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United States Environmental Protection Agency, Region IX

Air Division

Technical Support Document

for

EPA's Notice of Final Rulemaking

for the

Arizona State Implementation Plan

Tucson Air Planning Area

Redesignation to Attainment for Carbon Monoxide

Maintenance Plan

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ABBREVIATIONS/ACRONYMS

ADEQ	- Arizona Department of Environmental Quality
AIRS	- Aerometric Information and Retrieval System
CAA	- Clean Air Act or the Act
CAAA	- Clean Air Act Amendments
CFR	- Code of Federal Regulations
CMSA	- Consolidated Metropolitan Statistical Area
CO	- Carbon Monoxide
EI	- Emissions inventory
EPA	- The United States Environmental Protection Agency
FIP	- Federal implementation plan
I&M	- Inspection and Maintenance
NAAQS	- National ambient air quality standards
NSR	- New Source Review
PAG	- Pima Association of Governments
PDEQ	- Pima County Department of Environmental Quality
PSD	- Prevention of Significant Deterioration
RFP	- Reasonable further progress
SIP	- State implementation plan
SLAMS	- State and local Air monitoring Stations
TAPA	- Tucson Air Planning Area
TSD	- Technical Support Document
VEIP	- Vehicle Emissions Inspection Program

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The following Attachments are in the docket accompanying this notice located at the addresses indicated in the Federal Register Notice. The docket covers the original proposal for redesignation, the reproposal and the final approval. An Index to the entire docket is attached to this Technical Support Document.

A. Proposal Attachments

- 1. Memo from Morris Goldberg, Technical Support Office, Region 9, May 14, 1997
- 2. Memo from Robert Pallarino, Technical Support Office, Region 9, November 24, 1997

B. Reproposal Attachments

- 1. Comments received from ACLPI, August 21, 1998
- 2. Letter from PAG responding to one of ACLPI's comments, November 19, 1998

3. Letter from EPA to PAG requesting CO emissions projections, December 9, 1998
4. Letter from PAG in response to EPA request, June 18, 1999
5. Letter from ADEQ relating to extension of Vehicle Emissions Inspection Program, August 23, 1999

C. Final Attachments

1. Index to Entire Docket

I. INTRODUCTION

EPA originally proposed to redesignate the Tucson Air Planning Area (TAPA) to attainment for CO on July 22, 1998 (See 63 FR 39258). One set of public comments was received on that proposal. EPA repropoed the action on December 17, 1999 (See 64 FR 70660) to provide the public with an opportunity to comment on additional information submitted by the Pima Association of Governments (PAG) in support of the redesignation and on several other new issues that were raised subsequent to publication of the original proposal. EPA prepared Technical Support Documents (TSDs) to support both of those actions. The TSD supplementing the original proposal dealt with the CAA requirements for redesignation and reviewed Arizona's request for redesignation of the TAPA and for approval of a maintenance plan in accordance with those requirements. The TSD accompanying EPA's reproposal to redesignate the TAPA to attainment dealt with the additional information provided by the Pima Association of Governments in response to EPA's request and also with the SIP revisions that were submitted relating to amendments to various Arizona statutes. The previous TSDs are available to the reader in the docket accompanying this action.

II. SUMMARY OF TODAY'S ACTION

In this notice EPA is taking final action to approve Arizona's request for redesignation of the TAPA to attainment of the CO NAAQS and approval of a maintenance plan. EPA is also taking final action to approve as revisions into the Arizona SIP amendments that were made to various Arizona statutes to ensure continued implementation of the control measures contained in these statutes following the redesignation of the TAPA and 2) extending the State's Vehicle Emissions Inspection program (VEIP).

In this final action EPA is also responding to the comments made on the original proposal by the Arizona Center for Law in the Public Interest (ACLPI).

III. PUBLIC COMMENTS AND EPA RESPONSES

EPA received one set of comments during the 30-day comment period provided under the original proposal. Those comments came from the Arizona Center for Law in the Public Interest (ACLPI) in a letter dated August 21, 1998. The following covers the ACLPI comments and EPA responses.

EPA has considered all of the comments received from ACLPI on the original proposal and is providing the following responses.

Comment: ACLPI expressed concern that one of the CAA's requirements for redesignation, namely that the improvement in air quality is due to permanent and enforceable reductions, would not be met by the TAPA following redesignation because several Arizona statutes, including the state's auto emission inspection and maintenance program, the oxygenated fuels program and other control measures defined Tucson as "Area B", a carbon monoxide nonattainment area. ACLPI expressed concern that the area, following redesignation, would no longer be subject to these control measures and said that under the circumstances EPA cannot conclude that the emission reductions from these programs are permanent and enforceable.

Response: The Arizona legislature has acted to amend various Arizona Statutes to expand the definition of Area B to include CO maintenance areas. On May 18, 1999 Arizona Governor Hull signed into law House Bill 2189 which amended Arizona statutes 41-796.01, 41-2121, 49-401.01, 49-402, 49-404, 49-454, 49-541 and 49-571 to ensure continued implementation of committed SIP control measures in maintenance areas.

All of these statutory amendments have been submitted as SIP revisions and EPA in this notice is approving those SIP revisions. On the basis of these statutory amendments, EPA believes that this comment has been adequately addressed.

Comment: ACLPI questioned whether the assumption in the LMP option that an area beginning the maintenance period at or below 85% of exceedance levels will continue to meet the standard for another ten years is applicable to the TAPA, given the growth that is projected for the area.

ACLPI also questioned the LMP guidance waiver of the CAA's requirement for a 10 year maintenance demonstration and also the fact that under a LMP an emissions budget may be treated as essentially not constraining for the length of the maintenance period. ACLPI made the following arguments:

- With regard to the LMP's waiver of the maintenance demonstration, the mere fact that air quality and CO emissions are at or below 85% of exceedance levels does not assure that they will not increase to above exceedance levels in less than 10 years.
- The fact that under the LMP there is no emissions budget test for conformity purposes flagrantly violates EPA's own conformity rules which explicitly apply the emission budget test to all maintenance areas. There is no exception for areas that are at or below 85% of exceedance levels and EPA cannot amend or repeal rules with a guidance document.

- There is no factual or scientific basis for presuming that a motor vehicle emissions budget will not be constraining in a limited maintenance area. The potential for emissions growth has nothing to do with existing CO levels, but is driven by factors such as growth in vehicle miles traveled (VMT), increases in vehicle trips and increased congestion. In the Tucson area, VMT is almost doubling every 20 years, and congestion is expected to significantly worsen. Continued application of conformity rules is vital to ensuring that transportation plans, programs and projects, and federal activities, are consistent with maintenance of CO standards.

Response: The additional information provided by PAG included projections extending to 2010 and 2020 for CO mobile source emissions, vehicle miles traveled (VMT) and population growth, as well as information on ambient air CO concentrations for the years 1990 through 1998. That information is contained in Tables 1 and 2 below. The full text of the PAG letter and details on the sources used for these projections are in the TSD accompanying the reproposal notice, which may be found in the docket for this notice.

TABLE 1
PAG Projections for CO Mobile Emissions and VMT

Year (Population	CO Mobile Emissions (tpd)	VMT	POPULATION
1990	444.8	15,491,995	666,880
1995		17,915,850	766,172
1999 (2000)	325.8	20,243,419	854,329
2003 (2005)	325.1	22,873,378	943,795
2010	367.2	27,286,950	1,031,623
2020	428.7	32,760,981	1,206,244

TABLE 2
Ambient Air Concentrations - 1990 - 1998

Year	Ambient Air Concentration
1990	6.5
1991	5.7
1992	5.8

1993	6.0
1994	5.5
1995	5.9
1996	5.1
1997	4.4
1998	4.0

EPA has reviewed the additional information provided by PAG and, based on that data, has come to the following conclusions:

- E. Although there are projected increases in population and vehicle miles traveled (VMT), the data indicates that CO emissions will drop from 444.8 tons per day in 1990 to 367.2 in 2010, rising again to a projected 428.7 tons per day in 2020 which is still below 1990 levels. In summary, despite the projected growth in population and VMT, CO mobile source emissions in the TAPA will continue to decrease. The decrease in projected CO emissions can be attributed to existing control measures and the impacts of other programs that were not included in the Mobile model used by PAG in preparing these projections including the Pima Travel Reduction, Rideshare and Traffic Signal Coordination programs. In addition it may be anticipated that national mobile source control programs that will take effect in the future will play a role in reducing CO emissions from mobile sources.
- According to data contained in Table 2, the design value for the Tucson area for 1993-1995 was 6.0 or 67% of the NAAQS standard for CO. The design value is the second highest eight-hour concentration observed at any site in the area. The data also indicated that the design value for the years 1996 through 1998 dropped to 5.1 or 57% of CO NAAQS. EPA believes that these design values provide an ample margin of safety and time to take action in the event of a possible violation of the CO NAAQS in the future.
 - EPA reviewed the projected CO mobile source emissions, VMT and population values and the corresponding design values for the years 1990 through 1999 and concluded that it would be reasonable to assume that the future relationship of these four elements would be comparable through 2010.
 - The control measures contained in the TAPA maintenance

plan are currently mandated by federal and state statutes and are permanent and enforceable. They include the Federal Motor Vehicle Control program, the State Inspection and Maintenance program and the State Oxyfuels program. The Arizona legislature has amended the statutes that had defined Tucson as a nonattainment area to ensure continued implementation of SIP control measures following redesignation to attainment. In addition, the Arizona legislature has amended the statutes pertaining to the State's Vehicle Emission and Inspection Program (VEIP) to assure continuation of the program through December 31, 2008. With regard to the VEIP sunset date of 2008, which is two years short of the ten-year maintenance period, in a letter to EPA dated August 23, 1998, the Arizona Department of Environmental Quality (ADEQ) states that Arizona Revised Statutes 41-2955 limits to ten years the existence of a program before it undergoes a sunset review and therefore the VEIP has been extended for the maximum time allowed under this statute, i.e., ten years. The letter supplies a recent history of legislative changes to the VEIP, concluding that "The VEIP has consistently received support for necessary program updates from the Legislature". EPA therefore believes that on the basis of this legislative history, it is reasonable to assume that the program will be extended when it expires in 2008. The full text of the letter from ADEQ is attached to the TSD accompanying the reproposal.

- The maintenance plan for the TAPA contains a pre-violation action level trigger which would set in motion a process designed to forestall a future violation of the CO NAAQS. Under the plan, a pre-violation action level would be reached when two verified 8-hour average concentrations in excess of 85% of the CO NAAQS occurred at any one monitor site in any CO season. When this criterion is reached, it would trigger field studies and technical evaluations and recommendations for implementation of contingency measures.
- With regard to the ACLPI's comments that 1) the LMP policy flagrantly violates EPA's own conformity rules which explicitly apply the emission budget test to all maintenance areas and 2) that the rule does not provide an exception for areas that are at or below 85% of exceedance levels, EPA's conformity policy has clearly provided for opportunities for a SIP to demonstrate that no budget is needed (see Transportation Conformity Rule, 61 FR 36118 (July 9, 1996), paragraph B,

finalized on August 15, 1997, 62 FR 43780). This section addresses this question and mentions limited maintenance plans specifically. The policy states that areas must meet budgets that the SIP identifies, but if the SIP adequately justifies that no budget is necessary, then no regional emissions test is necessary.

Comment: ACLPI contends that under section 175(A)(a) of the CAA a maintenance plan must "provide for" and "ensure" maintenance for at least 10 years. ACLPI said that EPA's LMP is based on mere speculation and neither provides for, nor ensures, maintenance for ten years and is therefore contrary to the CAA.

Response: The LMP guidance provides the rationale for the policy. It states that "EPA believes it is justifiable and appropriate to apply a different set of maintenance plan requirements to nonclassifiable CO nonattainment areas whose monitored air quality is equal to or less than 85% of exceedance levels of the CO NAAQs. The EPA does not believe that the full maintenance plan requirements need be applied to these areas because they have achieved air quality levels well below the standard without the application of control measures required by the Act for moderate and serious nonattainment areas. Also, these areas do not have either a recent history of monitored violations of the CO NAAQS or a long prior history of monitored air quality problems. EPA believes that the continued applicability of prevention of significant deterioration (PSD) requirements, any control measures already in the SIP, and Federal measures (such as the Federal motor vehicle control program) should provide adequate assurance of maintenance for these areas."

EPA therefore believes that the LMP guidance considered the requirements of 175(A)(a) of the CAA, and interpreted those requirements in a manner consistent with the Act.

Comment: ACLPI expressed concern over the lack of clear commitments to address actual violations of the CO standards. According to ACLPI, the plan notes that state law gives ADEQ the option of reducing fuel volatility levels and raising fuel oxygen content, but there is no clear commitment from the state to take either of these steps if a violation occurs. The plan also lists various potential control measures that might be adopted to address future CO violations, but does not commit to any of them.

ACLPI asked EPA to seek clarification from the state and PAG that they are committed to adopt whatever additional controls are necessary to correct an actual violation, and to implement such controls by the start of the next CO season after the violation occurs. ACLPI claimed that without such clarification the plan

will not satisfy the requirements of Section 175A(d) to assure that any CO violation will be promptly corrected.

Response: As requested, EPA sought clarification from PAG as to whether they are committed to adopt whatever additional controls are necessary to correct an actual violation of the CO NAAQS, and to implement such controls by the start of the next CO season after the violation occurs. The following is a summary of the points made in the PAG response, dated November 19, 1998. The full text is contained in the TSD accompanying the reproposal notice.

- The TAPA CO LMP was designed to set evaluation triggers at a point where any violation of the CO NAAQS could be anticipated at least 5 years ahead of time. This would give enough time to fully evaluate the risk of violation and the best control measures to address any projected violations of the standard.
- The TAPA CO LMP provides that in the event of an exceedance (which must always precede a violation) the evaluation and implementation process described in the Plan will be triggered. The most likely control measure for immediate response is high oxygen requirement in the oxyfuels program that can be implemented no later than the following CO season.
- The TAPA plan provides that if the PAG finding indicates a probable violation of the CO NAAQS within 5 years, the recommended control measures to fully mitigate the projected violation must be initiated by the start of the next CO season after the violation occurs. EPA believes that the clarification of this issue provided by PAG is an adequate response to the ACLPI comment.

In summary, EPA considered the population growth and CO emissions projections provided by the PAG and the summary of the area's design values over the past few years and believes that the data, in conjunction with the pre-violation action triggers and the contingency measures provided for in the TAPA maintenance plan, provide reasonable assurance that the area will not violate the CO NAAQS during the maintenance period. EPA is therefore taking final action to approve the redesignation of the TAPA to attainment for the CO NAAQS and for approval of the maintenance plan on the grounds that the area meets the requirements for redesignation specified under the Clean Air Act, and that the TAPA is qualified to utilize the LMP option.

III. FINAL ACTIONS

A. Approvals. In this notice EPA is taking final action to approve the following:

1. Amendments to A.R.S. 41-2083, 2122 and 2125 relating to the State's oxyfuels program in the Tucson area both as SIP revisions and as control measures in the maintenance plan to be implemented in the event of a probable or actual violation of the CO NAAQS in the TAPA.
2. Amendments to Arizona Statutes 49-401, 49-406 expanding the authority of State and local certified metropolitan planning organizations to develop plans and to implement and enforce control measures for attainment as well as maintenance areas as required by Section 1109a)(2)(E) of the CAA.
3. Amendments to Arizona Statutes 41-3009.01, 49-541.01, 49-542, 49-545, 49-557, 49-573, 41-803, 41-401.01 extending the State's Vehicle Emissions and Inspection Program (VEIP) program through 2008.¹

¹With regard to the sunset date of 2008, which is two years short of the ten-year maintenance period, in a letter to EPA, dated August 23, 1998, ADEQ states that Arizona Revised Statutes 41-2955 limits to ten years the existence of an agency before it undergoes a sunset review and therefore the VEIP has been extended for the maximum time allowed under this statute, i.e., ten years. The letter supplies a recent history of legislative changes to the VEIP, concluding that "The VEIP has consistently received support for necessary program updates from the Legislature". EPA therefore believes that, on the basis of this legislative history, it is reasonable to assume that the program will be extended when it expires in 2008. The full text of the letter from ADEQ is contained in Attachment G of the Technical Support document for the reproposal which is contained in the docket accompanying this notice at the addresses indicated above.

4. Amendments to 41-796.01, 41-2121, 49-401.01, 49-402, 49-404, 49-454, 49-541 and 49-571, expanding the definition of Tucson from a CO “non-attainment area” to a CO nonattainment/maintenance” area.

5. Approval of Maintenance Plan

EPA is taking final action to approve the TAPA CO maintenance plan because it meets the requirements set forth in section 175A of the CAA and the requirements of the LMP options contained in the EPA guidance of October 6, 1995.

6. Approval of Emissions Inventory

EPA is taking final action to approve the Emissions Inventory for the base year 1994 contained in the LMP as meeting the requirements of section 172(c)(3) of the CAA.

2. Final Approval of Request for Redesignation for Attainment of the CO NAAQS.

EPA is taking final action to approve Arizona’s request for redesignation of the TAPA to attainment of the CO NAAQS on the grounds that it meets the requirements of Section 107(d)(3)(E) of the Clean Air Act.

B. Removal of Existing SIP Disapprovals of the attainment demonstration and contingency measures contained in the Pima County 1988 SIP.

1. EPA is taking final action to remove the Agency’s disapprovals (FR 56, 5459, February 11, 1991) of the attainment demonstration that was contained in the 1988 Arizona CO SIP revision for Pima County on the grounds that it has been supplanted by the maintenance demonstration contained in the TAPA maintenance plan. This maintenance demonstration supplants the 1988 Arizona CO SIP revision.

2. EPA is also taking final action to remove the disapproval of the contingency measures contained in the Arizona 1988 SIP for Pima County on the grounds that they have been supplanted by the contingency measures provided in the TAPA maintenance plan.

