the screen to locate the file of interest. Press <Return> to scan the next screen. After locating the file of interest, press <Return> to move to the end of the file list.

FROM THE COMPUTER SCREEN INTO YOUR HANDS . . .

DOWNLOADING FILES

To download a file on the TTN, type "P X D filename.extension <Return>." This prepares the TTN to send the file using the XMODEM transfer protocol. At this point you will need to prepare your system to receive the file by using the command specific to your communications software that downloads data. This command can be found in the manual that came with your communications software. For example, if you wanted to receive a WordPerfect file named "propamp.zip" on your "a" drive, the command using CrossTalk communications software would be "rx a:propamp.zip." Using ProComm Plus software, it would be "<Page Down>," then chose the XMODEM transfer protocol, and type "a:propamp.zip."

FILE FORMAT

Most of the recently sign rules are available for downloading to your computer system. The format of the files varies, but generally it is one of the following:

- ♦ WordPerfect, version 5.1 ("wpf" or "w51" file extension).
- ♦ Archived files, usually WordPerfect files compressed for faster downloading and to save disk space ("zip" file extension). See next section for more information.

DEARCHIVING FILES

Files that have been archived (zipped) need to be dearchived (unzipped). This requires the use of a program called "PKUNZIP," which can be downloaded (as described above) from the "utilities" section of the "Top Menu" of the TTN (not the main menu of the CAAA bulletin board) under the heading "Archivers/Dearchivers." Once the archived file and PKUNZIP reside on your computer, the following command should be executed: "pkunzip filename.extension <Return>." Make sure that there is excess unused disk space before doing this, as the newly created dearchived file may be several times larger than the archived file.

ADDITIONAL INFORMATION

For additional information on how to download files, decompress archived files, or other related technical problems, please contact the TTN systems operator at (919) 541-5384 or refer to the OAGPS TTN informational brochure.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Office of Air Quality Planning and Standards
Research Triangle Park, North Carolina 27711

Enhanced Monitoring Program

FACT SHEET

- On September 30, 1993 the Administrator signed the proposed rule for the Enhanced Monitoring Program.

Background

- Prior to the passage of the Clean Air Act Amendments of 1990, many emitters of air pollution had no means of demonstrating continuous compliance with regulatory limits. As a result, many sources were not in continuous compliance with the applicable regulations.
- Section 114(a)(3) requires the EPA to promulgate regulations that provide guidance on the performance of enhanced monitoring by owners and operators of major stationary sources of air pollution.
- The regulations establish a process for selection of enhanced monitoring and requires that enhanced monitoring data be used to determine whether compliance with emission limitations or standards was continuous or intermittent over a given reporting period.

Program Approach

- The Title V operating permit process will be the primary vehicle for implementing the Enhanced Monitoring Program. For each emission limitation or standard at a source subject to the program, an owner or operator would have to propose enhanced monitoring protocols in their permit application. This protocol will lay out the plan the source will employ to determine if compliance is continuous or intermittent over the reporting period.
- For criteria pollutants, the regulation will apply to emission units of major sources which have the potential to emit pollutants in an amount equal to or greater than 30% of the applicable major source definition. Applicability is also limited to emission units which emit pollutants for which the source is major. The proposal uses the statutory definitions for "major".

- For hazardous air pollutant sources subject to existing Part 61 requirements, the proposed regulations would apply to any emissions unit required to obtain an operating permit. EPA will be including appropriate enhanced monitoring requirements in all new hazardous air pollutant requirements promulgated under amended section 112 of the Act, therefore, the proposed regulations for the Enhanced Monitoring Program will not apply.
- EPA will provide an "Enhanced Monitoring Reference Document" as guidance to simplify the permitting process by providing a compendium of established monitoring and other potential approaches to enhanced monitoring.

Benefits of the Enhanced Monitoring Program

- The primary benefit of the proposed Enhanced Monitoring Program would be a reduction in overall emissions through increased compliance with the requirements of the Act. In addition, increased compliance rates with existing rules would lower the long-term overall cost of air pollution control by decreasing the need for command and control regulations.
- The Enhanced Monitoring Program may help reduce operating costs by alerting owner/operators to potential control device or operating process problems.

For additional information, contact Keith Brown at (703) 308-8676.

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ENVIRONMENTAL PROTECTION AGENCY
40 CFR PARTS 51, 52, 60, 61 and 64
September 30, 1993

Enhanced Monitoring Program Proposal

AGENCY: Environmental Protection Agency (EPA)

ACTION: Proposed rule; notice of opportunity for public hearing.

SUMMARY: Pursuant to the Clean Air Act (the Act) the EPA is proposing a new Enhanced Monitoring Program, including both new regulations and certain amendments to several existing air pollution program regulations. The program would require owners or operators of both major stationary sources of non-hazardous air pollutants and of sources subject to existing national emission standards for hazardous air pollutants, to perform enhanced monitoring at significant emissions units of air pollution. The proposed rule would require that enhanced monitoring data be used to determine the compliance status of affected emissions units with certain applicable emission limitations or standards.

The proposed rule would establish the criteria and procedures that owners or operators must satisfy in evaluating, selecting and demonstrating enhanced monitoring, and would include appendices containing enhanced monitoring performance and quality assurance requirements. Proposed reporting and recordkeeping requirements would identify the basis, content, frequency and other requirements for enhanced monitoring reports. The reporting requirements would also specify that enhanced monitoring data be used by an owner or operator to certify compliance pursuant to 40 CFR part 70 for those applicable requirements subject to enhanced monitoring. Finally, the proposed amendments to existing regulations would clarify that the enhanced monitoring program could be implemented through preconstruction permits issued under the Act and that enhanced monitoring and certain other information collected could be used to determine compliance with applicable emission limitations or standards.

DATES: Comments on the proposed rule must be received by [insert date 60 days after publication]. The EPA will hold a public hearing in Washington, D.C. on the proposed regulations on [insert date four weeks after publication]. Requests to present oral testimony must be received on or before [insert date two weeks after publication]. If possible, comments should be sent in both computerized form and hardcopy. Comments generated using word processing software should be sent on a clearly labeled, 3.5 inch IBM-compatible diskette. Comments formatted in WordPerfect 5.0 or 5.1 may be submitted as is; comments prepared by other word processing software, should be submitted in an "unformatted" mode. All comments submitted in hardcopy should be submitted in duplicate. Comments should refer to page numbers and columns whenever possible.

DOCKET: Supporting information used in developing the proposed regulations is contained in Docket No. A-91-52. This docket is available for public inspection and copying between 8:30 a.m. and 3:30 p.m. Monday through Friday, at the address listed below. A reasonable fee may be charged for copying.

ADDRESSES: Comments must be mailed (in duplicate, if possible) to: EPA Air Docket (LE-131), Attention: Docket No. A-91-52, Room M-1500, Waterside Mall, 401 M Street S.W., Washington, D.C. 20460. The public hearing will be held in the Waterside Mall auditorium at the EPA's Washington, D.C. Headquarters Office on (insert date four weeks after publication). Persons interested in attending the hearing or wishing to present oral testimony should contact Mr. Keith Brown, Stationary Source Compliance Division (EN-341W), U.S. Environmental Protection Agency, 401 M Street, S.W., Washington, DC 20460, telephone (703) 308-8676. **FOR FURTHER INFORMATION CONTACT:** Keith Brown at (703) 308-8676.

SUPPLEMENTARY INFORMATION: The contents of the preamble are listed in the following outline:

- I. Background and Purpose
 - A. Statutory Authority
 - B. Alternatives Considered
 - C. Benefits of Enhanced Monitoring
 - D. Public Participation
- II. Implementation Principles
 - A. Ensure Environmental Protection
 - B. Incorporate Broad-Based Perspective for Rule Development
 - C. Maintain an Effective Partnership With State and Local Governments
 - D. Minimize Small Business Concerns
 - E. Promote Pollution Prevention
 - F. Facilitate Use of Market-Based Incentives
 - G. Allow Flexibility in State Programs and Source Permits
 - H. Enable Effective and Efficient Information Transfer
 - I. Promote Simple and Streamlined Regulations
- III. Summary of Key Concepts
 - A. Development and Selection of Enhanced Monitoring Protocols
 - B. Purpose of Enhanced Monitoring
 - C. Relationship to Title V Permit Program
- IV. Detailed Discussion of the Provisions of the Proposed Regulations
 - A. Section 64.1 - Applicability
 - B. Section 64.2 - Definitions
 - C. Section 64.3 - Implementation Requirements
 - D. Section 64.4 - Enhanced Monitoring Protocol Requirements
 - E. Section 64.5 - Reporting Requirements
 - F. Section 64.6 - Recordkeeping Requirements

- G. Section 64.7 - Permit Application Requirements
- H. Section 64.8 - Permit Requirements
- I. Section 64.9 - Prohibitions
- J. 40 CFR Parts 51, 52, 60 and 61
- K. SIP Call
- V. Other Topics for Discussion
 - A. Relationship to Nonattainment Area Provisions
 - B. Relationship to Section 112 Regulatory Developments
 - C. Relationship to Title I Permit Programs
- VI. Administrative Requirements
 - A. Public Hearing
 - B. Docket
 - C. Office of Management and Budget (OMB) Review
 - D. Regulatory Flexibility Act
 - E. Paperwork Reduction Act

The first section of this preamble provides background on the statutory provisions under the Act that require owners or operators of stationary sources to perform enhanced monitoring and to submit compliance certifications. This section also provides information on the purpose, basic options, and the expected benefits of the proposed enhanced monitoring program. This section also relates the proposed enhanced monitoring program to the compliance certification requirements of 40 CFR part 70.

The second section explains the implementation principles EPA has followed while developing the proposed regulations, and EPA's position on associated issues. These implementation principles should be considered when the reader reviews the preamble and proposed regulations.

The third section provides a summary of the general approach EPA has taken in developing the proposed regulations.

The fourth section of the preamble presents a summary of each section of the proposed enhanced monitoring program. This section includes background on the provisions and a discussion of issues that EPA has identified and would like especially to be considered during the public comment period.

The fifth section then provides discussion on relationships between the enhanced monitoring program and other provisions of the Act. The sixth and final section of the preamble contains the administrative requirements that accompany Federal regulatory actions.

The preamble includes many citations which refer the reader to more detailed discussions of a topic or to the origin of certain requirements. These citation sections will generally not be followed by their origin, such as "of this preamble" or "of the Act." Rather, the reader can recognize the origins of the sections by their nature: sections of the preamble begin with a Roman numeral; sections of the proposed regulations range from §§ 64.1 to

64.8; sections of existing EPA regulations are preceded by 40 CFR; and sections of the Act are referenced by a three digit number, such as 114 or 504.

This preamble often refers to "State" or "permitting authority." The reader should assume that where the preamble refers to a "State," such term also includes local air pollution agencies, Indian tribes, and territories of the United States to the extent they are or will be the permitting authority for their area or have been or will be delegated permitting responsibilities under the Act. In addition, the term "permitting authority" would also include EPA to the extent EPA is the permitting authority of record.

Finally, this preamble often refers to 40 CFR part 70, the regulations promulgated July 21, 1992, implementing the operating permits program under title V of the Act (see 57 FR 32250). Those regulations provide requirements applicable to federally-approved, State-administered operating permits programs. Where a State fails to submit an approvable program or to adequately administer and enforce an approved program, EPA will have to promulgate, administer and enforce a Federal program for issuing permits in that State. The reader should assume that where the preamble refers to 40 CFR part 70, such term may also refer to an EPA-administered (Federal) operating permits program, which may be promulgated under another part of 40 CFR.

I. Background and Purpose.

A. Statutory Authority. The proposed regulations respond principally to the statutory mandate in section 702(b) of the Clean Air Act Amendments of 1990, Pub. L. 101-549, 104 Stat. 2399, which requires the Administrator of EPA to promulgate rules on enhanced monitoring and compliance certifications. Section 702(b) of the 1990 Amendments revised section 114(a) of the Act by adding a new paragraph (3) that provides, in part:

The Administrator shall in the case of any person which is the owner or operator of a major stationary source, and may, in the case of any other person, require enhanced monitoring and submission of compliance certifications.

Compliance certifications shall include (A) identification of the applicable requirement that is the basis of the certification, (B) the method used for determining the compliance status of the source, (C) the compliance status, (D) whether compliance is continuous or intermittent, (E) such other facts as the Administrator may require....

The 1990 Amendments also revised section 114(a)(1) of the Act to provide additional authority concerning monitoring, reporting, and recordkeeping requirements. As amended, that section provides the Administrator with the authority to require any owner or operator of a source:

on a one-time, periodic or continuous basis to -

- (A) establish and maintain such records;
- (B) make such reports;
- (C) install, use, and maintain such monitoring equipment ...
- (D) sample such emissions (in accordance with such procedures or methods, at such locations, at such intervals, during such periods and in such manner as the Administrator shall prescribe
- (E) keep records on control equipment parameters, production variables, or other indirect data when direct monitoring of emissions is impractical;
- (F) submit compliance certifications in accordance with section 114(a)(3); and
- (G) provide such other information as the Administrator may reasonably require....

In addition, related provisions under title V of the Act specify that operating permits must include requirements for monitoring and compliance certification. Section 504(c) requires that each permit must set forth "monitoring, compliance certification and reporting requirements to assure compliance with the permit terms and conditions." Section 504(b) permits the Administrator to promulgate appropriate test methods and monitoring requirements for determining compliance. That section states that "continuous emissions monitoring need not be required if alternative methods are available that provide sufficiently reliable and timely information for determining compliance." Because this section directly refers to promulgating monitoring requirements for determining compliance, the proposal cites this section in addition to section 114(a)(3) as explicit authority for the proposed regulations.

Section 504(a) states that permits shall include "a requirement that the permittee submit to the permitting authority, no less often than every six months, the results of any required monitoring, and such other conditions as are necessary to assure compliance with applicable requirements of the Act." Section 503(b)(2) states that permitted sources must certify compliance with any applicable permit requirements "no less frequently than annually . . . and promptly report any deviation from permit requirements to the permitting authority."

The 1990 Amendments also revised section 113 to clarify what evidence may be used to prove violations of the Act. Section 113(e), as amended, provides that "the duration" of a violation may be established "by any credible evidence (including evidence other than the applicable test method)." The Legislative history for this provision states that by this amendment, Congress meant to clarify that, in an enforcement action, "courts may consider any evidence of violation or compliance admissible under the Federal Rules of Evidence, and that they are not limited to consideration

of evidence that is based solely on the applicable test method in the State implementation [sic] or regulation." (S. Rep. No. 228, 101st Cong., 1st Sess., 366 (1989) reprinted in 1990 U.S. Code Cong. & Admin. News 3385, 3749.)

Coupled with these changes to section 113, section 114(a)(3) specifically requires that a certification be based upon a determination of whether compliance was continuous or intermittent. Therefore, the enhanced monitoring protocol must collect data that can be used to document compliance and facilitate enforcement of documented violations. Congress noted in a Senate Committee Report 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., at 368 (1989)). Similarly, a House Committee Report stated that this section "confirms that EPA has authority under section 114(a) to require enhanced monitoring and to require such monitoring in compliance certifications." (H.R. Rep. 490, 101st Cong. 2d Sess., pt. 1, at 394 (1990)). Thus, Congress linked enhanced monitoring and compliance certifications, with the idea that enhanced monitoring data would serve as the basis for certifying compliance and could be used to determine the existence of an enforceable violation.

In this proposal, EPA is proposing a new part 64 to respond to the direct mandate in section 114(a)(3). To assure that this mandate is carried out effectively and in a manner that responds to amended section 113, EPA also is proposing as part of this proposal revisions to portions of 40 CFR parts 51, 52, 61 and 62. These proposed revisions include proposed Federal implementation language that will be incorporated into SIP's for States that do not adequately respond to a SIP Call that EPA will issue in February 1994. See Sections III.B, IV.J. and IV.K. below. For these proposed revisions to 40 CFR parts 51, 52, 61, and 62, EPA is relying on the procedural requirements of section 307(d) of the Act.

B. Alternatives Considered. One clear objective inherent in all of these statutory provisions is to assure that owners or operators are accountable for their emissions and compliance status on a continuous basis. Thus, these proposed regulations would require that the owners or operators of all major sources of non-hazardous air pollutants, or any permitted emissions unit subject to existing hazardous air pollutant requirements under 40 CFR part 61, conduct enhanced monitoring for the purpose of determining their compliance status and report on that status in compliance certifications.

To achieve that objective in a cost-effective manner that is integrated with other regulatory initiatives under

the Act, EPA investigated alternatives for three separate decisions. First, EPA considered the degree to which the proposed regulations should prescribe enhanced monitoring requirements. Second, EPA considered to which regulated air pollutants and sources the proposed regulations should apply. Finally, the Agency considered in what manner the proposed regulations could ensure that enhanced monitoring provides a determination of whether compliance is continuous or intermittent, as mandated by section 114(a)(3).

1. Enhanced Monitoring Prescriptiveness. With respect to enhanced monitoring prescriptiveness, one possible option for achieving accountability would be to obtain the most accurate, timely and reliable data that is technologically feasible. For some sources, that option would entail the frequent use of reference test method procedures, while for others it would entail use of continuous emission monitoring systems (CEMS's). This "top-down" option was rejected by EPA as too burdensome and as inconsistent with congressional recognition under section 504(b) that other monitoring options may provide sufficiently reliable and timely information to determine compliance. The EPA solicits comments on the proposal to reject this option.

A second option considered was to specify the precise enhanced monitoring requirements for each major source category. That option was considered impractical given the short time period for issuing the enhanced monitoring program, the large number of source categories affected, and the Agency resource commitments that approach would require. The EPA solicits comments on the proposal to reject this option, including comments as to whether it may be feasible to develop specific requirements for a limited number of source categories and use the general requirements in the proposed regulations for all other source categories. For those comments that support the development of specific requirements, EPA also solicits comments on which source categories should have specific requirements.

A third option considered was to specify technical criteria that an enhanced monitoring protocol must achieve and then allow an owner or operator to demonstrate that its proposed enhanced monitoring protocol is the best monitoring for its particular emissions unit that could achieve these criteria. This option forms the basis for the proposal. It provides the owner or operator with significant flexibility in proposing the type of monitoring that best fits the owner or operator's circumstances, while at the same time assuring that all proposed monitoring methodologies meet the technical criteria that would ensure that a proposed protocol provides quality-assured, representative monitoring data that can be used to determine continuous compliance as required by section 114(a)(3).

It is important to note that the term "best" as would be used in the proposed regulations is not intended to

require a top-down selection process that focuses on the best monitoring system that is technically and economically feasible. Rather, the term "best" focuses on what monitoring can best provide an assurance that a particular emissions unit remains in compliance. This use of the term "best" would require evaluating several site-specific factors, such as emissions unit and control system design, operating processes at the facility, the demonstrated margin of compliance and the potential variability of emissions.

For instance, the best monitoring for determining continuous compliance at a large uncontrolled SIP industrial boiler burning high sulfur coal that results in emissions close to the SIP emission limit may be a CEMS given the potential variability in the fuel. However, the best system for a similar uncontrolled boiler burning fuel oil may be a fuel sampling and analysis program. The assurance of continuing compliance, and not the technological elements of the monitoring, would be the appropriate measure of what is "best."

The selection approach described above would serve as the basis for the proposed regulations. However, to ensure that owners or operators make informed proposals and to ensure that the permitting authority has adequate information to act upon proposed enhanced monitoring protocols, the proposed regulations would include some additional evaluation procedures for the enhanced monitoring protocol selection process.

The first option for evaluating a monitoring methodology that could be used as enhanced monitoring would be to consider the best "established monitoring." The proposed regulations would define this term to include monitoring that has been established in certain previous regulatory actions governing many source categories. The EPA believes that the use of established monitoring should serve to decrease the burden on permitting authorities because these methods are familiar and will increase the standardization of the selection process. The second option that an owner or operator would have is to identify all technologically feasible monitoring approaches in order to select the best monitoring methodology for a particular emissions unit that can satisfy all of the requirements for an enhanced monitoring protocol. These monitoring approaches would include both established monitoring and other monitoring identified by the owner or operator. This evaluation process is discussed in further detail in Section III.A.

The proposed regulations would use the operating permits program as the primary vehicle for implementing the evaluation and selection process described above. The owner or operator would include its proposed enhanced monitoring protocol and supporting information as part of a permit application. The permitting authority would then review and

approve or deny the proposed protocol as part of its permit issuance process. The performance of verification tests to certify that the protocol achieves technical specifications and requirements then would occur after permit issuance in order to finally demonstrate that the enhanced monitoring protocol achieves all of the requirements of the proposed regulations.

The operating permits program will provide a vehicle for selecting the best monitoring for emissions units at a particular source. Provided that the criteria in the proposed regulations are satisfied, a broad range of monitoring approaches may be approved as the best monitoring at a particular emissions unit. Depending on the circumstances at the emissions unit being monitored, enhanced monitoring could involve procedures such as maintaining records of, analyzing, and reporting on fuel or raw material usage, or systems such as control device parameter monitors or continuous emission monitoring systems. The types of monitoring procedures and systems that could be used under the proposed regulations are discussed in Section III.A.

The reader should note that the proposed regulations also would be implemented through the preconstruction permit programs for new and modified sources under parts C and D of title I of the Act. Selection of enhanced monitoring at the preconstruction stage would assure that enhanced monitoring needs are considered in the design and construction of an emissions unit. Implementation through preconstruction permits would also allow for streamlined conversion of preconstruction permits into operating permits where a permitting authority separates the issuance of the two permits. The proposed amendments to 40 CFR part 51 and 40 CFR 52.21 in the proposal would assure that permitting authorities adopt sufficient legal authority to impose enhanced monitoring conditions in preconstruction permits. This issue is discussed in further detail in Section V.C.

As stated in its operating permits rule, the Agency intends that title V permits contain all the requirements of the Act applicable to the permitted source. The title V process was not intended to establish more stringent or new requirements. However, the one exception is for compliance provisions required in all permits by title V and 40 CFR 70.6. The part 70 rule allows in some circumstances for the addition or clarification of compliance requirements -- as opposed to new emission limits or standards. For example, an addition might be made through this process to specify an averaging period or periodic monitoring requirement where the underlying standard fails to specify these elements as a part of the monitoring requirement. EPA continues to intend that the role of the title V permitting process is to express all of the underlying requirements applicable to the source.

2. Enhanced Monitoring Program Applicability. With respect to the scope of the proposed part 64 regulations, EPA considered several alternatives for defining the universe of sources, regulated air pollutants, emission limitations or standards, and emissions units that should be subject to the enhanced monitoring requirement. Section 114(a)(3) provides a general requirement that EPA must require enhanced monitoring at major stationary sources. However, section 114(a)(3) does not provide EPA with any further guidance as to which regulated air pollutants, emissions units, and emission limitations or standards at a major source must be covered by enhanced monitoring requirements.

In contrast, section 504(c) provides that each permit must include "inspection, entry, monitoring, compliance certification and reporting requirements to assure compliance with the permit terms and conditions." Furthermore, section 503(b)(2) requires a compliance certification for "any applicable permit requirements." Because of the language in these two title V sections, EPA has required monitoring and certification at all emissions units for all applicable requirements under the Act in 40 CFR part 70 because Congress clearly required in title V that all applicable requirements be subject to appropriate monitoring to "assure compliance."

Section 114(a)(3) does not contain such specific language regarding the scope of the part 64 program. Thus, Congress having remained silent on the precise question at issue, EPA believes the legislative branch was providing the Agency with broad discretion to determine what type of monitoring is enhancement enough for various emissions units at major sources. See Chevron USA, Inc., v. Natural Resources Defense Council, 456 U.S. 837 (1984). First, as a general rule, EPA has determined that the proposed rules should only apply at the units that emit pollutants for which the source is major. EPA believes that Congress's intent in requiring enhanced monitoring of major sources was an attempt to focus on imposing monitoring most immediately on the sources that may emit a particular pollutant in large amounts. With respect to which emission limitations and standards are covered by the enhanced monitoring rule, EPA believes that part 64 should apply to all emission limitations and standards applicable to the pollutants for which the source is major and at an emissions unit subject to part 64. Finally, the following two subsections will describe the emissions units that would be subject to part 64.

EPA has divided the applicability requirement into two parts: hazardous air pollutants and other regulated pollutants. With respect to these two categories of pollutants, EPA independently explored the range of applicability.

a. Hazardous Air Pollutant Sources. Requirements for hazardous air pollutants under the Act include existing NESHAP requirements under 40 CFR part 61 and will include new standards developed under section 112 as amended by the 1990 Amendments. The EPA recognizes that both minor and major sources of hazardous air pollutants are of significant concern and warrant enhanced monitoring. Therefore, EPA intends to apply enhanced monitoring under section 114(a)(3) of the Act to as many hazardous air pollutant sources as possible.

First, with respect to sources subject to existing part 61 requirements, the proposed regulations would apply to any emissions unit required to obtain a permit (regardless of whether the source is a major or area source). The EPA is not required to establish enhanced monitoring for area sources under section 114(a)(3), but has been granted discretion to establish enhanced monitoring for those sources. Because of the significance of hazardous air pollutants, EPA believes that area sources that must also obtain permits under part 70 should develop methods for enhanced monitoring in the permit application process. However, asbestos demolition and renovation projects subject to subpart M of part 61 are exempt from the requirements of part 70. Because EPA is not requiring States to permit these sources and the permit program is the established method for implementing enhanced monitoring, EPA has exempted these sources from the requirements of part 64.

With respect to emissions units subject to new hazardous air pollutant requirements under amended section 112 of the Act, EPA will include appropriate enhanced monitoring requirements as part of those new hazardous air pollutant requirements. This approach is consistent with EPA's statement in the July 21, 1992 preamble to 40 CFR part 70 that all future rulemakings will have no gaps in their monitoring provisions (see 57 FR 32278). Therefore, EPA will exercise its section 114(a)(3) authority to require enhanced monitoring for sources subject to new section 112 requirements in actions taken pursuant to the amended section 112. These actions include the general provisions of 40 CFR part 63 and the individual subparts of that new part, as well as case-by-case permit decisions in certain instances. The interrelationship between the proposed regulations and NESHAP regulatory development is discussed in further detail in Section V.B.

Finally, as to sources that achieve early reductions in accordance with the regulation promulgated pursuant to section 112(i)(5), 57 FR 61970 (Dec. 29, 1992), to be codified at 40 CFR 63.70 et. seq., EPA believes that the monitoring required pursuant to the permits program is enhancement enough. The early reductions program is a temporary program; these sources will ultimately need to comply with the new standards being developed under section

112. The EPA believes that during this interim period, the monitoring requirements of the permits program will provide monitoring sufficient for these sources to certify compliance with applicable emission limitations.

b. Criteria Air Pollutant Sources. With respect to sources and emissions units that emit non-hazardous pollutants, EPA determined to use its discretion to limit the scope of applicability more than for hazardous air pollutants. First, EPA determined not to exercise its discretion to require enhanced monitoring at non-major sources at this time. With respect to the Act's undefined mandate to require enhanced monitoring at major stationary sources, EPA has determined that some proposed limitations on the applicability of part 64 at certain emissions units located at major stationary sources would be appropriate. In making that determination, EPA considered three factors: the statutory requirement of enhanced monitoring at major stationary sources, the results of its Regulatory Impact Analysis (RIA), and the monitoring requirements of the part 70 operating permits program.

EPA is required to perform an RIA pursuant to E.O. 12291 in order to assess the costs and benefits of the proposed rule and to maximize the net benefits to society. The RIA calculates net benefits in two ways. For attainment areas, the calculation involves weighing health and welfare benefits associated with emissions reductions against the costs of complying with enhanced monitoring requirements. In nonattainment areas, the anticipated net benefits also include the avoided cost to the regulated source of alternative emission reduction regulations that would be necessary to achieve emission reductions required for attainment in the absence of enhanced monitoring requirements.

The RIA takes into account both the permitting authority burden costs and costs to the regulated community. The costs to the permitting authorities include costs associated with review and approval of proposed enhanced monitoring methods and subsequent review of monitoring reports. The costs analyzed for the regulated community include all aspects of implementing enhanced monitoring at a source. These include any one-time capital costs for purchasing and installing new monitoring equipment, and recurring annual costs for monitor operation and maintenance, quality assurance activities, and reporting, compliance certification, and recordkeeping burden costs. Because enhanced monitoring does not change the stringency of underlying standards or limitations, any costs associated with coming into compliance with these emissions limitations or standards by sources are not considered costs associated with this rule. The EPA solicits comments on this approach, and on whether other costs to the permitting authorities and regulated community should be incorporated in the analysis.

Because of EPA's uncertainty as to the scope of applicability, the Agency established a range of options in the RIA for imposing the enhanced monitoring rule to units at major stationary sources. The RIA explored in detail five gradations of coverage for the part 64 requirements: (1) all units emitting pollutants for which the source is major (Option 1); (2) all units that have the potential to emit pollutants in an amount equal to or greater than 10% of the applicable major source definition (Option 2); (3) all units that have the potential to emit pollutants in an amount equal to or greater than 30% of the applicable major source definition (Option 3); (4) all units that have the

potential to emit pollutants in an amount equal to or greater than 50% of the applicable major source definition (Option 4); and (5) all units that have the potential to emit pollutants in an amount equal to or greater than the applicable major source definition (Option 5).

The EPA also considered the fact that the regulations developed under part 70 require monitoring at all emissions units at a major source. The monitoring required by part 70 in many instances will be an enhancement over the existing monitoring at an emissions unit. In this sense, many units will have established some enhancement through the permit process even in the absence of part 64. For the other units covered by part 70 monitoring, EPA believes the existing monitoring is sufficiently enhanced.

Based on the three factors discussed above, EPA has decided not to propose Option 5. The EPA recognized that under that option, many major stationary sources would avoid any additional monitoring beyond that required by part 70. The RIA analysis indicates that only 47 percent of all major stationary sources would be subject to the part 64 requirement at one or more emissions units. In addition, this option would have the undesirable effect of excluding many significant emissions units from the part 64 enhanced monitoring requirements. For example, a source with several 90 tons per year emissions units would avoid any part 64 enhanced monitoring requirement. By contrast, a source consisting of one 110 tons per year unit would be subject to part 64 enhanced monitoring under this option. Finally, the RIA indicates that this option would not present the greatest net benefits (i.e., further net benefits are achieved by moving to Option 4). Therefore, balancing the fact that Option 5 would require part 64 monitoring at less than 50 percent of all major stationary sources with the fact that it did not produce the greatest net savings, EPA determined that Option 5 would not be an acceptable proposed approach.

As to the remaining options, EPA determined that there were positive and negative factors supporting each option. Option 1 would ensure that part 64 monitoring is performed

at all emissions units that emit the pollutant for which the source is major. However, this option also would provide the lowest net benefits of the options considered. The RIA estimates the loss of net benefits of moving from Option 4 (which would maximize net benefits, i.e. any other option selected would result in net costs) to Option 1 at \$735 million; in addition, the RIA indicated that the marginal cost of obtaining further emission reductions by moving from Option 4 to Option 1 would be extremely high (approximately \$11,750 per ton). Option 2, while ensuring that approximately 82 percent of all major stationary sources would be subject to the part 64 requirements at one or more emissions units, also would result in lower net benefits (\$197 million less) than those provided under Option 4; in addition, the RIA indicates that the costs for the incremental emission reductions would remain high (approximately \$5600 per ton).

Although the RIA indicates that Option 4 would maximize net benefits, only 56 percent of all major stationary sources would have emissions units subject to the part 64 requirements under this option. Moreover, Option 4 would require part 64 monitoring at less than 1/3 of all regulated emissions units at major stationary sources that emit the pollutant for which the source is major, leaving some significant emissions units to be regulated by the monitoring requirements of part 70. While EPA believes that there would be some support for this option because of the application of part 70 periodic monitoring requirements at the remaining major stationary sources, the Agency questions whether that monitoring would be sufficiently enhanced for the potentially large emissions units that would not be subject to part 64 enhanced monitoring.

Finally, Option 3 would provide increased coverage of major stationary sources -- 65 percent of all stationary sources that are major for one or more criteria pollutants -- and the RIA indicates that the additional emission reductions that could be achieved from moving from Option 4 to 3 would be reasonable in light of the projected additional costs achieved (approximately \$3000 per ton of additional emissions reduced). The EPA also believes that many of the additional emissions units that would be subject to part 64 monitoring under Option 3 should be considered significant emissions units that warrant part 64 enhanced monitoring.

Because Option 3 appears to be the best approach when balancing the three factors described earlier, EPA has selected this option for the proposed rule. Option 3 would ensure part 64 enhanced monitoring at one or more emissions units at a significant number of major stationary sources (65 percent). The remaining major sources would still be subject to monitoring under part 70 that EPA views as "enhanced" for units that size. Moreover, those emissions

units that would be required to meet only the part 70 monitoring requirements would be those with the potential to emit less than 30 percent of the pollutant for which the source is major, presumably the less significant units.

EPA solicits comment on its proposed general approach, the proposal to adopt Option 3 as the best approach. We are also interested in soliciting comments on any or all options appropriate for consideration, especially Option 1 which is the most inclusive, and Options 4 and 5, which have the highest net benefits. With respect to the decision to cover only units that emit the pollutant for which the source is major, EPA solicits comment on the policy and legal implications of the decision. As an alternative basis for not applying the part 64 requirements to certain units, EPA also solicits comments on the possible use of a de minimis exception to exempt certain units from the part 64 monitoring requirements in light of the general statutory requirement that EPA require enhanced monitoring at major stationary sources. EPA believes that a de minimis exception for certain units at major sources may be acceptable because the broad language of section 114(a)(3) would not preclude the drafting of such an exception. See Alabama Power Co. v. Costle, 636 F.2d 323, 357 (D.C. Cir. 1979). However, EPA believes that a de minimis exception to the general requirement of enhanced monitoring at all major sources would be appropriate only if there were trivial gains in requiring enhanced monitoring at some subset of emissions units. *Id.* at 361.

Finally, EPA also solicits comment on other reasonable alternatives. For example, EPA solicits comment on whether it should adopt a method for determining the universe of units subject to part 64 that is based upon uncontrolled emissions rather than potential to emit, as such an approach arguably would better address the units with the greatest environmental risk. In other words, in a monitoring rule such as part 64, should EPA use a different definition of potential to emit than EPA has used for other purposes.

The reader should note that the same 30 percent threshold that is applied to a single emissions unit as described above would apply to a group of emissions units in certain circumstances. A group of emissions units at a major source may in some instances achieve compliance with applicable emission limitations or standards by aggregating, averaging, apportioning or trading emissions among the group of emissions units. For instance, a source may be operating with an approved bubble plan or similar scheme. In such circumstances, if, collectively, the potential emissions of the group exceed the tons per year threshold described above for a single emissions unit, then the proposed rule would apply to all emissions units in the group.

One final alternative approach that EPA considered was to apply these rules only to major stationary sources in

nonattainment areas. The EPA rejected this approach as inconsistent with the explicit language of section 114(a)(3) and because it would fail to address the benefits that can be achieved by improving compliance with maintenance-related requirements in attainment as well as nonattainment areas.

3. Use of Enhanced Monitoring to Determine Compliance. As discussed in further detail in Section III.B., the purpose of enhanced monitoring is to provide a means for determining and certifying whether compliance is continuous or intermittent. Many existing regulations do not include a regulatory method for determining compliance on that basis. In addition, some such regulations are written in such a manner as to prohibit the use of methods not included in the applicable regulation as a means for determining compliance. Therefore, some existing rules as written could not allow for effective implementation of the enhanced monitoring program mandated by section 114(a)(3).

The EPA considered three alternative means for addressing this concern. First, EPA considered requiring an owner or operator to establish a separately enforceable permit condition whenever an existing rule would not permit a determination of compliance with the underlying emission limitation or standard on the basis of enhanced monitoring. This alternative was rejected as inconsistent with the concept discussed in the part 70 operating permits rule that the permit generally would not be used as a means of establishing new requirements. (The part 70 rule does in limited circumstances allow for clarifying or adding compliance requirements as opposed to new emission limitations or standards, e.g., specifying an averaging period or specifying a periodic monitoring requirement where no current monitoring exists.)

The second alternative considered was to construct the enhanced monitoring rule in a manner designed to work within the structure of existing applicable requirements, and to provide incentive for owners or operators to voluntarily consent to the use of enhanced monitoring to determine compliance where the underlying applicable requirement would allow. Under this alternative, the specified compliance test method would have to be included as part of an enhanced monitoring protocol if the underlying rule prohibited alternative means of determining compliance or the owner or operator did not consent to the alternative means. The proposed rule would have required an owner or operator to conduct the compliance method specified in the applicable regulation on a more frequent basis than currently required and whenever a set amount of deviations occurred. This alternative was rejected because in many instances it would fail to provide sufficient data to satisfy the statutory requirement that the enhanced monitoring be able to establish whether an emissions unit is in continuous compliance with an applicable requirement.

The third alternative, which is the approach selected for the proposed rule, would be to make amendments to the general provisions in Federal regulations, and to issue a SIP Call to correct any deficiencies in State regulations. These amendments and SIP changes would allow for a determination of compliance to be made on the basis of enhanced monitoring. These changes would best address the new statutory mandate in section 114(a)(3) and would allow for effective implementation of the enhanced monitoring program. The details of the proposed amendments and SIP Call are discussed in Sections III.B., IV.J. and IV.K. below.

It should be noted that the proposed regulations, although intended to fulfill the mandate to determine whether compliance is continuous or intermittent, are not intended to change the stringency of any underlying emission limitations or standards. Federal regulations, including approved SIP regulations, generally are intended to be complied with at all times, consistent with any associated averaging time and any federally-approved excused periods such as startup, shutdown or malfunction. The proposed regulations would measure compliance consistent with averaging periods, and would recognize the federally-enforceable provisions that may allow for periods of excess emissions. The EPA solicits comments on the issue of whether, and if so how, the proposed regulations would increase the stringency of an emission limitation or standard.

C. Benefits of Enhanced Monitoring. A primary benefit of the proposed enhanced monitoring program would be a reduction in overall emissions through increased compliance with the requirements of the Act. Continuing compliance with regulations after demonstrating initial compliance is necessary to assure that the emission reductions intended by regulations are achieved. One of the key elements to assure that reductions are achieved is a self-monitoring program that can quickly alert owners or operators so that they may take corrective or preventive action in order to prevent non-complying conditions and to minimize the amount of environmental harm caused.

In addition to the direct environmental benefit of decreased emissions, increased compliance rates would also achieve a corollary economic benefit. As a general matter, increased compliance rates with existing rules would lower the long-term overall cost of air pollution control by decreasing the need for additional command and control regulations to obtain the necessary emission reductions. For nonattainment areas, this benefit would be especially important as States that contain those areas prepare to demonstrate that reasonable further progress toward attainment is being achieved. Increasing the effectiveness of existing and future rules would allow States in many

instances to reduce the level of additional control measures needed to achieve the necessary emissions reductions. The extent to which the States with an enhanced monitoring program would be able to rely upon increased rule effectiveness in meeting their attainment demonstration burdens under title I of the Act is discussed in greater detail in Section V.A.

The information developed through the use of enhanced monitoring would have other benefits as well. First, enhanced monitoring data could be used to establish baseline emission information in those areas where economic incentive programs (such as emissions trading) may be implemented. Economic incentive programs will also require accurate data bases of monitoring information to allow for emissions trading or other marketable emissions concepts. The data developed from the enhanced monitoring protocols that would be required under the proposed regulations would assist in establishing these required data bases. This point is addressed in greater detail in Section V.A. of the preamble. The increased data accuracy that would result from conducting enhanced monitoring would also improve the accuracy of title I emission inventories and emission statements, and may allow for increased accuracy in the assessment of permit fees under the title V operating permits program to the extent a permitting authority bases its fee program on actual emissions.

Enhanced monitoring would also result in benefits to the regulated community. Although a self-monitoring program may not always be justified purely on the basis of economic benefit to a source, a monitoring program often provides an owner or operator with information beneficial to reducing other costs. Self-monitoring can in some situations reduce operating costs. For example, monitoring data can be used to increase combustion efficiency in an industrial boiler or to increase capture and reuse of solvents at a coating plant. A 1990 study by the General Accounting Office entitled "Air Pollution: Improvements Needed in Detecting and Preventing Violations" noted several instances in which companies have achieved such operating cost reductions. An enhanced monitoring program could also alert owners or operators that potential control device problems may exist. The owner or operator can use this information to target control devices for routine maintenance and repair, and reduce the potential of significant, costly breakdowns.

As discussed in Section VI.C., a complete analysis of the costs and benefits of the proposed regulations is included in the RIA. As stated previously, the Agency solicits comments on its approach. The RIA document is available in the docket.

D. Public Participation. The proposed regulations were developed with the benefit of insight from many parties that would be affected by the proposed regulations. These

groups include State and local air pollution control agencies, major industries, trade associations and environmental organizations.

To obtain the views of all these parties, as well as the general public, EPA published a notice in the Federal Register on August 8, 1991 to make available a Public Information Document on enhanced monitoring and to provide notice of a public meeting on the subject (56 FR 37700-01). The meeting was held in Washington, D.C. on August 22, 1991, and was attended by representatives from over fifty organizations. In response to the public meeting, EPA received many comments which are included in the docket.

Since the public meeting, EPA has held a series of informal informational and discussion sessions with interested organizations to receive their views on enhanced monitoring, as well as a recent informational meeting with approximately fifty attendees held on August 12, 1993. (A summary of those contacts is included in the docket.) The EPA is interested in receiving comments from these and other interested parties during the public comment period for the proposed regulations.

II. Implementation Principles. In the May 10, 1991 preamble to the proposed 40 CFR part 70 regulations, EPA announced several principles that "should guide the design and implementation of title V regulations and related programs" (56 FR 21714). As noted in Section I. above, the proposed regulations would be related to many of the provisions of title V. In addition, these proposed regulations would be implemented in large part through the operating permits program. Thus EPA has developed the proposed regulations in a manner consistent with these implementation principles of title V. The following discussion provides a brief outline of some of the title V implementation principles that most significantly relate to the proposed regulations.

A. Ensure Environmental Protection. Congress's basic goal in adopting section 114(a)(3) and related provisions is to ensure that sources continue to remain in compliance with applicable requirements of the Act after demonstrating initial compliance. The proposed enhanced monitoring program would provide EPA and States with the information necessary to oversee sources' compliance with the Act. The EPA anticipates that through improved oversight capabilities, overall compliance with the Act's requirements will improve and result in lowered emissions and improved air quality. This increased rule effectiveness will reduce the need to adopt additional air pollution control requirements in order to achieve national ambient air quality standards (see Section V.A.). The EPA believes that the other implementation objectives stated below must complement this objective and not undercut the potential of the proposed regulations for strengthening air quality

management efforts across the country.

B. Incorporate Broad-Based Perspective for Rule Development. The EPA continually seeks a better understanding of the key concerns of those most affected by proposed rulemakings in order to have a broad-based perspective during the regulation development process. By considering the views of various parties affected by a proposed regulation, EPA hopes to ease implementation of the proposed regulations and to minimize resource expenditures. As noted above in Section I.D., the proposed regulations were developed with the benefit of insight from important affected parties (including State and local governments, major industries, trade associations, and environmental organizations) that are actively involved in implementation of the Act. The EPA is interested in receiving additional input from these and other interested parties during the public comment period.

C. Maintain an Effective Partnership With State and Local Governments. The EPA recognizes that the bulk of the responsibility for implementing the proposed regulations would fall upon permitting authorities at the State and local level. A key principle in developing the proposed rules has been to build upon existing monitoring programs and to provide the States with flexibility wherever possible to reduce the burden of implementing the rules. In addition, EPA has developed a reference document to accompany these rules that would provide assistance in implementing the proposed rules.

D. Minimize Small Business Concerns. The EPA is sensitive to the potential impact of regulations on small businesses. To minimize such impacts, the proposed regulations would apply only to emissions units at sources of the most significant concern. In addition, the proposal could complement cost-effective permitting techniques, such as general permits, that can simplify the permit application and issuance process. For instance, in some circumstances, a group of facilities with similar emissions units subject to the proposed rule could develop a suggested enhanced monitoring protocol that, if considered acceptable, could then be incorporated as the enhanced monitoring requirement in a general permit applicable to each facility in the group. Finally, EPA has developed, but not mandated, a standardized summary reporting format that could be used for reporting under the proposed regulations. Use of the suggested standardized format would simplify and streamline reporting procedures. The standardized format is included as part of the draft Enhanced Monitoring Reference Document (see Section III.A.3.) and will be available on the technology transfer network bulletin board system (TTNBBS) operated by EPA's Office of Air Quality Planning and Standards.

E. Promote Pollution Prevention. The EPA encourages

permitting authorities to promote cost-effective pollution prevention alternatives where possible in their permitting activities. Because these proposed regulations would not cover emissions units with potential emissions below a minimum applicable threshold of regulated non-hazardous air pollutants, the proposal would encourage sources to limit their potential emissions by undertaking enforceable pollution prevention measures rather than be required to conduct enhanced monitoring. In addition, the flexible monitoring approach in the proposed regulations, including the use of material balance procedures where appropriate, would be compatible with materials recovery and other pollution prevention approaches for controlling emissions.

F. Facilitate Use of Market-Based Incentives. The operating permits program and the proposed enhanced monitoring program are intended to be useful administrative tools for achieving cost-effective improvements in air quality through market-based principles. The proposed regulations would facilitate implementation of market-based programs by requiring information to be collected that could be used to determine emission baselines and subsequent reductions. This type of information will be an essential element of any economic incentive program that may be implemented.

G. Allow Flexibility in State Programs and Source Permits. The EPA recognizes the need for flexibility to consider different but effective monitoring techniques that would meet the requirements of the proposed enhanced monitoring program. Therefore the proposed regulations would allow States and owners or operators a flexible range of options in designing source-specific enhanced monitoring requirements.

H. Enable Effective and Efficient Information Transfer. The EPA intends that information contained in enhanced monitoring reports (to the extent not protected under laws of confidentiality) would be used for several air quality management purposes. The EPA intends to promote consistent data submittals to track progress, consolidate current reporting burdens, and inform affected parties of a source's compliance status relative to its applicable requirements.

I. Promote Simple and Streamlined Regulations. It is EPA's intent to simplify and streamline these regulations to the extent possible. To this end, EPA solicits comments as to how this proposal might be further simplified or streamlined.

III. Summary of Key Concepts. In developing these proposed rules to implement the statutory mandates and intent under amended section 114(a) and title V of the Act, there are several key concepts that have guided the overall approach taken in the proposed regulations:

- (1) Enhanced monitoring requirements should be

flexible and allow for technological innovation and development;

(2) Enhanced monitoring data must be able to detect deviations with sufficient representativeness, accuracy, precision, reliability, frequency and timeliness in order for an owner or operator to determine and certify whether compliance with applicable emission limitations or standards is continuous or intermittent; and

(3) A link between the provisions under section 114(a) and the provisions under title V of the Act was intended by Congress.

Each of these concepts is addressed in further detail in the following subsections.

A. Development and Selection of Enhanced Monitoring Protocols.

1. General Approach. The proposed regulations envision that enhanced monitoring systems and procedures applicable to an individual emissions unit would be set forth in an enhanced monitoring protocol to be developed and proposed by an owner or operator for approval by the permitting authority. The proposed regulations would require an owner or operator to implement an enhanced monitoring protocol that can be used to determine and certify continuous or intermittent compliance in accordance with section 114(a)(3) of the Act. This link between the enhanced monitoring protocol and determining whether an emissions unit is in continuous compliance would serve as the fundamental criterion on which all proposed enhanced monitoring protocols must be evaluated.

To assure sufficient data quality for purposes of determining continuous compliance and to assist in the selection and evaluation of proposed enhanced monitoring, the proposed regulations would require that an enhanced monitoring protocol provide for the collection of data with sufficient representativeness, accuracy, precision, reliability, frequency and timeliness to satisfy the basic requirement of determining continuous compliance. The proposed regulations would include specifications and requirements related to monitoring equipment, installation, performance, performance verification test, and quality assurance procedures to assure that these data quality objectives are achieved.

The EPA has determined that there are many monitoring systems and procedures that can potentially satisfy these basic requirements for enhanced monitoring. Depending upon the nature of the emissions unit being monitored, an enhanced monitoring protocol could contain elements such as: continuous emission monitoring systems; continuous process or control device parameter monitoring systems or procedures; emission calculations based on accepted engineering estimation techniques; maintenance and analysis of records of fuel or raw materials usage; periodic

verification of emissions, process parameters or control device parameters using portable or in situ measurement devices; recording results of a program or protocol to conduct specific operation and maintenance procedures, leak detection, fugitive dust control, or other work practices; any other form of measuring emissions, process parameters or control device parameters that can achieve the requirements of the proposed regulations; or any combination of the above.

Many sources subject to Federal regulatory or permit requirements, and some SIP sources, use one or more of these types of monitoring systems or procedures already. For many other SIP sources, one or more of these monitoring methodologies are used by similar new sources. The EPA has proposed to classify much of this existing monitoring as "established monitoring." "Established monitoring" would be defined as monitoring that has previously been demonstrated as a feasible means of assessing compliance at a specific type of emissions unit at a source, without taking into account the date of construction or modification of the emissions unit. For instance, a monitoring requirement in an NSPS subpart would be considered "established" for both NSPS and SIP emissions units that are of the type covered by the applicable subpart. Established monitoring includes the monitoring requirements specified in 40 CFR part 60 (the NSPS program), 40 CFR part 61 (the NESHAP program), appendix P of part 51 (SIP CEMS requirements), provisions in SIP's that implement monitoring systems and procedures identified in Control Technique Guidelines developed by EPA pursuant to section 108 of the Act, monitoring requirements in preconstruction permits issued pursuant to title I of the Act, and, the Acid Rain Program monitoring requirements in 40 CFR part 75.

The proposed regulations would provide as one option that an owner or operator consider using the best established monitoring for the owner or operator's particular emissions unit for the purpose of enhanced monitoring. As noted in Section I.B.1., the determination of what is the "best" monitoring would involve an assessment of the circumstances at the particular emissions unit in question, and would not necessarily require the use of the best technologically and economically feasible monitoring.

If the established monitoring satisfies the requirements of part 64, then the owner or operator could propose that monitoring system or procedure for purposes of its proposed enhanced monitoring protocol. If necessary, the owner or operator would modify or add to the performance and operating requirements applicable to the established monitoring in order to satisfy enhanced monitoring performance and operating requirements specified under § 64.4(b), such as data availability requirements or quality-assurance procedures. Where parameter monitoring is

involved, the owner or operator may also have to include procedures for establishing a "demonstrated compliance parameter level" in order to demonstrate compliance with an applicable emission limitation or standard. (See Section IV.D. for discussions of these topics.)

If no established monitoring applies, or if the owner or operator considers the established monitoring inappropriate, then the owner or operator would be able to propose alternative monitoring for its enhanced monitoring protocol. In these circumstances, the owner or operator would have to identify all monitoring methodologies that are technologically feasible for the particular emissions unit. From that group of potential monitoring approaches, the owner would then have to select a methodology that can best satisfy enhanced monitoring requirements for the particular emissions unit. Again, the determination of what is "best" would involve an assessment of site-specific circumstances.

After the evaluation process, the owner or operator would describe and justify in a permit application the proposed enhanced monitoring protocol selected on the basis of the owner or operator's evaluation. The application would have to list the monitoring methodologies identified, include a summary explanation of how the proposed monitoring approach would best satisfy the enhanced monitoring requirements at the particular emissions unit, and provide detailed supporting documentation and information.

The EPA has proposed this process of identifying, evaluating and proposing an enhanced monitoring protocol because it emphasizes the use of monitoring systems and procedures that EPA has previously established to be acceptable for specific emissions units, based on the specific source category, the type of industry, and the size and nature of the emissions unit. Where an owner or operator proposes to use a different form of monitoring, then the process of identifying technologically feasible monitoring methodologies before evaluating a methodology for use in an enhanced monitoring protocol would assure that there is sufficient information for both the source and the permitting authority to select and approve an enhanced monitoring protocol.

It should be noted that existing monitoring systems and procedures, including many established monitoring methodologies, may need to be upgraded, either through improved instrumentation or through improved practices such as quality assurance, to meet the proposed enhanced monitoring protocol requirements. This upgrading would in large part be necessary to satisfy the enhanced quality assurance and data availability requirements in the proposed regulations.

The EPA has proposed this flexible approach for selecting an enhanced monitoring protocol for several

reasons. Given the short time-frame provided by Congress for promulgating regulations pursuant to section 114(a)(3), it would be infeasible for EPA to develop regulations dictating the enhanced monitoring approach that each possible source category must adopt. More importantly, the proposed approach would promote the development of technological advances and innovative ideas for cost-effective enhanced monitoring by the private sector. EPA is committed to allowing the private market to develop new and innovative means of achieving the air quality goals contained in the Act. One of the primary forces behind the 1990 Amendments was the drive to increase the reliance upon market-based efficiencies in developing air pollution control requirements, such as Congress included in the allowance trading provisions for the Acid Rain Program under title IV of the Act. By allowing source owners or operators to have a greater input on the type of monitoring that can be used, these regulations can allow for the development of cost-effective monitoring alternatives by the regulated community.

This flexible approach will also allow for differences in sources' potential variability in emissions to be taken into account. The emphasis in the proposed rule is on providing monitoring data that can determine accurately whether a source remains in compliance with applicable emission limitations or standards. If a particular emissions unit has a large margin of compliance and low potential variability in emissions, then less sophisticated monitoring would be more appropriate than if only a small margin of compliance exists or the potential variability of emissions is high.

The EPA anticipates that there generally would be a need for some type of continuous instrumental monitoring for those emissions units that use an add-on control device to achieve compliance with an applicable emission limitation or standard. Proper operation of a control device is essential for compliance with an applicable emission limitation or standard, and a failure of the control device can lead to significant emission exceedances even if a large margin of compliance is demonstrated while the control device is functioning properly.

Because many types of control devices are subject to potential reduced efficiency, enhanced monitoring generally would have to measure on a continuous basis the effectiveness of a control device in order to determine continuous compliance with the applicable emission limitation or standard. For some types of control devices, an owner or operator may be able to justify less frequent measurements (e.g., less frequent measurements may be justified for carbon bed adsorbers used to control VOC emissions because of the operational characteristics of that particular control device). A source generally would have

to either monitor the emissions exiting the control device (and entering if a reduction efficiency requirement applies), or monitor one or more operating parameters of the control device and maintain appropriate records for the emissions unit.

As noted earlier in Section I.B., the selection and use of monitoring, regardless of the degree of instrumentation or frequency of data collection, is not intended to affect the stringency of underlying emission limitations or standards.

2. Distinguishing Continuous Compliance from Continuous Monitoring. The reader should note that EPA has included within the monitoring approaches listed above both continuous and periodic monitoring systems and procedures. It is important to distinguish between the requirement under section 114(a)(3) to determine "whether compliance is continuous or intermittent" and the use of continuous or periodic monitoring approaches. Continuous compliance generally means to remain in compliance during all times that compliance is required, consistent with the applicable averaging period. Continuous monitoring generally means to measure emissions or parameters on an extremely frequent basis and then to average those results over some period of time.

For instance, a gaseous CEMS is required under 40 CFR part 60 to complete one cycle of measurement, analysis and data recording every fifteen minutes, and then those individual measurements are averaged over a period of time, often one hour, to provide a single average emissions value. For many emissions units, frequent measurements and averaging the results is unnecessary to determine whether compliance is continuous. In these circumstances, periodic measurements can be used to determine continuous compliance.

The determination of measurement frequency is a function of both the averaging period for the emission limitation or standard and the potential variability of emissions. As a general matter, a determination of continuous compliance will require some data for all applicable averaging periods for a standard. Where the potential variability in emissions is high, then several measurements within an averaging period may be required. Where the potential variability is low, a single periodic measurement that covers several averaging periods may be appropriate.

For instance, fuel sampling and analysis may be an appropriate form of enhanced monitoring at some fossil fuel-fired steam generating emissions units. By conducting proper fuel sampling and analysis, sulfur dioxide (SO₂) emission rates can be determined based on the sulfur content of the fuel used and the amount of fuel consumed. If an hourly averaging time is specified, usage rates may have to

be determined on a more frequent basis than if the averaging time is daily. As another example, since the sulfur content of coal is more variable than that of distillate oil, coal generally would require more frequent sampling and analysis. See Section IV.D. for a further discussion of measurement frequency and related performance specifications.

In public comments received during development of the proposal, some commenters suggested that the phrase "continuous or intermittent" as used in section 114(a)(3) referred to whether the methodology used for determining compliance was continuous or intermittent, not whether compliance was continuous or intermittent. The EPA believes that this interpretation of the statute is contrary to the explicit language of section 114(a)(3). Section 114(a)(3) states that a compliance certification must include, among other items, two discreet elements: the methods used to "determine the compliance status of the source" and "whether compliance is continuous or intermittent." If Congress had intended the latter phrase to apply to the methodology for determining compliance, Congress would have required that the certification identify whether compliance was determined on a continuous or intermittent basis.

The confusion on this issue may stem in part from language in section 114(a)(1) that gives the Administrator the authority to require any source to conduct monitoring, testing, reporting and recordkeeping "on a one-time, periodic or continuous basis." This language was added to section 114(a)(1) to clarify EPA's long-standing ability to require any owner or operator to collect and submit data pursuant to section 114 of the Act. The new language in section 114(a)(1) reaffirms EPA's authority to obtain this information on a one-time, periodic, or continuous basis. The EPA believes that the citations to discussions in a Senate report (see S. Rep. 228, 101st Cong., 1st Sess., at 368 (1989)) made by these commenters apply to this general provision and are not related to the term "enhanced monitoring" or the related provisions of section 114(a)(3).

3. Enhanced Monitoring Reference Document. Included in the docket for the proposed regulations is a separate preliminary draft "Enhanced Monitoring Reference Document" (referred to hereafter as the "EM Reference Document"). The EPA believes that this document, when finalized, will serve to reduce the burden on permitting authorities and sources by laying out the protocol evaluation process and including many examples of acceptable protocols.

The EM Reference Document provides an overview of the enhanced monitoring program and the types of issues that must be addressed by an owner or operator that seeks to comply with the proposed part 64 requirements. The document also reviews the selection process and provides a summary of the "established monitoring" from existing monitoring

regulations that could be evaluated by an owner or operator where applicable. (See the discussion of "established monitoring" in Sections III.A.1. and IV.D.5.)

The EM Reference Document also provides examples of other monitoring systems and procedures that potentially could be used as enhanced monitoring. The document also describes performance specifications, calibration and quality assurance procedures, and data availability requirements for enhanced monitoring protocols. Finally, the document provides guidance on how enhanced monitoring can be addressed in preparing permit applications and in developing permit terms and conditions.

The EM Reference Document is not included as part of the proposed regulation and is not intended to be viewed as a regulatory requirement. Rather, the EM Reference Document is intended to simplify the permitting process to the maximum extent possible by providing a compendium of established monitoring and other potential approaches to enhanced monitoring. Thus, for many situations, an owner or operator would be able to rely on the EM Reference Document as support in justifying that a proposed enhanced monitoring protocol can satisfy the regulatory requirements.

In some instances, however, the owner or operator, or the permitting authority, may decide that a system or procedure identified in the EM Reference Document is inappropriate for an emissions unit at a particular source because of unit-specific concerns, such as measurement interferences or unique design considerations. In other instances, an owner or operator may propose another alternative that will provide sufficient data to satisfy enhanced monitoring requirements, but that is less costly for the source. Finally, due to the scope of the enhanced monitoring program, the EM Reference Document cannot be all-encompassing. For emissions units not included, the owner or operator would have to demonstrate to the permitting authority that its proposed enhanced monitoring protocol meets the requirements of the proposed regulations.

The EPA intends that the EM Reference Document will be a dynamic document and that additional non-instrumental and instrumental monitoring approaches will be added over time to increase the effectiveness of the document as a reference tool for permitting authorities and the regulated community. The EPA anticipates adding additional examples to the document prior to promulgation of final enhanced monitoring rules. In addition, EPA encourages all affected parties to submit comments on the EM Reference Document and to propose enhanced monitoring protocols for consideration, not only before promulgation of the part 64 regulations, but after that time as well. In this manner, the document can be updated on a regular basis.

B. Purpose of Enhanced Monitoring. The enhanced monitoring and compliance certification program constitutes

a new initiative under sections 114(a)(3) and 113(e) of the Act designed to increase overall compliance with applicable emission limitations or standards. Historically, the determination of the compliance status of an emissions unit has been made in many cases on the basis of a single compliance demonstration, sometimes followed by additional (usually infrequent) compliance demonstrations to confirm continuing compliance. For new sources, an initial performance test using reference test method procedures is conducted in order to document an emissions unit's capability to comply with applicable emission limitations or standards. After demonstrating that an emissions unit is capable of compliance through this initial test, EPA has generally relied upon surveillance techniques (e.g., inspections, citizen complaints, etc.) to target sources for further compliance demonstrations.

The requirements of section 114(a)(3) shift to the owner or operator the burden to document and report whether an emissions unit remains in compliance with applicable emission limitations or standards over time. As required by section 114(a)(3), a responsible official of the source must certify "whether compliance is continuous or intermittent" during the reporting period. In order to meet the clean air goals of the Act, owners or operators, not EPA and States, must collect sufficient data to determine and report on the continuous compliance status of their emissions units.

The EPA anticipates that for those source subject to the enhanced monitoring requirements, the proposed enhanced monitoring program coupled with the compliance certification provisions of part 70 would improve overall compliance with emission limitations or standards under the Act and bring noncomplying owners or operators into compliance. The increased compliance that can be achieved through effective implementation of these proposed regulations and the part 70 regulations would reduce emissions significantly below current levels. The data analyzed by EPA in developing the RIA for these proposed regulations (see Section VI.C.) indicate that where monitoring programs have been initiated for determining continuous compliance, emissions have been reduced significantly. The reduced emissions that would occur from effective implementation is thus a primary environmental benefit of these proposed regulations.

In addition to environmental benefits, such emissions reductions will probably result in substantial reductions in the overall cost of air pollution control. The RIA performed to support the proposal documents that enhanced monitoring can achieve emissions reduction more cost-effectively than additional control technology requirements. By increasing the compliance rate with existing requirements through the performance of enhanced monitoring, the need for additional, more costly control regulations can be avoided. For instance, with respect to VOC emission inventories

required in nonattainment areas, EPA currently allows States to take credit for only 80 percent of the emission reductions that could be achieved by full compliance with a regulation. Increased compliance would allow States to take credit for additional reductions. In particular, where a State must document reasonable further progress in nonattainment areas pursuant to title I of the Act, EPA is considering the option of allowing a State that has implemented these proposed rules to take credit for a significant portion of its required progress demonstration; this point is discussed in further detail in Section V.A..

Finally, as noted earlier in Section I.C., a self-monitoring program can have economic benefits for many sources as well. Self-monitoring can increase operating efficiencies and reduce process costs. Monitoring can also document the need to perform routine maintenance of control equipment and avoid the need to perform costly repairs to, or even replacement of, a large capital investment. Instrumental systems can frequently be used to diagnose control device problems. In addition, self-monitoring could provide data that would allow an owner or operator to rectify control device problems before a period of non-compliance occurs and eliminate potential exposure to enforcement actions.

Section 114(a)(3) specifically requires that a certification be based upon a determination of whether compliance was continuous or intermittent. Therefore, the enhanced monitoring protocol must collect data that can be used to document compliance and facilitate enforcement of documented violations. Congress noted in a Senate Committee Report 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., at 368 (1989)). Similarly, a House Committee Report stated that this section "confirms that EPA has authority under section 114(a) to require enhanced monitoring and to require such monitoring in compliance certifications." (H.R. Rep. 490, 101st Cong. 2d Sess., pt. 1, at 394 (1990)). Thus, Congress linked enhanced monitoring and compliance certifications, with the idea that enhanced monitoring data would serve as the basis for certifying compliance and could be used to determine the existence of an enforceable violation.

To be effective, this program must also be practical and cost-effective for both the regulated community and the regulatory agencies at the local, State and Federal level. The EPA realizes that, because many existing reference test methods require expensive in-stack sampling techniques, it would often be impractical to require a source to conduct

such tests frequently enough to have representative data with which to determine and certify its compliance status over a period of time. However, some existing provisions in 40 CFR parts 51, 52, 60 and 61, and in some SIP's, are written in a manner that potentially limits determinations of compliance to such reference method test procedures. To implement the new statutory mandate effectively, the existing provisions must be modified to allow explicitly for the enhanced monitoring and compliance certification requirements to be implemented through 40 CFR parts 64 and 70.

Thus, this proposal would include several changes to 40 CFR parts 52, 60 and 61 to address this issue. (Additional amendments to parts 51 and 52 to address preconstruction permit implementation issues are discussed in Section V.C.) These amendments would allow for the use of enhanced monitoring protocols approved through the part 64 process, if applicable (and on the basis of other monitoring approved through the part 70 process), for the purpose of certifying compliance, in addition to the means of determining and certifying compliance provided for in the referenced regulations. The EPA also intends to require through State implementation plan (SIP) call procedures that all SIP's contain adequate authority to allow for the enhanced monitoring (and other part 70 monitoring) to be used for compliance certification purposes.

In addition to making enhanced monitoring and periodic monitoring data usable for compliance certifications, the amendments and the SIP Call also will make changes which make EPA's enforcement scheme consistent with the changes made by Congress to Section 113 of the Act. Congress made these changes, such as providing EPA with the authority to issue administrative penalty orders under the Act, to strengthen EPA's ability to bring enforcement actions for violations of the Act.

The change to the Act most relevant to the proposed amendments is section 113(e). Section 113(e) of the Act is entitled "Penalty Assessment Criteria," which in addition to establishing the factors to be assessed in the penalty phase of trial, also creates presumptions for proving continuing violations. (See section 113(e)(2) of the Act, 42 U.S.C. 7413(e)(2).) In addition, most relevant for the purposes of this proposed rule, section 113(e)(1) clarifies that violations can be proved based on any credible evidence admissible under the Federal Rules of Evidence. Section 113(e)(1) now provides that "in determining the amount of any penalty to be assessed . . . the Administrator or the court, as appropriate, shall take into consideration . . . the duration of the violation as established by any credible evidence (including evidence other than the applicable test method). . . ." (See section 113(e)(1) of the Act, 42 U.S.C. 7413(e)(1).) Under the Act, penalties are assessed for each

day of violation. (See sections 113(b), 113(d) and 113(e)(2), 42 U.S.C. 7413(b), 7413(d) and 7413(e)(2).) Therefore, penalties cannot be considered or assessed unless, and until, liability for the underlying days of violation has been established. In order for a court to consider penalty assessment for the "duration of the violation," liability for the violation must first be established by appropriate means, including "as established by any credible evidence."

The legislative history explains that Congress intended to grant the Agency greater flexibility in its use of evidence in proving a violation. Congress stated:

. . . the amendment clarifies that courts may consider any evidence of violation or compliance admissible under the Federal Rules of Evidence, and that they are not limited to consideration of evidence that is based solely on the applicable test method in the State implementation [plan] or regulation. For example, Courts may consider evidence from continuous emission monitoring systems, expert testimony, and bypassing and control equipment malfunctions, even if these are not the applicable test methods. Thus, this amendment overrules the ruling in United States v. Kaiser Steel Corp., No. 82-2623-IH (C.D. Cal. January 17, 1984) to the extent that the court in that case excluded the consideration of such evidence. (S. Rep. No. 228, 101st Cong., 1st Sess. 1, 366 (1989), reprinted in 1990 U.S. Code Cong. & Admin. News 3385, 3749.)

In addition, Congress also stated that the enforcement title of the Clean Air Act Amendments of 1990 makes "clear that the Agency may rely upon any credible evidence of violations in pursuing alleged violations." (S. Rep. No. 228, 101st Cong., 1st Sess. 1, 366 (1989), reprinted in 1990 U.S. Code Cong. & Admin. News 3385, 3741.)

The statutory language and the legislative history demonstrate that Congress intended to amend the penalty assessment provision in part to overrule Kaiser Steel. In Kaiser Steel, EPA argued to the court that it should be able to prove violations based on evidence other than the applicable "reference" test method. Then, as now, section 113(a) allowed the initiation of an enforcement action based on any information available to the Administrator. (See section 113(a), 42 U.S.C. 7413(a).) The court disagreed with EPA's argument and ruled that expert testimony of the opacity of Kaiser's blast furnace exhaust gases was inadmissible because the testimony did not strictly comply with the applicable test method. Thus, EPA was limited to proving violations on days for which reference test data was available. In overruling Kaiser Steel, Congress intended that section 113(e) would facilitate enforcement by allowing