TECHNICAL SUPPORT DOCUMENT

for

Notice of Final Rulemaking

on

Sulfur Dioxide (SO_2) Redesignation Request and Maintenance Plan for Ajo, Arizona

Air Division

U.S. Environmental Protection Agency, Region 9

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Technical Support Document
Ajo SO_2 Redesignation Request and Maintenance Plan SIP Revisions

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SECTION 1 - Introduction, Summary of Action, and Historical Background

A. Introduction

The Arizona Department of Environmental Quality (ADEQ) has submitted a revision to its state implementation plan (SIP) with a redesignation request and maintenance plan for the Ajo SO_2 nonattainment area. The main source of SO_2 emissions which caused the area to be in nonattainment, a copper smelter known as the Phelps Dodge Mining Company's Ajo Incorporated (PDAI) operation, ceased operation in 1985. Under an EPA policy signed on October 18, 2000,[1] we can approve SIPs in areas where past violations were due to a single source, where the source has shut down, and where monitors have also been removed (i.e., the area does not have eight quarters of clean monitoring data available for redesignation). Pursuant to our authority under the Clean Air Act (CAA or Act), the revisions to the plan are reviewed here and recommendations made regarding the action the United States Environmental Protection Agency (EPA) is taking on Arizona's submittal.

In this technical support document, we

- Summarize the requirements for redesignation requests and maintenance plans for SO_2
- Describe our analysis of the Ajo SIP
- Provide our proposed conclusions on the approvability of the Ajo maintenance plan and redesignation request based on our technical analysis.

B. Summary of Action

EPA is approving the maintenance plan for the Ajo SO_2 nonattainment area in Pima County, Arizona and granting the request submitted by the State to redesignate this area from nonattainment to attainment for the National Ambient Air Quality Standards (NAAQS) for sulfur dioxide (SO_2).

C. Description of Area and Area Designation History

PDAI was located near State Highway 85, approximately 110 miles southwest of Phoenix, AZ and 131 miles west of Tucson, the county seat of Pima County. The PDAI copper smelter was situated at the eastern end of the Little Ajo Mountains.

On March 3, 1978, at 43 FR 8968, for lack of a State recommendation, we designated Pima County as a primary SO_2 nonattainment area based on monitored violations of the primary SO_2 NAAQS in the area between 1975 and 1977. At the request of ADEQ, the nonattainment area was subsequently reduced to five townships in and around Ajo on April 10, 1979 (44 FR 21261). As a result, townships T11S, R6W; T11S, R5W; T12S, R6W; T12s, R5W; and T13S,

[1]Seitz Memo discussed in Section 2.C., below.

R6W make up the nonattainment area. Townships T11S, R7W; T12S, R7W; T13S, R7W; and T13S, R5W are classified as "cannot be classified" areas.

On the date of enactment of the 1990 Clean Air Act Amendments, SO_2 areas meeting the conditions of section 107(d) of the Act, including pre-existing SO_2 nonattainment areas, were designated nonattainment for the SO_2 NAAQS by operation of law. Thus, the Ajo area remained nonattainment for the primary SO_2 NAAQS following enactment of the 1990 CAA Amendments on November 15, 1990. These nonattainment designations and classifications were codified in 40 CFR part 81. See 56 FR 56694 (November 6, 1991). For the definition of the Ajo nonattainment area, see 40 CFR 81.303.

D. Background for this Action

As required by the CAA, Arizona submitted a state implementation plan (SIP) for all major sources in the State in January 1972. Although recognizing that copper smelters comprised the only significant source category of SO_2 emissions in Arizona, Arizona's SIP failed to provide adequate, responsive control strategies regulating copper smelter emissions. EPA disapproved the portion of the 1972 Arizona SIP related to smelters (37 FR 10849 and 37 FR 15081) on May 31 and July 27, 1972. EPA then proposed alternative emissions limits for Arizona smelters on October 22, 1975 (40 FR 49362).

Arizona submitted several deficient draft smelter regulations to EPA in 1976 which were rejected by EPA. In January 1977, Arizona officially submitted to EPA smelter regulations based on technology specifications rather than attainment of the NAAQS. EPA was preparing the notices of proposed rulemaking to disapprove these subsequent Arizona smelter control submittals in 1977 and 1978 for failure to assure the attainment and maintenance of the national standards in a manner consistent with the intent of Section 110 (a)(2)(B) of the Clean Air Act. In May 1978, Arizona withdrew the 1976 and 1977 smelter submittals, prior to EPA's formal disapproval, and EPA stopped publication of the Federal Register notice.

On September 20, 1979, Arizona submitted a SIP revision to EPA containing a proposed Multipoint Rollback (MPR) Rule and an attainment demonstration that relied on data representativeness and the air quality dispersion characteristics of each nonattainment area during a specific period of data accumulation. This element of Arizona's proposed SO_2 control strategy offered a method of accounting for the high variability inherent in SO_2 emissions from copper smelters.

On November 30, 1981, EPA proposed conditional approval of Arizona's MPR SIP revision (46 FR 58098). On June 3, 1982, Arizona submitted SIP revisions to correct the conditional approval. EPA formally approved the MPR revision as a final rulemaking on January

14, 1983 (48 FR 1717).[2] The rule, which established standards of performance for existing primary copper smelters, also set requirements for analyzing the impact of smelter fugitive SO_2 emissions on ambient air quality. Arizona's SIP revisions were designed to meet the requirements of the CAA Section 110 (state implementation plans) as well as 123 (smelter stack heights) as amended in 1977. The SIP revisions replaced the copper smelter emission limits that EPA published on January 4, 1978. To complete the Arizona SO_2 SIPs, EPA required that Arizona submit the necessary fugitive emissions control strategies and regulations for existing smelters by August 1, 1984.

The MPR included copper smelter performance standards for each existing primary copper smelter (see Arizona Administrative Code (AAC) R18-2-715, R18-2-715.01, and R18-2-715.02). In R18-2-715.01(D), the rule identified January 14, 1986 as the general compliance date for the provisions of the Section.

During this time, EPA took enforcement action against a number of smelters including PDAI. The emissions regulations violated were defined in Arizona's 1979 SIP and in 40 CFR 52.125(d) and 40 CFR 52.126(b). After issuance of notices of violation to Phelps Dodge for violations of emissions regulations at the Ajo smelter, EPA and PDAI negotiated a Consent Decree and filed it in October of 1981. PDAI was subject to consent decree requirements including installing new equipment for SO_2 and particulate control, and a Delayed Compliance Order/Innovative Technology Order (DCO/ITO) and a compliance date of December 31, 1985.

On March 4, 1982, Phelps-Dodge requested an 18-month delay in its Delayed Compliance Order dates for its Ajo copper smelter due to financial difficulties. EPA denied the request. On April 17, 1982, PDAI temporarily ceased copper smelting activities, recommencing operations on May 15, 1984. EPA amended the 1981 DCO/ITO on July 23,1984 terminating the ITO since the measures required earlier were no longer necessary to comply with the new MPR emissions limits. Accordingly, EPA shortened the SO_2 compliance deadline for PDAI to July 1, 1984.

On April 4, 1985, the PDAI smelter was permanently deactivated. Dismantling of the Ajo facility began in 1995 and was complete by February 1996. On October 15, 1997, ADEQ confirmed that the facility was dismantled and no longer existed at the former site. The area remains sparsely settled, and there is only one point source, the Phelps Dodge New Cornelia Branch Diesel-powered Generators, in or near the nonattainment area. This source emits less than 1 ton per year of SO_2. No significant new sources have located in the area, and the smelter was the obvious cause of past violations.

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[2]Arizona Code of Rules and Regulations (ACR): Rule (R)9-3-515 (recodified as Arizona Administrative Code (AAC) R18-2-515; renumbered as R18-2-715 in 1993 as Standards of Performance for Existing Primary Smelters; Site Specific Requirements.)

E. Who to Contact for More Information

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SECTION 2 – Clean Air Act (CAA) Requirements

A. Applicable CAA Provisions for SO_2 Nonattainment Area Plans

The air quality planning requirements for SO_2 nonattainment areas are set out in subparts 1 and 5 of Part D of title I of the Act. We have issued guidance in a General Preamble describing our views on how we will review SIPs and SIP revisions submitted under title I of the Act, including those containing SO_2 nonattainment area and maintenance area SIP provisions. 57 FR 13498 (April 16, 1992); 57 FR 18070 (April 28, 1992). The General Preamble discusses our interpretation of the title I requirements, and lists SO_2 policy and guidance documents.

Statutory Provisions

CAA Sections 191 and 192 address requirements for SO_2 nonattainment areas designated subsequent to enactment of the 1990 CAA Amendments and areas lacking fully approved SIPs immediately before enactment of the 1990 Clean Air Act Amendments. Ajo falls into neither of these categories and is therefore subject to the requirements of subpart 1 of Part D of title I of the CAA (Sections 171-179B). Section 172 of this subpart contains provisions for nonattainment plans in general; these provisions were not significantly changed by the 1990 CAA Amendments.

B. Applicable CAA Provisions for SO_2 Maintenance Plans and Redesignation Requests

What are the Statutory Provisions?

CAA Section 107(d)(3)(E). The 1990 CAA Amendments revised section 107(d)(3)(E) to provide five specific requirements that an area must meet in order to be redesignated from nonattainment to attainment. They are: 1) the area must have attained the applicable NAAQS; 2) the area has met all relevant requirements under section 110 and Part D of the Act; 3) the area has a fully approved SIP under section 110(k) of the Act; 4) the air quality improvement must be permanent and enforceable; and, 5) the area must have a fully approved maintenance plan pursuant to section 175A of the Act.

CAA Section 175A. CAA section 175A provides the general framework for maintenance plans. The maintenance plan must provide for maintenance of the NAAQS for at least 10 years after redesignation, including any additional control measures as may be necessary to ensure such maintenance. In addition, maintenance plans are to contain such contingency provisions as we deem necessary to assure the prompt correction of a violation of the NAAQS that occurs after redesignation. The contingency measures must include, at a minimum, a requirement that the state will implement all control measures contained in the nonattainment SIP prior to redesignation. Beyond these provisions, however, CAA section 175A does not define the content of a maintenance plan.

C. EPA Policy Guidance

Our primary general guidance on maintenance plans and redesignation requests is a September 4, 1992 memo from John Calcagni, entitled "Procedures for Processing Requests to Redesignate Areas to Attainment" ("Calcagni Memo"). Specific guidance on SO_2 redesignations also appears in a January 26, 1995 memo from Sally L. Shaver, entitled "Attainment Determination Policy for Sulfur Dioxide Nonattainment Areas" ("Shaver Memo").

Our historic redesignation policy for SO_2 has called for eight quarters of clean ambient air quality data as a necessary prerequisite to redesignation of any area to attainment. On October 18, 2000, we issued a policy to provide guidance on SO_2 maintenance plan requirements for an area lacking monitored ambient data, if the area's historic violations were caused by a major point source that is no longer in operation. See memo from John S. Seitz, entitled "Redesignation of Sulfur Dioxide Nonattainment Areas in the Absence of Monitored Data" ("Seitz Memo"). In order to allow for these areas to qualify for redesignation to attainment, this policy requires that the maintenance plan address otherwise applicable provisions, and include: (1) emissions inventories representing actual emissions when violations occurred; current emissions; and emissions projected to the 10^{th} year after redesignation; (2) dispersion modeling showing that no NAAQS violations will occur over the next 10 years and that the shut down source was the dominant cause of the high concentrations in the past; (3) evidence that if the shut down source resumes operation it would be considered a new source and be required to obtain a permit under the Prevention of Significant Deterioration provisions of the CAA; and (4) a commitment to resume monitoring before any major SOx source commences operation

We have determined that Ajo meets the criteria for redesignation under the Seitz Memo, and have conducted our analysis of the maintenance plan and redesignation request according to that memo.

SECTION 3 - Analysis and Approval of Ajo Maintenance Plan and Redesignation Request SIP Revisions

A. Summary of Ajo Maintenance Plan and Redesignation Request SIP Revisions

As discussed below, the State has addressed the requirements in the Seitz Memo for emissions inventories, modeling, permitting of major new sources, and agreement to commence monitoring if a new major source locates in the area. Therefore, the State has met the special criteria in the Seitz Memo for approval of maintenance plans and redesignation requests.

Emissions Inventory

The State provided the three emissions inventories specified in the Seitz Memo for the sources in, and within 50 kilometers of, the Ajo nonattainment area. For a representative year when the copper smelter was in operation (1981), direct SOx emissions from smelting operations were 39,596 tons per year (tpy). ADEQ identified the Phelps Dodge generators as emitting less than 1 ton per year, and projected actual emissions would likely be only 1.2 tpy SO_2 in 2015, but the allowable emissions or potential to emit (PTE) would be 60.6 tpy in 2015. ADEQ also identified in its emissions inventory the proposed Gila Bend Landfill, and estimated landfill emissions at 29.7 tpy PTE for 2015.[3] We conclude that the inventories are complete, accurate, and consistent with applicable CAA provisions and the Seitz Memo.

Modeling

Past EPA policy memoranda on SO_2 redesignations all ask for dispersion modeling. The Seitz Memo asks for dispersion modeling of all point sources within 50 km of the nonattainment area boundary. SCREEN3 screening dispersion modeling was also performed. The combined impact of all point sources within the nonattainment area and within 50 km of the nonattainment area boundary would be about 66 percent of any of the SO_2 standards. EPA therefore finds that the ambient SO_2 projection requirement for redesignations and maintenance plans is met. For further details, see Section 4.

The Seitz Memo requires a modeling analysis that shows point sources were the dominant sources contributing to high SO_2 concentrations in the airshed. While Multi Point Rollback (MPR) has been accepted by EPA for modeling of smelters, as a rollback method it assumes that the monitored SO_2 violations are completely due to the smelter being modeled. Thus, it cannot be relied upon for this analysis. Instead, screening modeling can be used to show that non-smelter sources have only an insignificant contribution. Since their emissions have changed relatively little since the time that emission controls were placed on the smelter, this same screening

[3]Since its original submission, ADEQ has informed EPA that the Gila Bend Regional Landfill permit was terminated by the permittee on August 28, 2002, and this proposed source was never constructed.

modeling shows that the non-smelter sources were insignificant in the past, and hence the smelter was the dominant source contributing to past high SO_2 concentrations. EPA therefore finds that the ambient SO_2 modeling requirement for redesignations and maintenance plans is met.

Permitting of New Sources

For the Ajo SO_2 nonattainment area, the nonattainment area new source review (NSR) permit program responsibilities are shared by ADEQ and PDEQ. ADEQ administers the preconstruction review and permitting provisions of Arizona Administrative Code, Title 18, Chapter 2, Articles 3 and 4. PDEQ administers the NSR program under Pima County Code, Title 17, Chapter 17.12 and Chapter 17.16, Article VIII. All new major sources and modifications to existing major sources are subject to the NSR requirements of these rules. We have not yet fully approved the ADEQ and PDEQ NSR rules.

Non-attainment NSR Permitting of New Sources

CAA Section 172(c)(5) requires NSR permits for the construction and operation of new and modified major stationary sources anywhere in nonattainment areas. We have determined that areas being redesignated from nonattainment to attainment do not need to comply with the requirement that an NSR program be approved prior to redesignation provided that the area demonstrates maintenance of the standard without part D nonattainment NSR in effect. The rationale for this decision is described in a memorandum from Mary Nichols dated October 14, 1994 ("Part D New Source Review (Part D NSR) Requirements for Areas Requesting Redesignation to Attainment"). We have determined that the maintenance demonstration for Ajo does not rely on nonattainment NSR. Prevention of Significant Deterioration (PSD) is the replacement for NSR, and part of the obligation under PSD is for a new source to review increment consumption and maintenance of the air quality standards. PSD also requires preconstruction monitoring. Therefore, the State need not have a fully approved nonattainment NSR program prior to approval of the redesignation request.

Attainment PSD permitting of New Sources

ADEQ and Pima Department of Environmental Quality (PDEQ) have PSD permitting programs (A.A.C. R18-2-406 and Pima County Code (PCC) 17.16.590) that were established to preserve the air quality in areas where ambient standards have been met. The State's PSD program for all criteria pollutants except PM-10 was approved into the SIP effective May 3, 1983 (48 FR 19879). The federal PSD program for PM-10 was delegated to the State on March 12, 1999. Pima's PSD program (for all criteria pollutants) was delegated effective April 14, 1994. The PSD program requires stationary sources to undergo preconstruction review before facilities are constructed, modified, or reconstructed and to apply Best Available Control Technology (BACT). These programs will apply to any major source wishing to locate in the Ajo area once the area is redesignated to attainment. The ADEQ and PDEQ commitments to treat any major source in or near Ajo as "new" under the PSD program satisfies the preconstruction permit provision of the Seitz Memo as one of the prerequisites to redesignation.

Monitoring

ADEQ has confirmed that the State commits to resume monitoring before any major source of SO_2 commences to operate. Moreover, the PSD permit program requires that permit applicants conduct preconstruction monitoring to identify baseline concentrations. Together, these commitments address the monitoring provision of the Seitz Memo.

B. Completeness Finding

ADEQ submitted the Ajo Maintenance Plan and Redesignation Request on June 18, 2002. The Act requires States to observe certain procedural requirements in developing implementation plans and plan revisions for submission to EPA. Section 110(a)(2) of the Act provides that each implementation plan submitted by a State must be adopted after reasonable notice and public hearing.[4] CAA Section 110(l) similarly provides that each revision to an implementation plan submitted by a State under the Act must be adopted by such State after reasonable notice and public hearing.

EPA must determine whether a submittal is complete and therefore warrants further EPA review and action [see CAA Section 110(k)(1) and 57 FR 13565]. The EPA's completeness criteria for SIP submittals are set out at 40 CFR Part 51, Appendix V (1991), as amended by 57 FR 42216 (August 26, 1991). The EPA attempts to make completeness determinations within 60 days of receiving a submission. However, under CAA Section 110(k)(1)(B), a submittal is deemed complete by operation of law if a completeness determination has not made by EPA within six months after receipt of the submission. The Ajo maintenance plan and redesignation request SIP submittal was found complete in a letter from Jack Broadbent of EPA to Richard Tobin of ADEQ dated October 30, 2002.

C. Is the Maintenance Plan Approvable?

As discussed above, CAA section 175A sets forth the statutory requirements for maintenance plans, and the Calcagni and Shaver Memos cited above contain specific EPA guidance. The only maintenance plan element not covered by the Seitz Memo is the contingency provision. CAA section 175A provides that maintenance plans “contain such contingency provisions as the Administrator deems necessary to assure that the State will promptly correct any violation of the standard which occurs after the redesignation of the area as an attainment area.”

The Ajo Maintenance Plan includes the State’s commitment to continue to implement and enforce measures necessary to maintain the SO_2 NAAQS. ADEQ’s current operating permit program places limits on SO_2 emissions from existing sources. Should an existing facility want to upgrade or increase SO_2 emissions, the facility would be subject to the PSD program. Should a new facility be constructed in the Ajo area, the facility would also be subject to PSD as required in the Calcagni Memo.

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[4]Also, section 172(c)(7) of the Act requires that plan provisions for nonattainment area to meet the applicable provisions of section 110(a)(2).

If these measures prove insufficient to protect against exceedances of the NAAQS, the State has also committed to adopt, submit as a SIP revision, and implement expeditiously any and all measures needed to ensure maintenance of the NAAQS.

The Calcagni Memo emphasizes the importance of specific contingency measures, schedules for adoption, and action levels to trigger implementation of the contingency plan. Since there are no remaining sources of SO_2 emissions of the magnitude of the Phelps Dodge smelter and there is no SO_2 monitoring in the Ajo area, we agree with the State that this level of specificity is not appropriate, and we conclude that the State's commitment satisfactorily addresses the CAA provisions. Since there are neither significant SO_2 sources nor SO_2 monitoring in the Ajo area, we agree with the State that the State's PSD permitting program is sufficient to track future air quality trends and to assure that the Ajo area will not violate the NAAQS. If the State identifies the potential for a NAAQS violation through the permitting process, the State would ascertain what measures would be needed to avoid the violation.

D. Has the State Met the Redesignation Provisions of CAA Section 107(d)(3)(E)?

Has the area attained the 24-hour and annual SO_2 NAAQS?

As discussed above, the normal prerequisite for redesignation is submittal of quality-assured ambient data with no violations of the SO_2 NAAQS for the last eight consecutive quarters. However, the Seitz Memo recognizes that states should be provided an opportunity to request redesignation where there is no longer monitoring but where there is no reasonable basis for assuming that SO_2 violations persist after closure of the sources that were the primary or sole cause of these violations. Ajo is such an area, and the State has submitted convincing evidence that no major stationary sources of SOx emissions remain in operation in or within 50 kilometers of the area that might cause a violation of the SO_2 NAAQS.

Has the area met all relevant requirements under section 110 and Part D of the Act?

CAA Section 110(a)(2) contains the general requirements for SIPs (enforceable emission limits, ambient monitoring, permitting of new sources, adequate funding, etc.) and Part D contains the general provisions applicable to SIPs for nonattainment areas (emissions inventories, reasonably available control measures, demonstrations of attainment, etc.). Over the years, we have approved Arizona's SIP as meeting the basic requirements of CAA Section 110(a)(2), and the CAA Part D requirements for Ajo addressed primarily by the regulations applicable to the Phelps Dodge facility during the period of its operation. The State has thus met the basic SIP requirements of the CAA.

Does the area have a fully approved SIP under section 110(k) of the Act?

Arizona has a fully-approved SIP with respect to the Ajo area. Additional information on the SIP is found in Appendix A and the docket.

Has the State shown that the air quality improvement in each area is permanent and enforceable?

The Maintenance Plan shows that the exclusive cause of past SO_2 NAAQS violations (the Phelps Dodge copper smelter in Ajo) no longer exists. Because the source closure is complete and

final, and all permits for the facility have expired, the “permanent and enforceable” requirement has been met. Minor sources which exist in the area will not, in the aggregate, cause a violation of the NAAQS. As a result, there is no reason to expect that SO_2 ambient concentrations will exceed background levels.

Does the area have a fully approved maintenance plan pursuant to section 175A of the Act?
We are approving the Ajo Maintenance Plan in this action.

SECTION 4 - Modeling Analysis and Additional Materials

A. Summary of Modeling Approach and Choice of Model

The standard EPA screening dispersion model, SCREEN3 (version 96043) was chosen to conservatively estimate the impact of remaining SO_2 sources in or near the Ajo nonattainment area (Guideline on Air Quality Models, 40 CFR 51, Appendix W). SCREEN3 steps through all 54 combinations of wind speed and atmospheric stability classes that are used in standard EPA Gaussian dispersion models, and reports the highest concentration from among the 54. Performed for a range of distances from the source, this calculation provides a conservatively high estimate of 1-hour average concentrations. Effectively, this assumes that the worst case condition (which may not even actually occur at the source's area) exists all the time, e.g. for a full 24 hours in the case of the 24-hour SO_2 NAAQS. Wind direction-persistence factors were applied to convert the SCREEN3 result to 3-hour, 24-hour, and annual estimates, in accordance with EPA guidance (Screening Procedures for Estimating the Air Quality Impact of Stationary Sources, Revised (EPA-454/R-92-019, October 1992)).

B. Development of Inputs

The SIP submittal identifies two sources within the nonattainment area and the 50 km buffer around the nonattainment area: Phelps Dodge Generator Station and the Gila Bend Regional Landfill flares, though the Landfill has not been built. Phelps Dodge was modeled at 1 tpy, and the results scaled up by a factor of 60.6 tpy to reflect its potential emissions in 2015 (input and output files AJOSCR2.DAT and AJOSCR2.OUT). Stack parameters (height, temperature, exit velocity) were taken from a generator previously modeled as part of an Authority to Construct Permit for a different source, and represent typical values. Emissions for the Gila Bend flares were modeled at the submittal's 29.7 tpy estimate for 2015 (input and output files AJOSCR3.DAT and AJOSCR3.OUT). Together with emissions, the heating value of methane was used to determine the hourly heat output of the flare for use in SCREEN3. A conservative final step was to add the maximum impacts from the two sources together, thus assuming that their plumes overlap to the maximum extent possible. After the modeling was performed, ADEQ staff informed us that the Gila Bend Regional Landfill permittee had terminated the permit. Since the landfill flares were modeled but do not exist, the modeling is that much more conservative.

C. Model Performance

Table 4-1 indicates model performance.

Table 4-1. 1-hour average SCREEN3 results, converted to 3-hr, 24-hr, and annual results for comparison to the SO_2 NAAQS

Ajo SO2 SIP screening modeling					
		3-hr	24-hr	annual	
SO2 NAAQS		1300	365	80	
Typical power plant turbine					
	1-hr	3-hr	24-hr	annual	
SCREEN3		0.9	0.4	0.08	
1 ton/yr	0.9782	0.88038	0.39128	0.078256	
Ajo Phelps Dodge New Cornelia Diesel Generator (scaled from preceding)					
tons/yr	60.6				
Impacts	59.2789	53.35103	23.71157	4.742314	max %
Impact as % of NAAQS		4.1%	6.5%	5.9%	6.5%
Gila Bend Regional Landfill flares					
tons/yr	29.7				
	1-hr	3-hr	24-hr	annual	
		0.9	0.4	0.08	
SCREEN3 Impacts	0.888	0.7992	0.3552	0.07104	max %
Impact as % of NAAQS		0.1%	0.1%	0.1%	0.1%
Combined sources					
Impacts		75.35103	24.06677	4.813354	max
Impact as % of NAAQS		5.8%	6.6%	6.0%	6.6%

D. Results of Overall Modeling Approach

Taken together, the modeling showed if both sources burn low sulfur fuel, the area will be under 10 percent (model showed 6.6 percent) of the National Ambient Air Quality Standards (NAAQS). Arizona rules allow the use of high sulfur fuel in generators such as the ones at the Ajo Phelps

Dodge generating station in certain circumstances when low sulfur fuel is not available. However, the applicable SIP rules also limit the sulfur content of high sulfur fuel. Even if Phelps Dodge burned high sulfur fuel, the area would remain about 66 percent of the NAAQS, since the high sulfur fuel would contain approximately ten times the sulfur of low sulfur fuel and would likely be burned for limited periods of time. Therefore, this modeling relies on extremely conservative assumptions that are unlikely to occur. According to the SIP submittal, the generators typically burn a mixture of 5 percent diesel fuel and 95 percent natural gas.

EPA finds that the ambient SO_2 projection requirement for redesignations and maintenance plans is met by the submittal. Since the existing source, the Phelps Dodge generator, is not causing NAAQS exceedances now, we can conclude the closed smelter was the likely source of the past violations.

APPENDIX A - The Applicable SO_2 SIP for Arizona

I. Is the Applicable Implementation Plan Fully Approved?

The applicable implementation plan must be fully approved for the Ajo area to be redesignated to attainment. CAA Section 107(d)(3)(E)(ii) states that the Administrator may not promulgate a redesignation of a nonattainment area (or portion thereof) to attainment unless the Administrator has fully approved the applicable implementation plan for the area under CAA Section 110(k). See 42 U.S.C. § 7407(d)(3)(E)(ii) (CAA § 107). "Applicable implementation plan" means the portion (or portions) of the implementation plan, or most recent revision thereof, which has been approved under section 7410 [SIPs] or promulgated under section 7410(c), [FIPs] or promulgated or approved pursuant to regulations under section 7601(d) [TIPs] and which implements the relevant requirements of the Clean Air Act. See 42 U.S.C. § 7602(q) (CAA § 302). An area cannot be redesignated if a required element of its plan is the subject of a disapproval; a finding of failure to submit or to implement the SIP or partial, conditional or limited approval. However, this does not mean that earlier issues with regard to the SIP will be reopened. Regions should not reconsider those things that have already been approved and for which the Clean Air Act Amendments did not alter what is required. In contrast, to the extent the Amendments add a requirement or alter an existing requirement so that it adds something more, Regions should consider those issues. In addition, requests from areas known to be affected by dispersion techniques which are inconsistent with EPA guidance will continue to be considered unapprovable under section 110 and will not qualify for redesignation. Calcagni Memorandum at 3.

A. What is the Applicable Implementation Plan for the Ajo Area/Control of SO2?

The "**applicable implementation plan**" means the portion (or portions) of the implementation plan, ***or most recent revision thereof***, which has been approved under section 7410 [SIPs] or promulgated under section 7410(c) [FIPs] or promulgated or approved pursuant to regulations under section 7601(d) [TIPs] and which implement the relevant requirements. See 42 U.S.C. § 7602(q) (CAA § 302){emphasis added}. The "applicable implementation plan" is thus the portions of the plans which are the most recent revisions and which (1) apply to the Ajo area and (2) implement the relevant requirements of the Clean Air Act with respect to control of sulfur dioxide. The relevant area for this redesignation is the Ajo area, located in the Pima County Air Pollution Control District but also subject to ADEQ oversight. Thus, the relevant Arizona SIP has two parts: (1) the relevant portions of the SIP implemented by ADEQ and (2) the relevant portions of the SIP implemented by the Pima County Department of Environmental Quality.

1. ADEQ

The applicable implementation plan, with respect to ADEQ, is found at 40 CFR 52.120. We examined the applicable SIP, and also looked at the disapprovals listed in 40 CFR 52.125 and no disapprovals remain relevant to the applicable SIP. The applicable plan is fully approved.

2. PDEQ

The applicable implementation plan, with respect to Pima County, is found at 40 CFR 52.120. We examined the applicable SIP and also looked at the disapprovals listed in 40 CFR 52.125 and no disapprovals remain relevant to the applicable SIP. The applicable plan is fully approved.

B. Is the Applicable Implementation Plan fully approved? (Disapprovals)

Despite the disapprovals which are still listed at 40 CFR 52.125, the relevant SIP is, or through this action will be, fully approved. Upon approval of the maintenance plan, Sections 52.125(a)(1) and 52.135(a)(2) will no longer apply to the Ajo plan, to the extent that these sections even remain relevant to the Ajo area now that there is no copper smelter in Ajo. We have determined that the language in 40 CFR 52.125(a) is no longer applicable to the Ajo area for reasons including: (1) We have evidence of three years of no violation when the Ajo smelter was operating. From this, we conclude that in the Ajo SO_2 nonattainment area, controls on fugitive emissions were not necessary to attain the NAAQS. (2) In our original approval of the MPR approach (48 FR 1717), we explicitly stated that "Failure to submit SIP revisions by August 1, 1984 will not result in the disapproval of the MPR regulations but will result in EPA promulgation of new fugitive control strategies and regulations (if necessary) for each smelter town." The issue of a study of fugitive emissions and EPA promulgating our own regulations became moot when the Ajo smelter permanently closed in 1985.

The other disapprovals listed in 40 CFR 52.125 are either not relevant to the Ajo area, or discuss SIP rules which have already been revised. In addition, some of the language in section 52.125 is outdated and can be removed from the CFR (however, updating the CFR will occur separately from this approval action).