

specifically with (1) certain limited size new construction; (2) limited expansion or improvement of an existing facility; (3) purchase or lease of a limited size existing building; and (4) disposition of unimproved land. In each of the above exclusionary areas, it was found that there was very little significant environmental impact in actions much more extensive than those excluded. Accordingly, it appears that the exclusions should be expanded.

**DATE:** Comments must be received on or before December 30, 1981.

**ADDRESS:** Written comments should be sent to the General Manager, Project Analysis Division, Real Estate and Buildings Department, U.S. Postal Service, Washington, D.C. 20260-6400. Copies of all written comments will be available for public inspection and photocopying between 9:00 AM and 4:00 PM, Monday through Friday, in Room 4141, U.S. Postal Service Headquarters, 475 L'Enfant Plaza West, SW., Washington, D.C.

**FOR FURTHER INFORMATION CONTACT:** Mr. Royal Rasmussen, (202) 245-4354.

**SUPPLEMENTARY INFORMATION:** Since 1979 the Postal Service has continually analyzed, both at Headquarters and in the field, information about the preparation of environmental assessments. We believe the evidence shows that four of the categorical exclusions are too limited. For example, the categorical exclusion of new construction, including lease-construction, of 10,000 or less, net square feet, seems unduly limited in light of the fact that 92 percent of the new construction projects, with twice as much net square footage as those categorically excluded, did not encounter a need for an environmental assessment. As to the 8 percent that required an assessment, there were extraordinary circumstances in each case.

The second category studies excludes expansions or improvements of existing facilities where the gross square footage is not increased by more than 20 percent and the site size is not increased substantially. We analyzed projects where the gross square footage was not increased by more than 40 percent. Of that group we found only one project that required an environmental assessment, and in that case there were extraordinary circumstances.

The third category excludes the purchase or lease of an existing building containing 20,000, or less, net square feet of space where a new or substantially enlarged occupancy is not involved. We analyzed projects in this category where the buildings contained up to 50,000 net

square feet of space, and in none of the projects were there any environmental problems. In addition to proposing an increase to 50,000 in the net square feet of space, we are proposing to exclude the purchase or lease of an existing building of any size if currently occupied by the Postal Service, where a substantially enlarged operation is not involved.

We are also proposing to amend the fourth category, which excludes an acre or less of unimproved land in an urban area and five acres or less of unimproved land in a rural area. In none of our land dispositions were there any environmental concerns. Accordingly, we propose to exclude the disposal of all unimproved land.

The Postal Service envisions the following benefits from expanding the categorical exclusions: (1) Elimination of unwarranted environmental work, which would save many employee manhours for work on other projects; (2) reduction of contractor costs for environmental studies and reports; and (3) possible completion of projects more quickly and consequent realization of operating savings due to the use of new facilities. While these categorical exclusions are proposed to be expanded, we retain the command in the rules that "the responsible [postal] officials must be alert to unusual conditions that would require an environmental assessment or an environmental impact statement." 39 CFR 775.4(b). See also 39 CFR 775.6(a)(1).

Under 39 U.S.C. 410(a), the Postal Service is exempt, with specified exceptions not including NEPA, from Federal laws dealing with public property, works, employees, or funds, including the provisions of the Administrative Procedure Act regarding proposed rulemaking (5 U.S.C. 553(b), (e)). Nevertheless, the Postal Service invites comments on the following proposed revisions of title 39, Code of Federal Regulations:

#### **PART 775—ENVIRONMENTAL PROCEDURES**

In § 775.4, paragraphs (b)(1), (2), (3), and (5) are revised to read as follows:

##### **§ 775.4 Typical classes of action.**

\* \* \* \* \*

(b) \* \* \*

(1) New construction, including lease-construction, of 20,000, or less, net square feet.

(2) Expansion or improvement of an existing building where the gross square footage is not increased by more than forty percent, and the site size is not increased substantially.

(3) Purchase or lease of an existing building containing 50,000, or less, net square feet of space where a new or substantially enlarged occupancy is not involved and purchase or lease of an existing building of any size that is currently occupied by the Postal Service where a substantially enlarged operation is not involved.

\* \* \* \* \*

(5) Disposal of unimproved land.

(39 U.S.C. 401)

W. Allen Sanders,

Associate General Counsel, General Law and Administration.

[FR Doc. 81-34225 Filed 11-27-81; 8:45 am]

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#### **ENVIRONMENTAL PROTECTION AGENCY**

##### **40 CFR Part 52**

[A-9-FRL-1971-2]

#### **Approval and Promulgation of Implementation Plans; Arizona Plan Revision: Sulfur Oxides Control Strategy and Regulations for Existing Nonferrous Smelters**

**AGENCY:** Environmental Protection Agency.

**ACTION:** Notice of proposed rulemaking.

**SUMMARY:** Revisions to the Arizona State Implementation Plan (SIP) were submitted to the Environmental Protection Agency (EPA) by the Governor's designee on September 20, 1979. The revisions consist of a demonstration of good engineering practice (GEP) stack height for the 1,000 foot stack at the ASARCO copper smelter in Hayden, Arizona, and rules entitled *Finding of no violation*, and *Standards of performance for existing primary copper smelters*. The intended effect of these revisions is to meet the requirements of Sections 110 and 123 of the Clean Air Act, as amended in 1977 and replace the federally promulgated sulfur dioxide control regulations applicable to the Arizona smelters. These sections of the Act pertain to implementation plans and stack heights, respectively. In addition, the copper smelter rules were amended slightly by the State SIP revisions submitted on January 14 and September 10, 1980.

The ASARCO GEP demonstration and the air pollution control regulations have been evaluated for conformance with the requirements of the Clean Air Act. This notice provides a description of the ASARCO GEP demonstration and the two rules, summarizes the Clean Air Act requirements, compares the elements of

the SIP submittal to those requirements, and proposes approval, conditional approval or disapproval of each portion of the submittal. EPA is also proposing to extend the attainment dates for sulfur oxides and rescind the federally promulgated sulfur dioxide control regulations applicable to the Arizona copper smelters once the State has satisfied the conditional approval items outlined in this notice.

**DATES:** Comments may be submitted on or before January 27, 1982.

**ADDRESSES:** Comments may be sent to: Regional Administrator, Attn: Air & Hazardous Materials Division, Air Programs Branch, Stationary Source Section (A-2-2), Environmental Protection Agency, Region 9, 215 Fremont Street, San Francisco, CA 94105.

Copies of the proposed revisions and EPA's associated evaluation reports are contained in document file No. AZ-MPR-1 and are available for public inspection during normal business hours at the EPA Region 9 office at the above address and at the following locations:

Arizona Department of Health Services,  
Bureau of Air Quality Control, 1740  
West Adams Street, Phoenix, AZ  
85007

Arizona Department of Health Services,  
Bureau of Air Quality Control,  
Southern Regional Office, 5055 East  
Broadway, Suite C-209, Tucson, AZ  
85711

Public Information Reference Unit,  
Room 2404 (EPA Library), 401 "M"  
Street, S.W., Washington, D.C. 20460.

**FOR FURTHER INFORMATION CONTACT:**  
Wallace Woo, Chief, Stationary Source  
Section, Air Programs Branch, Air &  
Hazardous Materials Division,  
Environmental Protection Agency,  
Region 9, (415) 974-8210, FTS 454-8210.

#### **SUPPLEMENTARY INFORMATION:**

##### **Background**

On May 31, 1972 (37 FR 10849), pursuant to section 110 of the Clean Air Act and 40 CFR Part 51, the Administrator disapproved the Arizona SIP for attainment and maintenance of the National Ambient Air Quality Standards (NAAQS) for sulfur dioxide in the Phoenix-Tucson Intrastate Air Quality Control Region and the Arizona portion of the Arizona-New Mexico Southern Border Interstate Air Quality Control Region. The Administrator's disapproval was based on the fact that the plan did not provide for the attainment and maintenance of the NAAQS for sulfur dioxide in these regions. On May 30, 1972, the Governor of Arizona submitted a proposed SIP

revision<sup>1</sup> incorporating regulations for the control of sulfur dioxide from existing copper smelters, and on July 27, 1972 (37 FR 15081), the Administrator published his decision to disapprove those regulations. That decision was based on several factors. One major factor was that the regulations were not specific in a number of areas, which made it impossible to judge whether or not the regulations would have assured attainment and maintenance of the NAAQS. In addition, the regulations did not require constant control of emissions from copper smelters to achieve the NAAQS for sulfur dioxide. Instead of constant emission controls, the Arizona regulations allowed the use of supplementary control systems (SCS) on a permanent basis to achieve the NAAQS.<sup>2</sup>

On July 27, 1972 (37 FR 15096), the Administrator proposed regulations for the control of sulfur dioxide emitted by all the existing smelters in Arizona. The amount of control required for the attainment and maintenance of the NAAQS was based on the available air quality data from the State of Arizona and diffusion model estimates. Because public comments and analysis indicated that the air quality data were questionable, the regulations proposed on July 27, 1972 were not finalized. Instead, EPA established a monitoring network, and collected air quality data at 23 sites in the vicinity of the seven copper smelters located in Arizona. Data were collected from these sites between July 1973 and November 1974.

Using these air quality data, new regulations were proposed by the Administrator on October 22, 1975 (40 FR 49362). The proposed regulations required the constant control of emissions from each smelter such that both the primary and secondary NAAQS would be met.

During 1976, the State of Arizona solicited comments from EPA on tentative SIP revisions for sulfur dioxide

control at existing smelter locations. EPA responded to the State with detailed comments on the tentative SIP revisions. On January 7, 1977, the State submitted to EPA sulfur dioxide regulations for existing nonferrous smelters as proposed SIP revisions, but these regulations were subsequently withdrawn in May 1978. The State initiated this action since the Clean Air Act was amended in mid-1977, and the State needed to reevaluate the proposed SIP revisions under the new requirements.

In August 1977, Congress amended the Clean Air Act. Certain of these amendments changed and clarified the statutory requirements applicable to primary nonferrous smelters. Section 110(a)(2)(B) of the amended Act requires the SIP to include emission limitations and other such measures as are necessary to ensure attainment and maintenance of the NAAQS. In section 302(k), Congress made clear that those emission limitations must be achieved by the use of constant emission control technology alone. The use of any dispersion techniques to meet national standards is prohibited, except as provided in sections 119 and 123.

Section 119 of the 1977 Clean Air Act Amendments established a new enforcement mechanism, the primary nonferrous smelter order (NSO), which permits a smelter to defer compliance with its SIP sulfur dioxide emission limitation, if several conditions are satisfied. If the smelter can demonstrate that it is unable to afford the adequately demonstrated technology which would enable it to comply with its SIP emission limitation for sulfur dioxide, and if it meets other requirements of section 119 and applicable regulations, then the smelter may receive an NSO. Under an NSO, certain interim requirements must be met. These requirements include the use of dispersion-dependent techniques, the evaluation and control of fugitive emissions, research and development on additional sulfur oxide control measures, and the assumption of legal liability by the smelter for violations of the sulfur dioxide NAAQS. In addition, a smelter receiving an NSO must use an interim level of continuous emission reduction technology. The first NSO issued to a smelter may not extend beyond January 1, 1983. In addition, if certain conditions are met, a second NSO may be issued, but may not extend beyond January 1, 1988. However, compliance with the SIP sulfur dioxide emission limitations necessary to attain the NAAQS is merely postponed. The smelter remains responsible for compliance with the limitations solely

<sup>1</sup>In this notice, the term "proposed SIP revision" used in this context does not mean that the regulations were not final as matter of Arizona law, but that they were proposed for inclusion in the Federal SIP.

<sup>2</sup>By using a supplementary or intermittent control system (SCS or ICS), emissions are varied according to meteorological dispersion conditions (i.e., the source reduces emissions during periods of poor dispersion). The use of a tall stack which exceeds "good engineering practice" as defined by Section 123 of the Clean Air Act could also disperse emissions over a wide geographic area. Such dispersion techniques do not limit total emissions into the atmosphere on a continuous basis.

Constant emission controls, however, diminish the overall atmospheric loading of pollutants either by continuously preventing pollutants from being generated or removing pollutants from waste gas on a continuous basis.

through the use of constant controls upon expiration of the NSO(s). EPA published regulations governing the issuance of the first NSO on June 24, 1980 [45 FR 42536], but has not yet published regulations for the second NSO.

Section 123 of the Clean Air Act Amendments denies credit for the dispersion of pollutants from any stack built after December 31, 1970 whose height exceeds the GEP formula stack height, unless the owner or operator of the source demonstrates that the stack is of good engineering practice (GEP) height.

Congress defined GEP stack height as:

" \* \* \* The height necessary to insure that emissions from the stack do not result in excessive concentrations of any air pollutant in the immediate vicinity of the source as the result of atmospheric downwash, eddies and wakes which may be created by the source itself, nearby structures or nearby terrain obstacles (as determined by the Administrator)." [Clean Air Act, section 123(c)]

Section 123 also prohibits any other dispersion techniques, such as supplementary control systems (SCS), which may reduce the required degree of emission limitations, unless the dispersion techniques were implemented before December 31, 1970. Regulations to implement section 123 were proposed by EPA on January 12, 1979 [44 FR 2608].

On January 4, 1978 (43 FR 755), EPA promulgated a sulfur dioxide emission limitation regulation for the seven Arizona smelters. The published regulation was based on requirements of the Clean Air Act Amendments, as well as testimony and comment received during the public hearing on the October 1975 proposed rulemaking. On February 17, 1978 (43 FR 6945), EPA delayed the effective date of this regulation pending publication of final section 119 NSO regulations. The implementation of the January 4, 1978 promulgated regulation was deferred to ensure that the affected smelters would have an opportunity to apply to EPA for NSOs prior to the effective date of any SIP requirements. EPA promulgated regulations for the first NSO on June 24, 1980 (45 FR 42536), but the effective date of the January 4, 1978 regulations is still stayed.

Between January and May, 1978, all five Arizona smelting companies and the State of Arizona responded to the EPA promulgated regulation by filing section 307 challenges to EPA's emission limitations in the Ninth Circuit Court of Appeals. The smelting companies and the State of Arizona also filed Administrative Petitions for Reconsideration and Revision with EPA

regarding the January 4, 1978 regulation. The Ninth Circuit Court has repeatedly stayed action on the section 307 challenges pending the outcome of EPA's response to the Petitions for Reconsideration and Revision and/or EPA action on Arizona's September 20, 1979 SIP revision. During late 1978 and early 1979, the State of Arizona again solicited comments from EPA on another tentative SIP revision for sulfur dioxide control at existing copper smelters. This tentative SIP revision contained emission limitations calculated through a new technique called multipoint rollback (MPR). The purpose of developing MPR was to establish emission limitations which would reflect the highly variable smelter operations and emissions while protecting the NAAQS. EPA responded to the State with detailed comments on the tentative SIP revision.

Concurrent with the State's development of the new sulfur dioxide emission limitations for copper smelters, ASARCO, Inc. was developing a study to demonstrate good engineering practice (GEP) stack height for the 1000 foot stack at their smelter in Hayden, Arizona. Since this stack was first put into operation in October 1974, the exemption provisions in section 123 did not apply. ASARCO contracted with North American Weather Consultants to conduct this study and the final results were submitted to the State in July 1979.

On August 9 and 10, 1979, the State conducted a public hearing on the proposed sulfur dioxide emission limitation regulations and the ASARCO GEP stack height demonstration in Phoenix and Tucson, Arizona. Based on testimony and comments received at the hearing, as well as previous technical analysis, the proposed sulfur dioxide regulations were revised. In September 1979, the State adopted both a determination of GEP stack height for the ASARCO smelter and the sulfur dioxide regulations for all the smelters. The State subsequently submitted these to EPA as proposed SIP revisions on September 20, 1979.

On January 14, 1980, the State submitted regulations to implement NSOs. Included in these proposed SIP revisions are amendments to the sulfur dioxide regulations submitted September 20, 1979 which make reference to the new State NSO regulations. In addition, the January 14, 1980 SIP revision submittal repeals the old version of Appendix 7 and replaces it with a completely different version of Appendix 7 dealing with Nonferrous Smelter Order applications. However, EPA will propose no action on the January 14, 1980 submittal, since it is

inappropriate for EPA to act on State NSO regulations as SIP revisions under section 110 of the Clean Air Act. On September 10, 1980 the State submitted a proposed SIP revision which, among other things, modified the attainment date for the September 20, 1979 sulfur dioxide regulations. EPA is proposing conditional approval of this change to the attainment date, as discussed below.

#### Description of Proposed SIP Revisions

On September 20, 1979, the Director of the Arizona Department of Health Services (ADHS), the Governor's official designee, submitted the following as proposed SIP revisions to EPA:

##### 1. State Implementation Plan Determination of "Good Engineering Practice" Stack Height.

The State also submitted two documents in support of the SIP determination of GEP stack height:

*A Wind Tunnel Investigation of Good Engineering Practice (GEP) Stack Height at the ASARCO Smelter, Hayden, Arizona.* North American Weather Consultants, Report No. SBAQ-79-10. Prepared for ASARCO, Inc., July 1979. 24 pages and a 16mm movie.

*Evaluation of "Good Engineering Practice" Stack Height at the ASARCO Smelter, Hayden, Arizona—A Physical Modeling Study.*

Colorado State University, Report No. CER79-80RLP-JEC2. Prepared for North American Weather Consultants, July 1979. 98 pages.

These documents contain the technical details of a fluid modeling investigation and the resulting GEP stack height demonstration. Additional clarifying information was received by EPA from ASARCO and its consultants as follows:

(1) "Responses to EPA Comments on ASARCO Good Engineering Practice (GEP) Study," North American Weather Consultants, July 1980.

(2) "Responses to Questions Concerning ASARCO Good Engineering Practice (GEP) Study," North American Weather Consultants, G. Taylor & R. L. Peterson, August 1980.

(3) Internal ASARCO memo of July 3, 1980 concerning Hayden plant emission rates.

##### 2. Arizona Department of Health Services Rules and Regulations for Air Pollution Control.

R9-3-309. Finding of no violation.

R9-3-515. Standards of performance for existing primary copper smelters.

These rules are contained in a document entitled *Ultimate Sulfur Dioxide Emission Limits for Arizona Copper Smelters*, dated September 1. In addition to the proposed SIP

revisions, the document contains a Technical Support Statement on the application of multi-point rollback (MPR) in establishing the sulfur dioxide emission limits. Amendments to R9-3-515 were submitted by Arizona on January 14 and September 10, 1980.

#### Discussion of Action

##### *I. ASARCO, Inc. GEP Stack Height Demonstration*

On September 20, 1979, the State submitted the ASARCO study demonstrating GEP for the 1000 foot stack at its Hayden smelter to EPA. The State also submitted its SIP determination that this study was an adequate demonstration of GEP. Therefore, the ASARCO stack was granted full dispersion credit by Arizona in calculating the sulfur dioxide limits for Hayden contained in the Multi-Point Rollback (MPR) SIP revision.

#### Discussion

EPA has reviewed the ASARCO study for consistency with section 123 of the Clean Air Act as amended, EPA's proposed stack height regulations (44 FR 2608, January 12, 1979), and EPA's draft fluid modeling guideline documents.<sup>3</sup>

Section 123 of the Act prohibits the use of dispersion techniques to attain the NAAQS unless these techniques were implemented before December 31, 1970, or, in the case of tall stacks, it can be shown that a stack higher than the GEP formula is needed to prevent excessive concentration of the pollutant from occurring in the immediate vicinity of the source as a result of atmospheric downwash, eddies or wakes.

The proposed EPA regulations for implementation of section 123 require that emission limits and constant control technology be used in attaining the NAAQS, rather than the additional dispersive effect of that portion of a stack which exceeds GEP. The proposed EPA regulations also require administrative procedures such as providing for public notification of the fluid modeling GEP demonstration and an opportunity for a public hearing.

The draft EPA fluid modeling guidelines for demonstrating GEP require that actual and modeled values of meteorological, stack, emission, and terrain conditions be comparable, and that the fluid modeling results be verified by empirical (Gaussian) diffusion modeling.

<sup>3</sup>Guideline For Use Of Fluid Modeling To Determine Good Engineering Practice Stack Height, Draft for Public Comment: EPA-450/4-79-015, EPA, June 1979. Guideline For Draft for Public Comment, EPA-450/4-79-0167, EPA, June 1979. Guideline For Determination Of GEP Stack Height, Draft EPA-450/4-80-023, EPA, September 1980.

#### Findings

EPA has reviewed the ASARCO GEP demonstration study for consistency with both the general criteria discussed above and the technical requirements contained in the draft EPA guidance documents. Several deficiencies were initially found to exist in the ASARCO GEP demonstration, and the initial EPA evaluation report dated February 27, 1980 recommended disapproval. However, additional information submitted by ASARCO and its contractors, and revised EPA stack height guidelines resulted in a second evaluation report dated July 6, 1981 which recommended approval.

#### Proposed Action

As a result of the above findings, it is concluded that the proposed Arizona SIP revision of GEP stack height for the ASARCO, Inc. copper smelter's 1000 foot stack at Hayden does demonstrate that a 1000 foot stack is GEP stack height, as it is necessary to prevent violations of the NAAQS resulting from downwash caused by nearby structures or terrain features. Therefore, EPA is proposing to approve the ASARCO GEP stack height demonstration. A final decision on the GEP stack height demonstration will be made based on the regulations and/or draft regulations in effect at the time the decision is made. A decision is necessary so that EPA may take appropriate action on the emission limits for Hayden, Arizona adopted by Arizona in their September 20, 1979 SIP revision, as discussed in the next section of the notice.

More detail concerning EPA's proposed action can be found in *Evaluation of the September 20, 1979 Arizona SIP Revision on the ASARCO, Inc., Hayden, AZ, Good Engineering Practice (GEP) Stack Height Investigation/Demonstration* (February 27, 1980) and in *Final Evaluation of Arizona SIP Revision for the ASARCO GEP Stack Height Study* (July 6, 1981) contained in EPA's document file No. AZ-MPR-1.

##### *II. Sulfur Dioxide Stack Emission Limits for Arizona Copper Smelters Based on Multi-Point Rollback*

EPA has reviewed the Arizona sulfur dioxide emission limitation regulations submitted by the State on September 20, 1979 for acceptability under the Clean Air Act and 40 CFR Part 51. In addition, a comparison was made with the January 4, 1978 EPA promulgated regulation for the control of sulfur dioxide emissions from copper smelters contained in 40 CFR 52.125, *Control strategy and regulations: Sulfur oxides*.

Since Arizona had not submitted an approvable regulation, EPA promulgated this regulation to ensure the attainment and maintenance of the NAAQS.

##### *Discussion of the Multi-Point Rollback (MPR) Technique*

Multi-point Rollback is a new approach to controlling the variable sulfur dioxide emissions of nonferrous smelters. Since MPR has never been applied to smelters, there are some issue and questions that remain unresolved. In the following discussion the Agency intends to lay out the methodology of MPR and then discuss the components of the method which need to be closely reviewed in order to assure that the NAAQS for sulfur dioxide are attained and maintained. This discussion may also facilitate public comment on MPR given that this method is new and very technical.

*Comparison of Single Point Rollback and Multi-Point Rollback:* By definition, MPR is a proportional rollback technique. Therefore, its application is founded upon the assumption that emissions and ambient concentrations are proportional for a given set of dispersion conditions. Thus, a reduction in emissions would be expected to result in a comparable reduction in ambient concentrations. Based upon this assumption, the NAAQS can be achieved if emissions are reduced by the ratio of the corresponding ambient concentration to the air quality standard. In this respect, MPR is similar to the "single-point" rollback procedure used by EPA to establish the January 4, 1978 EPA-promulgated sulfur dioxide emission limits for Arizona copper smelters (43 FR 755).

However, the presumption in the single point rollback approach is that the highest recorded ambient sulfur dioxide concentration can be related to a single emission rate. More importantly, to protect the NAAQS, this emission rate associated with the "worst case" ambient concentration must be rolled back by the ratio of the "worst case" ambient concentration to the ambient standard, and established as a maximum "never to be exceeded" emission rate.

MPR differs from proportional rollback in two basic areas: choice of design value (or rollback factor), and choice of emissions to be reduced.

The rollback factor or design value used in MPR can be determined by: (1) Picking the maximum concentration observed; or (2) fitting the cumulative frequency distribution (from observed data) to an appropriate functional form and calculating an expected once-per-

year maximum value. Although the first approach is easier, the second approach is desirable in terms of minimizing random measurement errors and accounting for missing values in the period of record. Additionally, it provides the capability to estimate a maximum pollutant concentration for a particular averaging time. This maximum concentration (design value) occurs at a frequency of  $1/n$ , where  $n$  is equal to the number of potential values in the period of data accumulation. As with single-point rollback, it is necessary to calculate rollback factors for all applicable NAAQS averaging periods. The largest rollback factor calculated is used to establish the allowable emission limits.

The second area where MPR differs from single-point rollback is in the choice of emissions to be reduced in establishing emission limits. Where single-point rollback attempts to reduce that emission rate which is attributed to the second highest measured ambient concentration,<sup>4</sup> MPR uses the rollback factor discussed above to reduce each and every emission which occurred over the period of data accumulation (i.e., an emission profile). The smelter must operate at or less than any point on this frequency distribution (or emission profile) to achieve the NAAQS. In order to do this, an emission profile must be developed for each smelter for this period of time. Ideally, the emission profile is developed entirely from actual measured data. Where data limitations precluded this, then the available data must be used to fit a distribution. The approach used by Arizona is discussed elsewhere in this notice.

#### MPR Application—Arizona

In applying MPR in Arizona, data limitations required that the approach be slightly modified. In particular, lack of continuous emission measurements at all smelters required that the cumulative frequency distributions for emissions be estimated using sulfur balance data and by assuming a particular functional form for the distribution. Using this functional form and estimates of the mean and variability in emission rates, distributions were developed. A more detailed discussion of this approach is provided in the technical evaluation report to this rulemaking notice.

The State's analysis of the data (assisted by the University of Arizona)

is divided into two basic categories: Hayden smelters, and non-Hayden smelters. The reasons for this division are that the Hayden smelters, ASARCO and Kennecott, both impact the same air basin, both have continuous emissions monitoring (CEM) data, and sufficient meteorological data is available to separate the impact of fugitive emissions from stack emissions. The non-Hayden smelters are single, isolated point sources of sulfur dioxide, have only sulfur balance data on emissions, and the impact of fugitive emissions on the ambient monitors are not separable from those of stack emissions.

#### Hayden Smelters

Due to the physical relationship of the smelter stacks in Hayden to the Montgomery Ranch ambient monitor, and the availability of meteorological data, the State concluded that it is possible to separate the impact of fugitive emissions on the monitor from stack emissions. The purpose of making this distinction is to enable a more realistic stack emission limit to be calculated. The fugitive emissions could then be handled in a separate evaluation, as required by the new sulfur dioxide regulation discussed in the next section.

The State examined meteorological data obtained from the Joint Control Center in Hayden to define stack versus fugitive and low-level emission impacts on the Montgomery Ranch ambient monitor.<sup>5</sup> Those ambient concentrations not attributable to main stack emissions were then dropped from the ambient data base used to derive the design value for the main stack(s).

Derivation of the Hayden design value was made using the remaining ambient monitoring data. A cumulative frequency distribution of 3-hour average concentrations was developed in accordance with the methodology explained earlier.

Several extra steps were required to develop the ASARCO and Kennecott emission limitations. Only two calendar years of CEM data could be considered: 1975 and 1976. (Before 1975, continuous emission monitors had not been installed, and after 1976, the data are known to be contaminated by the operation of SCS). Given these two years, the theoretical method of developing emission profiles could not be used. A complete year of good quality 1975 CEM data were not available and the 1976 CEM data were possibly contaminated by SCS operation. To overcome these problems,

<sup>5</sup> The low-level emissions are from the 100 foot Kennecott tail gas stack.

the State examined both the sulfur balance data and the CEM data.

Although the 1976 CEM data did not appear to be significantly affected by SCS operations, the annual averages from the 1975 sulfur balance data were used in developing the Hayden emission profiles as preliminary calculations indicated these would result in slightly more stringent emission limitations.

The use of 1975 sulfur balance data to calculate sulfur dioxide stack emission limits necessitated an adjustment to eliminate fugitive emissions from the sulfur balance data, and emission profiles had to be developed. To accomplish this, it was assumed that the general shape of the emission profile remained the same from 1975 to 1976, since the smelter configurations were constant. Based on this assumption, a mathematical function (a Gamma distribution) was used to describe the 1976 emission profile curve. The amount of variability in a Gamma distribution is described by a parameter called the shape factor. This shape factor was calculated from the 1976 data and then used with the 1975 annual average (after subtracting fugitive emissions) to develop an emission profile.

The emission limitations for ASARCO and Kennecott were calculated by analyzing a combined emission profile for the Hayden area, since the shape factors for the two smelters were very close. The rollback factor was applied to the combined emission profile to obtain an emission limit curve. This combined emission limit curve was redefined into two curves by reducing the combined curve on the ratio of 45:55. This 45:55 ratio was previously calculated by the State as the air shed allocation for Kennecott and ASARCO, respectively, based on production capability. This is also the same ratio used by EPA in the January 4, 1978 regulation.

#### Non-Hayden Smelters

Air quality analyses at the non-Hayden smelters (Inspiration, Magma, and the three Phelps Dodge smelters at Ajo, Douglas, and Morenci), showed that the 3-hour average would require the most stringent reduction in emissions, except in the case of Phelps Dodge, Ajo, where the 24-hour average was the most stringent. The predicted maximum ambient concentration from each smelter was then used to calculate the rollback factor. As discussed previously, the rollback factor is that value,  $C_{max}/C_{std}$  used to reduce each point on the emission profile to obtain the emission limit.

Since the non-Hayden smelters had no CEM data, a method of deriving

<sup>4</sup> When EPA applied proportional rollback to the Arizona smelters in its January 4, 1978 regulations, the highest measured ambient concentration was used to represent the actual second highest reading, since the monitors were not located at the points of maximum expected air quality impact and slightly less than a full year of ambient data was available.

emission profiles had to be developed. Since the CEM data from the Hayden smelters were found to fit a Gamma distribution, it was assumed that the smelter emission profiles could be represented by a Gamma distribution. The profiles could then be developed, given a point on the curve and a shape factor which would define the amount of variability. As with the Hayden smelters, the point on the emission profile curves used to fit a Gamma distribution was the annual average emission rate calculated from sulfur balance data.

Since CEM data were not available, examination of smelter configurations and emissions indicated that shape factors could be estimated based on the amount of sulfur fixation capability.

Based on this theory, the shape factors for the non-Hayden smelters were estimated. The resultant shape factors, along with the annual averages (from sulfur balance data), were used to generate emission profiles for each smelter.

The emission limits were then calculated applying the appropriate rollback factor to each emission profile.

#### Findings

The EPA review of the MPR technique has determined that the Arizona approach represents a rollback technique designed to allow no more than one exceedance of the NAAQS and no violations for the period of data accumulation. In this respect the approach conforms with Agency guideline requirements for attainment demonstrations. However, the proposed acceptance of the application of MPR to single, isolated point sources such as copper smelters represents a change in Agency policy. As discussed earlier, with MPR the protection of the short-term NAAQS is accomplished by rolling back an entire emission distribution without attempting to relate the short-term emission rate responsible for the highest ambient concentration to that highest ambient concentration. Previously, Agency policy has required that an adequate demonstration of attainment of a short-term NAAQS must roll-back a single short-term emission rate. Further, the "rolled-back" emission rate must then be established as "never to be exceeded" emission limit. Thus, the action proposed today constitutes a change to previous Agency policy concerning the use of proportional rollback for single, isolated, variable point sources.

#### Proposed Action

The September 20, 1979 submittal of R9-3-309, *Finding of no violation*,

amends a version of R9-3-309 submitted on January 4, 1979. This amendment exempts all sources except smelters from compliance with SIP emission limitations during periods of excess emissions, resulting from a startup, shutdown or malfunction of pollution control equipment as long as certain conditions are satisfied. Since EPA has not yet completed its evaluation of the appropriateness of this regulation for all sources, EPA will not propose action on R9-3-309 at this time. This rule will be addressed in a future Federal Register notice.

The following discussion details EPA's proposed action on R9-3-515, *Standards of performance for existing primary copper smelters*, submitted September 20, 1979 (and amended on January 14 and September 10, 1980), which uses MPR to establish sulfur dioxide stack emission limits.

R9-3-515(A) defines the sources to which the provisions of this rule are applicable. EPA is proposing to approve this definition, since it is essentially equivalent to that contained in EPA's promulgated regulation, 40 CFR 52.125(d).

R9-3-515(B), "Particulate emissions limitations," stays the effect of rule R9-3-502(A) until December 31, 1979, and requires each smelter operating under an operating permit to operate existing particulate control equipment at maximum feasible efficiency during the stay period. EPA proposes to take no action on this rule, since the stay period has expired.

R9-3-515(C), "Sulfur dioxide emission limitations," defines both specific sulfur dioxide emission limitations for each of the existing Arizona primary copper smelters, as well as general requirements applicable to all smelters. The approvability of each subsection is discussed below.

R9-3-515(C)(1) defines the date for the smelters to achieve compliance with the emission limitations as three years from the effective date of the section or December 31, 1982, whichever is earlier. The September 10, 1980 Arizona SIP revision amended the introductory paragraph of R9-3-515(C)(1) such that the final compliance date was changed from December 31, 1982 to October 1, 1983. This compliance date is approvable under section 110(a)(2) of the Act, because it is within three years of the date of approval of the plan. Since EPA's 1978 SIP regulations have not gone into effect, EPA is treating Arizona's submission as the initial SIP for purposes of the attainment date requirement of section 110(a)(2). EPA is therefore also proposing to change the attainment dates from January 4, 1981 to

October 1, 1983 for sulfur oxides in the Phoenix-Tucson and Southeast Arizona Intrastate Air Quality Control Regions [40 CFR 52.131].

R9-3-515(C)(1) also contains the emission limitations, as required under section 110(a)(2)(B) of the Act for the following seven copper smelters:

Magma Copper Company, San Manuel Division, San Manuel, AZ;

Inspiration Consolidated Copper Company, Miami, AZ;

Phelps Dodge Corporation, New Cornelia Branch, Ajo, AZ;

Phelps Dodge Corporation, Douglas Reduction Works, Douglas, AZ;

Phelps Dodge Corporation, Morenci Branch, Morenci, AZ;

ASARCO, Inc., Hayden Smelter, Hayden, AZ; and

Kennecott Corporation, Ray Mines Division, Hayden, AZ.

The emission limitations are specified in terms of 3-hour average cumulative occurrence limits, and an annual average emission limit, for each smelter.

However, the regulations do not specifically state that emissions during periods of malfunction, startup and shutdown will not be excluded when determining compliance with the cumulative occurrence and/or annual average emission limits. The theory of MPR requires, and Arizona has previously stated that they intend that all emissions will be used to determine compliance regardless of the operating conditions at the smelter. Arizona has also indicated a willingness to include a specific provision in this paragraph that clarifies their intention regarding periods of startup, shutdown and malfunction. Therefore, EPA is also proposing conditional approval of R9-3-515(C)(1) based on Arizona's willingness to submit an appropriately revised version of this regulation by April 15, 1982.

R9-3-515(C)(2) defines the method of determining compliance during the initial 365-day period under this regulation. EPA proposed approval of R9-3-515(C)(2) as this provision is necessary for enforcement of the emission limits during the first year of implementation and is in accordance with the requirements of 40 CFR 51.15(a)(1) and 40 CFR 51.22.

R9-3-515(C)(3) defines the method of determining compliance after the initial 365-day period of this regulation. This provision is necessary for enforcement of the emission limits after the first year of implementation, but it is not fully in accordance with the requirements of 40 CFR 51.15(a)(1) and 40 CFR 51.22. EPA proposes conditional approval of R9-3-515(C)(3). The conditional approval is



based on Arizona's willingness to modify the annual average compliance determination requirements from once per month to once per day. This change is necessary in order to ensure that each smelter operates in compliance with the emission profile at all times, as the multipoint rollback theory demonstrates is necessary to ensure attainment and maintenance of the NAAQS for sulfur dioxide. EPA is requiring that these changes be submitted as SIP revisions by April 15, 1982.

R9-3-515(C)(4) requires the smelter to install, calibrate, maintain, and operate continuous emissions monitoring systems. This subsection also requires the smelter to meet a compliance schedule for installation of these monitors, as well as performance and data recovery specifications. The compliance schedules are at least as stringent as those contained in 40 CFR 52.125(d)(5). However, the 95 percent data recovery requirement could result in enforcement problems and smelter operations in excess of the allowable emission profile for 5 percent of the year. Emissions in excess of the allowable emission profile would increase the probability of violating the NAAQS. In addition this paragraph could be interpreted such that captured fugitive emissions are not required to be monitored. EPA proposes to conditionally approve R9-3-515(C)(4), because of these problems, and because Arizona has indicated a willingness to modify the regulations to require continuous emission monitoring of captured fugitive emissions and to include regulatory incentives/requirements which strive for 100 percent continuous emission monitoring data recovery. EPA is proposing to require that these changes be submitted as SIP revisions by April 15, 1982.

R9-3-515(C)(5) contains requirements for continuous emissions monitoring recordkeeping. EPA proposes conditional approval of R9-3-515(C)(5) as it is approximately equivalent to 40 CFR 52.125(d)(5)(vii). However, the annual average recordkeeping and reporting requirements need to be amended such that they are consistent with the amended requirements of R9-3-515(C)(3). Arizona has indicated a willingness to make these changes. EPA is proposing to require that these changes be submitted as SIP revisions by April 15, 1982.

R9-3-515(C)(6) requires each smelter to develop a compliance schedule for meeting the emission limitations specified in R9-3-515(C)(1). The compliance schedule must contain the specified increments of progress. EPA

proposes approval of R9-3-515(C)(6), since the compliance schedule and increments of progress are equivalent to those contained in 40 CFR 52.125(d)(4).

R9-3-515(C)(7) sets interim emission limitations based on current emissions control capability at the smelters. Compliance is to be determined through sulfur balance. EPA proposes no action on R9-3-515(C)(7), since the interim emission limits do not demonstrate attainment and maintenance of the standards, and therefore are not required or approvable as part of an SIP under section 110(a)(2) of the Clean Air Act.

R9-3-515(C)(8) requires each of the smelters to conduct a fugitive emissions evaluation. Should this evaluation conclude that fugitive emissions have the potential to cause or significantly contribute to violations of the ambient sulfur dioxide standards in the vicinity of the smelter, then the State must adopt regulations for fugitive emission limitations or other appropriate measures. Should a smelter demonstrate that it must undergo major modification or process changes to comply with emission limitations under R9-3-515(C)(1), and that these changes will virtually eliminate the impact of fugitives on air quality, then the smelter may not have to conduct the fugitive evaluation study. EPA proposes approval of R9-3-515(C)(8) as these requirements are a strengthening of the EPA promulgated regulation. However, EPA cannot fully approve the control strategy for each smelter town until such time as Arizona either demonstrates that fugitive controls are not required to attain and maintain the NAAQS for SO<sub>2</sub>, or submits regulations specifying the fugitive controls that are required to attain and maintain the NAAQS for SO<sub>2</sub> (along with the appropriate control strategy demonstration).

For five of the six smelter towns it is not currently known whether fugitive emission controls will be required. However, at Hayden fugitive emission controls are clearly required, based on Arizona's treatment of the ambient air quality data. At Hayden, the ambient air quality data was split into two groups: fugitive influenced and stack/fugitive influenced. The stack/fugitive influenced data were used to develop the MPR regulations for the ASARCO and Kennecott stacks. However, no control strategy or regulations were developed based on the fugitive influenced data. Since this data shows that fugitive emissions must be reduced by a factor of 3.19 in order to attain the NAAQS for SO<sub>2</sub>, an additional fugitive emission control strategy is clearly

required in order to reduce the fugitive emissions at ASARCO and Kennecott by a factor of 3.19.

Therefore, EPA is proposing conditional approval of the control strategies for each smelter town. Arizona has indicated a general willingness to address the impact of fugitive emissions at each smelter town under provisions of R9-3-515(C)(8). EPA is proposing to require that the fugitive emissions control strategy and regulations for all 6 smelter towns be submitted as SIP revisions by December 31, 1982. These regulations must require compliance by three years after the date of EPA's approval of the plan now being proposed by Section 110(a)(2) of the Act.

R9-3-515(C)(9) requires the smelters to continue to calibrate, operate, and maintain ambient sulfur dioxide monitoring equipment for a period of three years past the compliance date. However, paragraph (C)(9) refers to Appendix 7 [Requirements for a Supplementary Control System (SCS)] for monitor operation and maintenance requirements. EPA cannot approve SCS requirements under Section 110 of the Act, since section 123 prohibits credit for SCS operation for attainment and maintenance of the NAAQS except under certain temporary circumstances. Finally, R9-3-515(C)(9) was amended by the State's Nonferrous Smelter Order regulations which were submitted on January 14, 1980 as proposed SIP revisions. The provisions of Appendix 7 were completely changed by this submittal. Therefore, EPA is proposing conditional approval for R9-3-515(C)(9) at this time. EPA will approve this paragraph when the reference to the specific ambient monitoring operation and maintenance requirements is clarified and made equivalent to the EPA requirements of 40 CFR Parts 50 and 58, and appendices.

Rule R9-3-515 [paragraphs (C)(7) and (C)(9)] also contains references to Appendices 7 [Requirements for a Supplementary Control System (SCS)] and 8 [Procedures for Utilizing the Sulfur Balance Method for Determining Sulfur Emissions]. These appendices have been previously submitted to EPA as proposed SIP revisions on January 7, 1977, but action has been deferred at the request of the Governor. In addition, the January 14, 1980 SIP revision submittal repeals the January 7, 1977 version of Appendix 7 and replaces it with a completely different version entitled "Instructions and Forms for Submission of Data and Information Pertaining to Eligibility for a Nonferrous Smelter Order (NSO)." The SCS and monitoring requirements are now contained in the

NSO regulations in rule R9-3-704. Until otherwise notified EPA proposes to continue to defer action on Appendices 7 and 8.

More detail on the reasons for the above recommendations concerning rule R9-3-515 can be found in *EPA Evaluation Report on the Approvability of the September 20, 1979 Arizona SIP Revision on the Arizona Copper Smelter Sulfur Dioxide Stack Emission Limitations* (August 1981) contained in EPA's document file No. AZ-MPR-1.

In addition to the actions proposed above on rule R9-3-515, EPA is proposing to rescind the following portions of the Federally promulgated regulation for Arizona copper smelters if Arizona satisfies all conditional approval items: 40 CFR 52.125(d) *Regulation for control of sulfur dioxide emissions (Phoenix-Tucson Intrastate and Southeast Arizona Intrastate Regions)*; Paragraphs (d)(1) through (d)(6). This would rescind the EPA-promulgated requirements on the seven copper smelters for which EPA is today proposing new requirements; and 40 CFR 52.125(e) *Deferral of effectiveness*. This would rescind the EPA-promulgated deferral of the effective date of 40 CFR 52.125(d).

#### Issues

The proposed Arizona SIP revision involves the use of a new approach to setting emission limitations. EPA has reviewed the technical validity of MPR as well as the regulatory aspects of this type of emission limiting regulation. During the review process, several major issues have been raised.

Since there is no clear answer to these issues, a discussion of the issues is presented in this notice so that the public may have the opportunity to comment on these issues.

#### Attainment and Maintenance of the NAAQS

EPA's primary concern is the ability of MPR to provide for attainment and maintenance of the NAAQS. An examination of the proposed emission limitations for each of the copper smelters indicates that each smelter is provided with both an annual average emission limit and cumulative occurrence limits for three-hour averaging times. These cumulative occurrence limits range from a once-per-year occurrence to about 2500 occurrences per year. The highest number of occurrences are allowed slightly above the annual average emission rate while the once-per-year limit is normally allowed at about four times the annual average rate. Intermediate emission rates are

dispersed among the remaining occurrence limits.

These allowable emission rates were derived by the State using the rollback procedure previously described. They were included in the control strategy to account for the high variability inherent in sulfur dioxide emissions from copper smelters. The attainment demonstration relies upon the representativeness of the period of data accumulation (particularly the dispersion characteristics) and the low probability that high emissions will occur on "poor dispersion days" to assure attainment of the NAAQS.

In contrast to the MPR approach, the single point rollback approach utilized by EPA in the January 4, 1978 promulgation on Arizona smelters attempts to locate the worst combination of dispersion and emissions in the period of data accumulation. The emissions coinciding with this event were then rolled back by the ratio of the corresponding ambient concentration to the NAAQS. Only by establishing the resultant emission limit as a maximum rate (never to be exceeded) did EPA consider the NAAQS to be adequately protected. Understandably, during periods of good dispersion, there was potential for "over-control." Conversely, if the worst case conditions had not been identified, a potential for "under-control" existed. Regardless, the resultant EPA emission limits were generally more stringent than the State's MPR limits, particularly with regard to the short-term emission rates.

In this rulemaking notice, EPA is proposing to conditionally approve the Arizona multi-point rollback SIP revision. As noted above, however, instead of attempting to account for the worst foreseeable combinations of emissions and dispersion conditions in setting emission limitations to prevent NAAQS violations, Arizona's attainment demonstration presumes that the probability that high emissions will coincide with poor dispersion is acceptably low. EPA is continuing to study this question, and anticipates placing further analysis on the issue in the rulemaking file before taking final action on today's proposed conditional approval. Additionally, the SIP requires three years of ambient monitoring after implementation of controls. Should this monitoring reveal air quality problems, the State has committed to rectify any deficiencies in the strategy.

#### Continuous Emission Monitor Reliability

Another issue raised during the review process is the ability to operate

continuous emission monitors in such a fashion as to be reliable for enforcement of the emission limitations. Due to the nature of the MPR-derived emission limitations, the traditional stack test cannot be used to determine compliance other than to validate the continuous monitors. Therefore, it is essential that a high quality performance level be maintained for each of the required emission monitors. For this reason, Arizona has provided both operational performance specifications and data recovery requirements for each continuous emissions monitoring system.

Some doubts have been expressed as to the ability of the current continuous emission monitors to perform as required by this proposed SIP revision. It is the State's opinion that the currently available monitors can be operated to meet the requirements of R9-3-515(C), particularly given the regulatory incentive to do so. If a smelting company believes that currently available monitors will not meet the data recovery requirements, then extra precautions may be needed. Three possible options are: (a) Install and operate duplicate monitoring systems, (b) provide back-up systems which could be operated in place of a broken or malfunctioning monitor, or (c) develop a better monitor.

Since compliance with MPR emission limits is based on consideration of one year of CEM data, the CEM performance and data recovery requirements are extremely important. In order to emphasize the seriousness of violating any of the monitor performance or data recovery specifications required in R9-3515(C), Arizona has committed to amend its regulations to require that spare monitors and/or critical spare parts be available for quick replacement of any monitor which malfunctions.

#### Ambient Air Quality Data

The use of air quality data from the existing monitoring network has also been questioned, since the monitors may not be located at points of maximum concentration. This could mean that ambient sulfur dioxide concentrations in excess of the NAAQS could occur at other unmonitored locations, even though the smelter is operating in compliance with the calculated emission limitations.

Location of air quality monitors at sites of maximum concentration is a difficult, if not impossible task because of many practical concerns (e.g., securing a land lease, or supplying a monitor with power in possibly remote locations). In the development of EPA's



January 4, 1978 promulgated regulation, a similar problem with monitor locations was found to exist, and so the highest (rather than the second highest) occurring ambient air quality concentration monitored in the field of monitors was used to determine a rollback factor. Although this approach has not been used in the Arizona analysis of air quality, a comparable approach has been used. The Arizona method of determining a rollback factor is to determine a predicted maximum ambient concentration which will occur once per year based on actual data from that monitor registering the highest readings. In this way, a value even higher than the highest actual monitored concentration could be used for the rollback factor. This was in fact the case at the Magma and Phelps Dodge, Morenci smelters.

#### *Total Atmospheric Loading*

Concern has been expressed in the Agency that the MPR limits can result in higher total sulfur dioxide emissions than permitted by the EPA promulgated limits. Although this is not necessarily germane to the requirements of sections 110 and 172 of the Act, it may be a consideration in the Agency efforts to meet the requirements of section 169A (Visibility Protection for Federal Class I Areas) of the Act. Because of differences in the forms of the EPA and Arizona emission limitations, (6 hour and annual averaging periods, respectively) direct comparisons of total emission rates require that the smelters be treated as constant emitting sources. This is obviously a misrepresentation of these sources. Nevertheless, using this approach it can be shown that total allowable sulfur dioxide emissions under the proposed SIP revision are about 12 percent higher than the current EPA limits. This difference can be shown to be as much as 300 percent when certain assumptions are made regarding the actual emissions permitted by EPA's maximum emission rate. Specifically, it is agreed that the smelter will have to emit (on the average) at levels much lower than the EPA allowable emission rate in order to ensure that peak emissions do not exceed the allowable limit. Arizona has argued that this may be unduly stringent, and it is this argument that is the basis for the development of the MPR technique for calculating emission limits for a variable emission source.

The Agency has considered this issue and determined that, overall, significant positive emission reduction will result from the MPR SIP revision. Where paper relaxations appear to result, these differences are small enough that they

could be attributable to the different base years used by EPA and Arizona for their respective control strategy calculations. At Hayden, dispersion from the 1,000 foot tall ASARCO stack, rather than the two 250 and 300 foot tall stacks previously used, probably accounts for most of the apparent relaxation between EPA's and Arizona's limits.

#### *General Criteria for the Use of Multipoint Rollback*

As a result of the intensive review of the proposed Arizona Multipoint Rollback SIP revision, EPA has developed a list of eight general criteria which should be satisfied if EPA is to approve any SIP revision based on MPR. EPA believes that after correction of all conditional approval items, the September 20, 1979 Arizona SIP revision will satisfy the eight general criteria. They are listed below along with a brief indication of why the Arizona SIP revision currently satisfies (or will satisfy) each condition.

1. Ambient air quality monitoring data and emission data must meet acceptable quality assurance criteria.

Data records must be of sufficient length to reasonably describe atmospheric dispersion conditions and their frequencies. To the extent possible, ambient data must also reflect locations of maximum expected air quality impact. Running average concentrations shall be used to determine both the location of the limiting case site and the limiting case averaging period (i.e., 3-hour or 24-hour).

Arizona has assembled the necessary quality assurance data and submitted it to EPA. It is currently under review by EPA. Further, one year of ambient data was used for each smelter analysis, the ambient monitoring network used by Arizona was similar to that used by EPA for its January 4, 1978 promulgation (the maximum impact monitor was the same as used by EPA for five out of the six smelter towns), and running averages were used in all cases.

2. Neither ambient data nor emission data can be influenced by dispersion techniques, i.e., supplementary control system or stack heights greater than good engineering practice (GEP).

A fundamental assumption in the theory of multipoint rollback is that emissions and dispersion are independent. Therefore, any use of supplementary control systems (SCS) during the period of data accumulation would make that data suspect for use in an MPR control strategy. The use of non-GEP stack heights is prohibited by Section 123 of the Act. None of the ambient data used by Arizona was

influenced by SCS operation, and the ASARCO 1000 foot stack is being proposed as GEP stack height. All other smelter main stacks were "grandfathered" under the provisions of section 123(a).

3. Ambient data concentration distributions shall be developed for all possible discrete averaging periods (e.g., for 3-hour at 12 a.m., 3 a.m., 6 a.m., 1 a.m., 4 a.m., 7 a.m., 2 a.m., 5 a.m., 8 a.m.). The rollback factor shall be based upon the highest once-per-year maximum concentration provided by these distributions.

Arizona has done this for all relevant 3-hour distributions. Arizona has not, however, used this approach for the Ajo smelter, which is limited by the 24-hour standard, rather than the 3-hour standard. EPA has requested Arizona to make whatever revisions are necessary to correct this problem along with the other revisions discussed in this notice.

4. Baseline emission profiles should be based upon continuous emission measurement (CEM) data. Where it is not initially possible to do so, then profiles must be based upon conservative assumptions. Allowable emission profiles must ultimately be verified by CEM data.

The Arizona smelter baseline emission profiles were not based on continuous emission monitoring (CEM) data, but were calculated from annual average emissions (based on sulfur balance data) and assumed shape factors. EPA believes that Arizona used conservative assumptions in developing the smelter emission profiles. Further, Arizona has committed to future verification of these profiles based on actual CEM data. This will occur during the next two to three years as the smelters install CEM devices.

5. To represent a fully acceptable demonstration of attainment, measures adequate to ensure that fugitive emissions will not violate the NAAQS must be incorporated directly into the control strategy.

Arizona's regulations require a study to determine the air quality impacts of fugitive emissions at each smelter. These studies will be conducted in the next 12 to 18 months. EPA will not fully approve any smelter control strategy until the state has demonstrated that there are no significant fugitive emission impacts, or submitted regulations adequate to demonstrate attainment and maintenance of the NAAQS.

EPA is proposing to require that Arizona submit a fugitive emissions control strategy and regulations for each smelter town by December 31, 1982.

6. Regulations should require that continuous emission monitors measure at least 95 percent of the hours in which emissions occur. CEM downtime should be minimized by providing an incentive to sources to strive for 100 percent data recovery. This may be accomplished by reducing cumulative occurrence limits by the percent missing data or other comparable approaches.

The Arizona MPR regulations currently require 95% CEM data recovery. Further, Arizona has agreed to provide additional incentives/requirements in its regulations so that sources will strive for 100% data recovery.

7. Regulations shall not exempt malfunctions from either the emission profile determination or the ultimate emission limitations.

This criteria is consistent with the theoretical basis for MPR in that the entire emission distribution for the period of data accumulation is rolled back by the reduction factor. It was Arizona's stated intention (as provided in their SIP) not to exempt emissions during periods of malfunction from either the baseline emission profile, or the ultimate emission limitation profile compliance determination. In fact, Arizona's regulation R9-3-309, *Finding of no violation*, contains a provision which requires that malfunction emissions are not excluded when determining whether a smelter is in compliance with its MPR ultimate emission limitation profile.

Further, EPA is proposing to require that Arizona include a more explicit statement in R9-3-515(C)(1) which specifically states that emissions during periods of malfunction, startup and shutdown will not be excluded when determining compliance with the MPR emission limits.

8. If the data base permits that the control strategy be developed in a probabilistic manner, then the control strategy must consider the probability that the source causes a violation anywhere rather than simply at the worst site. Concurrently, the probability for a violation of the NAAQS must be shown to be consistent with Agency policy in effect at that time.

EPA is proposing conditional approval of the Arizona SIP control strategy as a rollback demonstration whereby the entire emissions distribution rather than a single emission rate has been reduced by a level necessary to allow no more than one exceedance of the NAAQS and no violations for the period of analysis. Although the Agency recognizes that the MPR approach may not be as conservative as EPA's single-point approach in assuring attainment and

maintenance of the NAAQA in Arizona, no attempt is being made to quantify any probabilities for a violation. It is the Agency's opinion that data limitations preclude Arizona from responding to this criterion in any meaningful manner. Therefore, the proposed action is not based upon conformance with this criterion.

#### Benefits

The effective date of the currently approved SIP, i.e., the federally promulgated emission limitations, has been indefinitely deferred since February of 1978. By this proposed action, EPA can effectively return to Arizona the primary responsibility for the program for control of sulfur dioxide emissions from copper smelters. Additionally, the proposed SIP revision appears to be a strengthening of the EPA regulations in that it requires fugitive emissions evaluations and controls.

#### Conditional Approval Procedure

Conditional approval requires the State to submit additional material by the deadlines specified in today's notice. There will be no extensions granted to the conditional approval deadlines eventually promulgated. EPA will follow the procedures described below when determining if the State has satisfied the conditions.

1. If the State submits the required additional documentation according to schedule, EPA will publish a notice in the Federal Register announcing receipt of the material. The notice of receipt will also announce that the conditional approval is continued pending EPA's final action on the submission.

2. EPA will evaluate the State's submittal to determine if the conditions are fully met. After EPA's review is completed, a Federal Register notice will be published proposing or taking final action to either (1) find the conditions have been met and approve the SIP, or (2) find the conditions have not been met, withdraw the conditional approval, and disapprove the SIP. If the SIP is disapproved, EPA's January 4, 1978 Arizona smelter regulations would be reimposed.

3. If the State fails to submit the required materials to meet a condition, EPA will publish a Federal Register notice shortly after the expiration of the deadline. The notice will announce that the conditional approval is withdrawn, the SIP is disapproved, and the EPA's January 4, 1978 smelter regulations are in effect.

#### Public Comments

Under Section 10 of the Clean Air Act as amended, and 40 CFR Part 51, the

Administrator is required to approve or disapprove regulations submitted as revisions to the SIP. The Regional Administrator hereby issues this notice setting forth these revisions (including rule deletions) as proposed rulemaking and advises the public that interested persons may participate by submitting written comments to the Region 9 Office. The EPA Region 9 Office specifically invites public comment on whether to conditionally approve the items identified in this notice as deficiencies in the regulations and/or control strategy. EPA is further interested in receiving comments on the specified dates for the State to submit the corrections, in the event of conditional approval.

The EPA invites comments on the September 20, 1979 SIP submittal, as amended, any identified deficiencies, and whether these revisions should be approved, conditionally approved or disapproved, especially with respect to the requirements of sections 110 and 123 of the Clean Air Act.

Comments received on or before January 27, 1982 will be considered. Comments received will be available for public inspection at the EPA Region 9 Office and the EPA Public Information Reference Unit.

The Administrator's decision to approve, conditionally approve or disapprove the proposed revisions will be based on the comments received and on a determination of whether the amendments meet the requirements of the Clean Air Act and 40 CFR Part 51 Requirements for Preparation, Adoption, and Submittal of State Implementation Plans.

#### Regulatory Process

Pursuant to the provisions of 5 U.S.C. 605(b) the Administrator has certified (46 FR 8709) that the attached rule will not have a significant economic impact on a substantial number of small entities.

Under Executive Order 12291, EPA must judge whether a regulation is "major" and therefore subject to the requirement of a Regulatory Impact Analysis. The miscellaneous SIP approvals announced today are not "major" because they approve state actions or preserve the status quo. They impose no new regulatory requirements.

This regulation was submitted to the Office of Management and Budget (OMB) for review as required by Executive Order 12291.

(Secs. 110, 123 and 301(a) of the Clean Air Act as amended (42 U.S.C. 7410, 7423 and 7601(a)))