

REGIONAL AIR STRATEGY

REGION IX

ENVIRONMENTAL PROTECTION AGENCY



March, 1976

REGIONAL AIR STRATEGY

REGION IX

ENVIRONMENTAL PROTECTION AGENCY



March, 1976

TABLE OF CONTENTS

<u>Section</u>	<u>Page</u>
I. Introduction	1
II. Purpose, Goals, Techniques	3
A summary of air pollution goals and approaches	
III. State Strategies - Summary Sheets	5
IV. AQCR Summaries	14
A. AQCR #12 - Arizona Southern Border	15
B. AQCR #13 - Arizona Clark-Mohave	16
C. AQCR #14 - Arizona Four Corners	17
D. AQCR #15 - Arizona Phoenix-Tucson	18
E. AQCR #23 - CA Great Basin Valley	19
F. AQCR #24 - CA Los Angeles Metropolitan	20
G. AQCR #25 - CA North Central Coast	21
H. AQCR #26 - CA North Coast	22
I. AQCR #27 - CA Northeast Plateau	23
J. AQCR #28 - CA Sacramento Valley	24
K. AQCR #29 - CA San Diego	25
L. AQCR #30 - CA San Francisco Bay Area	26
M. AQCR #31 - CA San Joaquin Valley	27
N. AQCR #32 - CA South Central Coast	28
O. AQCR #33 - CA Southeast Desert	29
P. AQCR #13 - NV Clark-Mohave	30
Q. AQCR #147 - NV Intrastate	31
R. AQCR #148 - NV - Northwest Nevada	32
S. AQCR #60 - HI - Hawaii	33
T. AQCR #246 - GU - Guam	34
V. Program Descriptions	35
A. AQMP	37
B. A/W Coordination - 201	38
C. A/W Coordination - 208	39
D. Air/Transportation Coordination	40
E. Air/Energy	41
F. EIS Review	42
G. Prevention of Significant Deterioration	43
H. Indirect Source Review (Nevada only)	45
I. New Source Review	46
J. New Source Performance Standards	47
K. NESHAPS (National Emission Standards for Hazardous Air Pollutants	49
L. Non-Criteria Pollutants (111(d))	50
M. EPA Compliance Verification	51
N. State/local Compliance Verification	52
O. EPA Enforcement	53
P. Emergency Episodes	54
Q. Vapor Recovery	55

R.	Other Organics	57
S.	Inspection/Maintenance	58
T.	Fuel Additive	59
U.	In-Stack Monitoring	60
V.	Special Air Monitoring	61
W.	Emission Inventory Development	62
X.	Emission Inventory Data Processing	63
Y.	Air Monitoring Quality Assurance	65
Z.	Air Monitoring Data Processing	66
AA.	Isolated Point Sources	67
VI.	Prioritization schemes	68
VII.	Glossary	70
VIII.	Narratives	71
	Basic Program	BP-1 to BP-
	Arizona	A-1 to A-15
	California	C-1 to C-41
	Guam	G-1 to G-3
	Hawaii	H-1 to H-3
	Nevada	N-1 to N-10

INTRODUCTION

General

The Regional Air Strategy is a response to the perceived need to formulate and implement a coordinated air program within Region IX. The strategy provides a framework for making decisions for programs in unrelated administrative units with the confidence that those decisions will be supportive of the Region's goals and objectives over the short- and long-term, and will not be contradictory of specific efforts in other programs. The benefits of such a strategy are obvious; the more important issues to bear in mind are (1) implementation, (2) resolution of conflict with headquarters guidance, and (3) staff recognition of how the strategy was developed and general agreement throughout the Region that this represents the course for EPA involvement. As with any plan there must be a procedure for amendment or mid-course correction. Such a process is not specified in this strategy, but clearly the RAS is a beginning articulation of a dynamic plan which will provide a basis for further refinement and definition.

Implementation

The key to controlling EPA's Air Program lies first in a plan or strategy - this is the RAS. Once adopted, the RAS serves as a basis for setting priorities and objectives throughout the Region. The RAS serves as a guideline then, for directing the actions of sections performing the Planning, Enforcement and Surveillance roles which, combined, represent Regional air programs. The RAS is a reference document that is to be available to all air staff that they can read, be familiar with, and understand their role within the overall air program and the Region. It will be the experience of those staff using the RAS that will lead to the refinement and amendments that will keep it current and useable.

Conflict Resolution

Throughout its development, the RAS was shown to be tending towards recommendations which were not always congruent or even consistent with other guidance, notably that from Headquarters. One of the benefits of preparing, using, amending and implementing the RAS, is the ability to recognize conflicts early and to propose exceptions or modifications such that the air program is conducted efficiently and effectively. To the extent that national guidance may not be universally applicable within the Region, the RAS may serve as a basis for requesting exceptions to national guidance.

History/Evolution.

The RAS developed out of a series of staff "hearings" during which consensus was achieved on most major issues surrounding the severity, type, and nature of the air pollution problem in each Air Quality Control Region in Region IX. A task force used that data and applied the objectives of each of the programs currently being implemented by EPA to develop a list of applicable programs which would essentially either reduce emissions directly or contribute to the further identification of a poorly understood air quality problem. (A more defined, 5-step criteria was actually applied.) The resulting discussion and amendment through "hearings" with Section Chiefs produced what the RAS contains as "narratives".

From the Narratives, major themes, programs and major elements applicable in each State were extracted as well as summary discussions for each AQCR prepared for presentation at Branch, Division and Executive levels of Region IX.

The RAS presented in this document is a total package composed mainly of the Narratives as the prime communicating tool and supported by the program descriptions, AQCR summaries.

II. PURPOSE, GOALS, TECHNIQUES

A. Purpose

Objectives

1. Develop long- and short-range objectives.
2. Describe the means to attain these objectives.
3. Define the roles of the Regional Office, EPA and Federal, State and local agencies in meeting these objectives.
4. Provide the rationale for the objectives, means and roles.

Application

1. Coordination
2. Resources
3. MBO output commitments
4. Contract funds
 - a. Regional Office
 - b. Headquarters
5. R&D needs
6. State communication
7. Grants
 - a. Base
 - b. Priority Objectives
8. State Assistance
 - a. IPA
 - b. Assignees

B. Goals

1. Attainment and maintenance of NAAQS in non-attainment areas.
2. Maintenance of NAAQS in attainment areas.
3. Preservation of air quality in areas meeting NAAQS.
4. Delegation of Federal programs to State and local agencies where legally possible. Support compatible State and local environmental programs.
5. Integration of EPA environmental program objectives with local, State and Federal programs.
6. Promotion of a public environmental ethic.

Techniques

- A. Goals 1-3: Attain, maintain, and enhance air quality.
 - 1. Develop professional Regional Office capability, both programmatic and technical.
 - 2. Include State and local agencies in regional decision making process.
 - 3. Impact national environmental policy with regional priorities and perspectives.

- B. Goal 4: Delegation of programs
 - 1. Develop EPA credibility.
 - 2. Develop State and local agency capability.
 - 3. Delegate and Overview, expectations must be realistic.
 - 4. Interagency Cooperative Agreements or Memorandum of Understanding may be indicated.

- C. Goal 5: Integration of EPA environmental program objectives
 - 1. Establish interagency liaison.
 - 2. Develop an understanding of other agencies' programs.
 - 3. Integrate environmental factors into other agencies' decision making process.

- D. Goal 6: Public involvement
 - 1. Obtain public participation in environmental decision making.
 - 2. Inform public of EPA environmental position.
 - 3. Build public confidence in EPA.

III. STATE STRATEGIES - Summary Sheets

ARIZONA

PROBLEMS

Oxidant: moderate problem in Phoenix, Tucson and Yuma metropolitan areas.

Carbon Monoxide: moderate problem in Phoenix metropolitan area.

Particulate Matter: slight to moderate problem throughout State.
gross problem in vicinity of copper smelters.

Sulfur Dioxide: gross problem in vicinity of copper smelters.

STRATEGY

	Ox	CO	PM	SO ₂
Reassess pollutant source/causes.	X	X	X	
Reassess control strategy.	X	X	X	X
Ensure compliance with existing regulations.			X	
Integration of air quality programs with other planning agencies.	X	X		
Long-term planning and implementation by State and local agencies.	X	X	X	

ACTIVITIES SUPPORTING STRATEGIES

<u>Strategy</u>	<u>Principle Activities</u>	<u>Additional Activities</u>
Reassess pollutant sources	Emission inventory development	Quality Assurance Source Surveillance
Reassess control strategy	SIP analysis and revision	Isolated point source I/M
Ensure compliance	Compliance Verification	Enforcement
Integrate air quality programs/long-term planning	AQMP, Air/201 and 208, Air/Transportation	EIS

ROLES

EPA

1. Perform 10% overview of major stationary sources by inspection. Emphasis on particulate and hydrocarbon sources. Major Federal facilities are included.
2. Encourage State and local enforcement against non-complying sources.
3. Perform overview and liaison on AQMP development and Air/Water and Air/Transportation planning.

4. Provide technical and R&D assistance in State/local identified needs.
5. Perform quality assurance audit.

State

1. Revise SIP for TSP and SO₂ (smelters) and CO and Ox (Phoenix and Tucson).
2. Perform major source compliance verification.
3. Enforcement.
4. Implement statewide quality assurance program.

Local

1. Perform major source compliance verification.
2. Develop emission inventories.
3. Provide air planning support to water and transportation planning agencies.

CALIFORNIA NON-ATTAINMENT AREAS

PROBLEM

Oxidant	<p>Gross problem in South Coast.</p> <p>Moderate problem in other metropolitan areas.</p> <p>Moderate problem in Central Valley.</p>
Carbon Monoxide	<p>Gross areawide problem in Los Angeles metropolitan area.</p> <p>Localized problems in other metropolitan areas and the Central Valley.</p>
Particulate Matter	<p>Slight-moderate problem in four AQCR's.</p> <p>Gross problem in four AQCR's.</p>
SO ₂	<p>No present problem [but natural gas curtailment may cause violations].</p>
NOx	<p>Significant problem in Los Angeles metropolitan area.</p>

STRATEGY

<u>Strategy</u>	<u>Ox</u>	<u>CO</u>	<u>PM</u>	<u>SO₂</u>	<u>NOx</u>
Reassess pollutant sources/causes	X		X		X
Reassess control strategy	X	X	X	X	
Ensure compliance with existing regulations	X		X		X
Integrate air quality programs with other planning programs	X	X			X
Long-term planning and implementation by State and local agencies	X	X	X	X	X

ACTIVITIES SUPPORTING STRATEGIES

<u>Strategy</u>	<u>Principle Activities</u>	<u>Additional Activities</u>
Reassess pollutant sources	Emission inventory development	Quality assurance Special monitoring Source Surveillance
Reassess control strategy	SIP analysis and revisions	
Ensure compliance	Compliance Verification	New Source Review
Integrate air quality programs/long-term planning	AQMP; EIS	I/M Air/Energy coordination 201 A/W 208 A/W Air/Transportation

ROLES

- | | |
|-------|--|
| EPA | <ol style="list-style-type: none">1. Support State and local programs to maximum extent possible, maintaining a monitoring or overview role.2. Provide technical and R & D assistance.3. Continue to act as required by statute in those areas where state and local agencies have not assumed responsibility. |
| STATE | <ol style="list-style-type: none">1. Overview stationary and mobile source emission control programs.2. Initiate state legislation.3. Revise SIP. |
| LOCAL | <ol style="list-style-type: none">1. Perform basic first line of stationary source control and compliance determination.2. Assume responsibilities for programs such as vapor recovery hydrocarbon controls, inventory refinement, and long-term planning.3. Maintain accurate current data base. |

CALIFORNIA ATTAINMENT AREAS

STATUS

Ten AQCR's are in attainment for one or more pollutant.

STRATEGY

<u>Strategy</u>	<u>Ox</u>	<u>CO</u>	<u>PM</u>	<u>SO₂</u>	<u>NOx</u>
Ensure compliance with existing regulations	X	X	X	X	X
Integrate air quality programs with other planning programs	X	X	X	X	X
Long-term planning and implementation by State and local agencies	X	X	X	X	X

ACTIVITIES SUPPORTING STRATEGIES

<u>Strategy</u>	<u>Principle Activities</u>	<u>Additional Activities</u>
Ensure compliance	Compliance verification	New Source Review NSPS
Integrate air quality programs/long-term planning	Prevention Significant Deterioration	Air/Energy Coordination 201 A/W 208 A/W EIS Review

ROLES

EPA	<ol style="list-style-type: none"> 1. Maintain low profile in observing State/local programs. 2. Support State/local programs through R&D, contracts or program grant if indicated. 3. Support local programs through comments on Federal actions through EIS review.
State	<ol style="list-style-type: none"> 1. Overview local program activities. 2. Provide technical assistance. 3. Support local basic program through subvention. 4. Initiate necessary legislation. 5. Assume enforcement against non-complying sources in absence of effective local action.
Local	<ol style="list-style-type: none"> 1. Has primary responsibility for control of stationary sources, monitoring and reporting to State. * 2. Enforces against non-complying sources. 3. Maintain accurate and current data base.

* May object to reporting on minor sources when no violations are present, attributable to such sources.

GUAM

PROBLEM

Particulate
Matter - Slight localized problem

Sulfur
Dioxide - Moderate localized problem

STRATEGY

	PM	SO ₂
Reassess pollutant source/causes.		
Reassess control strategy and revise SIP.	X	X
Ensure compliance with existing regulations.	X	
Integration of air quality planning with other programs.		
Long-term planning and implementation by State and local agencies		

ACTIVITIES SUPPORTING STRATEGY

STRATEGY

PRINCIPLE ACTIVITIES

Reassess pollutant sources	
Reassess control strategy	SIP revision
Ensure compliance	Compliance verification
Integrate air quality programs/long term planning	EIS

ROLES

EPA 1. Support State compliance verification program with minimal overview.

STATE 1. Perform compliance verification.
2. Conduct ambient monitoring.
3. Revise SIP for PM and SO₂.

HAWAII

PROBLEM

Particulate
Matter - Slight problem throughout State

Sulfur - Gross problem near two power plants

Carbon
Monoxide - Slight localized problem in Honolulu

STRATEGY

	TSP	SO ₂	CO
Reassess pollutant source/causes.			
Reassess control strategy and revise SIP.		X	
Ensure compliance with existing regulations.	X		
Integration of air quality planning with other planning programs.			X
Long-term planning and implementation by State and local agencies.			X

ACTIVITIES SUPPORTING STRATEGY

<u>STRATEGY</u>	<u>PRINCIPLE ACTIVITY</u>	<u>ADDITIONAL ACTIVITIES</u>
Reassess pollutant sources	Ambient Monitoring	
Reassess control strategies	SIP Revision (SO ₂ regulations)	Ambient Monitoring
Compliance	Compliance verification	
Integration air program/long term planning	208 (upcoming FY-77) EIS	

ROLES

EPA 1. Support State compliance verification program with minimal overview.

STATE 1. Perform compliance verification.
2. Conduct ambient monitoring.
2. Promulgate final power plant SO₂ regulations

PROBLEM

Particulate

- Matter - Moderate problem throughout State
- Sulfur Dioxide - Gross problem in vicinity of smelter
- Carbon Monoxide - Moderate problem in Reno and Las Vegas; Seasonally near alert in Las Vegas.
- Oxidant - Moderate problem in Las Vegas; decreasing for unknown reasons.

STRATEGY

	<u>SO₂</u>	<u>PM</u>	<u>CO</u>	<u>Ox</u>
Reassess pollutant source/causes.				.X
Reassess control strategy.	X	X		X
Ensure compliance with existing regulations.	X	X		
Integration of air quality programs with other planning programs.			X	X
Long-term planning and implementation by State and local agencies.		X	X	X

ACTIVITIES SUPPORTING STRATEGY

<u>STRATEGY</u>	<u>PRINCIPLE ACTIVITY</u>	<u>ADDITIONAL ACTIVITIES</u>
Reassess pollutant sources	Quality Assurance	Special Ox study
Reassess control strategies	SIP analysis and revision	Vapor recovery
Compliance	Compliance verification	
Integration air program/long term planning	Air/Transportation; AQMP A/W 208	A/W 201 EIS; I/M

ROLES

- EPA
1. Support local efforts to develop and maintain programs, maintaining minimal overview.
 2. Support State compliance verification program with 10% overview and audit. No overview to locals.
 3. Act in statutorily required capacity only when efforts to engage State/local action exhausted.
 4. Manage special Ox study including audit.
 5. IPA/State assignee.
- STATE
1. Operate ambient monitoring and stationary source control/compliance verification and enforcement programs.
 2. Revise SIP for particulate matter and SO₂.
 3. Promote needed legislation.
- LOCAL
1. Operate first line ambient monitoring and stationary source/compliance verification and enforcement programs.
 2. Revise SIP for oxidant.
 3. Provide air planning support to water and transportation planning agencies.
 4. Maintain accurate and current data base.

IV. AIR QUALITY CONTROL REGION (AQCR) SUMMARIES

AQCR #12 ARIZONA SOUTHERN BORDER

PROBLEM:	Moderate PM Gross SO ₂	
GOALS:	Long-term	Maintain NAAQS Prevent Significant Deterioration
	Short-term	Define PM Problem Stationary Source Compliance Attain SO ₂ and PM Standards
PROGRAMS:	Long-term	NSR
	Short-term	SIP Revision-Isolated Point Sources (SO ₂ and PM) Emission Inventory (PM) Compliance Verification Emission inventory Data Processing Quality Assurance EPA Compliance Verification

AQCR #13 - ARIZONA CLARK - MOHAVE

PROBLEM:	Slight PM Moderate O _x	
GOALS:	Long-term	Attain O _x and PM Standards Define PM problem
	Short-term	Define O _x problem
PROGRAMS:	Long-term	Emission Inventory (PM & HC) SIP Revision (O _x & PM) Vapor Recovery (if needed)
	Short-term	Quality Assurance (O _x) Compliance Verification (PM) EPA Compliance Verification

AQCR #14 - ARIZONA FOUR CORNERS

PROBLEM: Slight PM

GOALS: Long-term Maintain Standards
Prevent Significant Deterioration

Short-term Delegate NSR-PSD
Reclassify Pristine Areas to Class I

PROGRAMS: Long-term NSR
Significant Deterioration
Quality Assurance
Compliance Verification

Short-term Compliance Verification (PM, SO₂)
SIP Revision - Isolated Point
Source (Navajo Power Plant)
NSR/NSPS (SO₂, PM)
Significant Deterioration
Indian Land Jurisdiction

AQCR #15 - ARIZONA PHOENIX - TUCSON

PROBLEM:	Moderate CO Moderate O _x Moderate PM Gross SO ₂	
GOALS:	Long-term	Maintain SO ₂ Standards Attain PM, CO, and O _x Standards
	Short-term	Attain SO ₂ Standards Implement I/M Define O _x and PM Problems
PROGRAMS:	Long-term	AQMP NSR Vapor Recovery (if needed) Air Energy Coordination Quality Assurance In Stack Monitoring
	Short-term	SIP Revision (CO/O _x) and Isolated Point Sources (SO ₂ , PM) AQMP Emission Inventory Development (PM & HC) S/L Compliance Verification (PM, SO ₂) Emergency Episodes (CO, SO ₂) I/M (CO, O _x) Data Processing Quality Assurance NSR Fuel Additives 201/208/Transportation Consistency EPA Compliance Verification (PM, O _x)

AQCR #23 - GREAT BASIN VALLEY

PROBLEM:

None (Part-time monitor for PM shows AGM 40% of Standard.)

GOALS:

Long Term - Avert development of air quality problems.

Short Term - Work toward PSD classification system or
State equivalent.

PROGRAMS: (All long-term)

PSD

New Source Review (19 NSD categories)

State/local Compliance Verification

AQCR #24 - LOS ANGELES METROPOLITAN

PROBLEM:

O_x - Gross
CO - Gross (8 hr standard)
PM - Slight
NO₂ - Moderate (AAM)

GOALS:

Long Term:

Eliminate technical disagreement on all issues
Improve data base
Establish planning process
Establish I&M
BACT controls on sources of HC
Net Annual Decrease in HC, CO, NO₂ and PM
Maintain SO₂ standard

Short Term:

Implement HC controls (existing)
Solve reactivity issue and source testing issue
Begin improvement of data base
Tighten Surveillance/Enf. Stationary Sources
Institutional relationships for AMP
Monitor growth-related projects

PROGRAMS:

Short Term:

Vapor recovery
*Other organics
*I&M
*Emissions Inventory (Development and Data Handling)
*AQMP
*State/local Compliance Verification
Fuel Additives
Quality Assurance
Air/201, Air/208, Air/Energy Coordination*, Air/
Transportation*
Coordination
EIS Review
NSR
In-Stack monitoring
EPA Compliance Verification
*EPA Enforcement (if needed)
Emergency Episodes

Long Term programs marked by *

AQCR #25 NORTH CENTRAL COAST

PROBLEM:

Moderate Ox
Slight PM

GOALS:

Define air quality problem for Ox, PM and SO₂.
Improve validity of data.
Plan for attainment/maintenance.

PROGRAMS:

Long-term	PSD
Short-term	Emission Inventory Quality Assurance (Ox, PM, SO ₂) Other organics A/W 208 Air/energy coordination State/local compliance verification

AOCR #26 - NORTH COAST

PROBLEM:

Slight particulate

GOAL:

Attainment/Preservation

PROGRAMS:

Coordination with

Forest Service

RWQCB

R&D to develop alternate uses of redwood bark and waste.

EPA surveillance/compliance verification, low priority.

State/local compliance verification.

Prevention of Significant Deterioration

AQCR #27 - NORTHEAST PLATEAU

PROBLEM:

Slight particulate matter

GOAL:

Attainment/Preservation

PROGRAMS:

State/local compliance verification
Coordination with Forest Service
Air Conservation Areas/PSD

AQCR #28 - SACRAMENTO VALLEY

PROBLEM:

Moderate Ox
Moderate CO
Slight PM

GOALS:

Plan for attainment/maintenance.
Implement technological controls.
Define extent of CO problem.

PROGRAMS:

Long-term	I/M
	AQMP
Short-term	Vapor recovery
	Other organics
	Quality Assurance
	State/local Compliance Verification
	NSR
	EIS
	Air/Transportation Coordination
	Fuel Additives
	EPA Compliance Verification

LAKE TAHOE PORTION

PROBLEM:

Suspected Ox and CO violations.

GOALS:

Define problem.
Plan for attainment/maintenance/presentation.

PROGRAMS:

Intergovernmental executive liaison.
Designation as interstate AQCR.

PROBLEM:

Ox - Gross
PM - Moderate
CO - Slight

GOALS:

Long Term:

Maintain existing planning process
Improve emissions data base
Identify magnitude of L.A. contribution to O_x problem.*
I&M
Modify HC regulations to increase level of control
Annual net decrease in HC, CO, and PM
Do whatever is possible on Mexican sources
Achieve NAAQS for CO, Maintain SO₂

*SDAPCD wants to start this in FY-77.

Short Term:

Implement existing HC regulations. Reexamine HC controls.
Complete RAQS-II (AQMP)
Revise emission data management system
Tighten surveillance on existing sources of HC
Monitor growth related projects
Determine cause of PM violation

PROGRAMS:

Short Term:

Vapor Recovery
Other organics
*State/local Compliance Verification
EPA Compliance Verification
EPA Enforcement (if needed)
*I&M
Fuel Additive
Instack Monitoring
*AQMP
*Air/208
*Emission Inventory Development
*Emission Inventory (Data Management)
Air/201
*Air/Transportation
*Air/Energy Coordination
*EIS Review
A/M Quality Assurance

AQCR #30 - SAN FRANCISCO BAY AREA

PROBLEM;

Photochemical oxidant - moderate, pervasive
Carbon monoxide - slight localized
Particulate matter - marginal attainment
Sulfur dioxide - may become a problem

GOALS:

Media-wide environmental planning process with appropriate
institutions for implementation.
Refined inventory.
Implement proven technological controls.

PROGRAMS:

Long-term	AQMP I/M
Short-term	Vapor recovery Other organics State/local Compliance verification EPA Compliance verification 201 A/W 208 A/W EIS Review Air Energy Coordination In-stack monitoring Transportation coordination Fuel Additives Quality Assurance Emissions Inventory Dev. AQMP NSR

AQCR #31 -- SAN JOAQUIN VALLEY

PROBLEM:

Gross Ox
Slight PM
Moderate CO

GOALS:

Plan for attainment/implementation.
Improve air quality pending AQMP.

PROGRAMS

Long-term	AQMP PSD
Short-term	Vapor recovery Other Organics State/local compliance verification Quality Assurance (CO) EPA compliance verification EIS A/W 201 A/W 208 Air/Transportation coordination. Fuel additives Emissions Inventory Development AQMP

AQCR #32 SOUTH CENTRAL COASTAL

PROBLEM:

O_x - moderate

GOALS:

Long Term - Monitor and improve definition of oxidant problem. Watch Morro Bay Power Plant.

Short Term - Confirm O_x data. Improve HC inventory.

PROGRAMS:

Short Term:

- NSR (until delegated)
- Quality Assurance
- *Emission Inventory Development (HC)
- *State/local Compliance Verification
- *BSD
- EIS's and 201
- *Air/Energy Coordination for Morro Bay Power Plant

Long Term programs marked by *

AQCR #33 SOUTHEAST DESERT

PROBLEM:

Ox - moderate.

PM - gross.

GOALS:

Long-term - Mitigate the effect of growth locally and seek solution via Los Angeles and San Diego. Identify the role of point sources in the PM problem.

Short-term - Maintain low profile surveillance of growth in East Los Angeles County and Coachella Valley.

PROGRAMS: (All long-term)

AQMP/208 (Coachella only)

201 Coordination

EIS Review

Air monitoring for trends

State/Local Compliance Verification

NEVADA AQCR #013 CLARK-MOHAVE

PROBLEM:

Moderate CO
Moderate TSP
Moderate Ox

GOALS:

Long-term Implement and enforce CO, Ox, and
TSP control programs.

Short-term Analyze Ox trend.
Develop Ox control program.
Improve CO control program.

PROGRAMS:

Long-term Compliance Verification
I/M
Other Organics
Vapor Recovery, Stage II
AQMP/208

Short-term Vapor Recovery, Stage I
Ox Ambient Monitoring/Quality Assurance
AQMP/208/Transportation planning
Compliance Verification
Enforcement for non-compliance
In-stack Monitoring
ISR
I/M

AQCR #147 - NEVADA INTRASTATE

PROBLEM:

Moderate TSP

Moderate SO₂

GOALS:

Long-term

Prevent deterioration of air quality.

Short-term

Meet SO₂ standard.

Implement existing regulations.

PROGRAMS:

Long-term

PSD: delegation of NSR and
reclassification of areas.

Compliance verification

Non-compliance enforcement

Short-term

Compliance verification

Enforcement

Ambient Monitoring

Instack Monitoring

ISR

Isolated Point Source

PROBLEM:

Moderate CO
Moderate TSP

GOALS:

Long-term

Maintain O_x standard.
Attain CO standard.
Maintain source compliance.

Short-term

Correct deficient CO monitoring.
Launch long-term air planning effort.
Ensure quality assurance of O_x monitoring.

PROGRAMS:

Long-term

AQMP/Transportation planning/208
Compliance Verification

Short-term

AQMP/208/Transportation planning
Ambient Monitoring/Quality Assurance
ISR
201/EIS
Instack Monitoring
Compliance Verification

AQCR #60 - HAWAII

PROBLEM: Slight CO
Slight TSP
Gross SO₂

GOALS: Long-Term: Prevent stationary source violations
Develop CO control program

Short-Term: Implement existing source regs
Promulgate SO₂ emission regs for
power plants
Define CO problem

PROGRAMS: Long-Term: Compliance verification; AQMA

Short-Term: Ambient Monitoring (CO, SO₂)
SIP Revision (SO₂ emission regs)
Air/Water (208) integration
Compliance Verification
Non Compliance Enforcement

AQCR #246 - GUAM

PROBLEM: Slight PM
Moderate SO₂

GOALS: Long-term Maintain NAAQS SO₂, NO_x, CO, O_x
Eliminate SO₂ Hot Spots
Short-term Verify SO₂ Standard Attainment
Stationary Source Compliance (SO₂)

PROGRAMS Long-term Compliance Verification
NSR
In Stack Monitoring
Short-term SIP Revision (PM and SO₂)
-Isolated Point Sources
Compliance Verification
Quality Assurance
Emergency Episodes (SO₂)
NSR
Air/Energy Coordination
208 Coordination
Ambient Monitoring/Quality Assurance

V. PROGRAMS

OMP

/W COORDINATION - 201

/W COORDINATION - 208

AIR/TRANSPORTATION COORDINATION

AIR/ENERGY

SIS REVIEW

PREVENTION OF SIGNIFICANT DETERIORATION

INDIRECT SOURCE REVIEW (NEVADA ONLY)

NEW SOURCE REVIEW

NSPS

NESHAPS

NON-CRITERIA POLLUTANTS (111[d])

EPA VERIFICATION COMPLIANCE

STATE/LOCAL VERIFICATION COMPLIANCE

EPA ENFORCEMENT

EMERGENCY EPISODE

VAPOR RECOVERY

OTHER ORGANICS

INSPECTION/MAINTENANCE

FUEL ADDITIVE

INSTACK MONITORING

SPECIAL AIR MONITORING

EMISSIONS INVENTORY DEVELOPMENT

EMISSIONS INVENTORY DATA PROCESSING

A/M QUALITY ASSURANCE

A/M DATA PROCESSING

ISOLATED POINT SOURCES

Air Quality Maintenance Planning

DESCRIPTION:

AQMP is designed to foster local institutional development to address long range air quality standards attainment and maintenance. Within two years a plan to accomplish this goal is to be produced and appropriate implementing institution is to be selected/formed.

GOALS:

Long term attainment and maintenance of NAAQS.

SPECIAL ATTRIBUTES:

Local plan development & public participation.

CURRENT STATUS:

California: varied degree of success;
Nevada: very slow; Arizona: by contract, progressing.

STRATEGY:

California: work through ARB in developing local task forces to do AQMP.
Others: Develop local air constituency, support through contracts.

CONSTRAINTS:

Willingness of States and local groups.

TACTICS:

1. Program grant: direct and pass-through.
2. Staff and executive liaison.
3. Contract support - B.O.A.

APPLICABILITY:

All designated AQMAS (9 in California, 2 in Nevada, 2 in Arizona).

RELATED PROGRAMS:

Refined inventory, basic programs of APCDs, transportation coordination, Air-Water Coordination (201 and 208), EIS review, Air-Energy Coordination.

OTHER RELEVANT FACTORS:

EPA grant conditions on FWPCA §208 grants require consistency with air planning, in many areas the planning boundaries are very similar to AQMAS and integration of the two plans is possible.

Air/Water Coordination §201

DESCRIPTION:

Provide consistency between wastewater treatment facility construction grants and the air programs.

GOALS:

EPA construction grants consistent with SIP and AQMP.

SPECIAL ATTRIBUTES:

An internal EPA program in terms of statutory responsibility.

CURRENT STATUS:

Air/Water M.O.U. to provide air comments on significant 201 projects.

STRATEGY:

1. Develop state expertise so that ARB can assume role at State level.
2. Develop local expertise through AQMP/208 so that decisions are made locally recognizing the issues involved.

CONSTRAINTS:

1. Ability or perception of State.
2. Availability of local agencies with authority and ability.

TACTICS:

1. Support AQMP/208 integration to develop local expertise.
2. Inter-governmental liaison and education of State to assume role of mediator.

APPLICABILITY:

Regionwide with major emphasis in AQMAS.

RELATED PROGRAMS:

AQMP/AW Coordination §208

OTHER RELEVANT FACTORS:

'Consistency' should be defined as a "zero net increase in emissions" to be compatible with NSR policy.

Air/Water Coordination §208

DESCRIPTION:

Provide guidance to 208 agencies so that the air quality assessment is adequate and so that it is consistent with AQMP and the SIP generally.

GOALS:

Develop local capability to make decisions where air/water conflicts arise.

SPECIAL ATTRIBUTES:

A new opportunity to improve local awareness of this issue.

CURRENT STATUS:

Varied progress, depending on the status of AQMP and 208.

STRATEGY:

Develop local expertise in air/water interrelationships and analysis.

CONSTRAINTS:

Willingness of local agencies to accept this responsibility, the willingness of State air and water agencies to assist.

TACTICS:

Intergovernmental and executive liaison. Program grant to State agency.

APPLICABILITY:

208 areas.

RELATED PROGRAMS:

AQMP, A/W 201, EIS review

OTHER RELEVANT FACTORS:

AIR TRANSPORTATION COORDINATION

DESCRIPTION:

Coordination with transportation agencies in order to insure adequate consideration of the air quality implication of their projects.

GOALS:

Transportation plans and projects consistent with the SIP.

SPECIAL ATTRIBUTES:

CURRENT STATUS:

Moderate participation in the Intermodal Planning Group and compliance with Federal Aid Highway Act 109 j.

STRATEGY:

1. Impact D. O. T. planning and projects through IPG and 109j consistency reviews.
2. Prepare AQMP groups to raise similar concern at local level to resolve issues at earliest opportunity.

CONSTRAINTS:

TACTICS:

1. Continue participation in IPG and 109j review.
2. Intergovernmental staff and executive liaison.
- 3.

APPLICABILITY:

Primary: interest in AQMA's
Secondary: regionwide

RELATED PROGRAMS:

AQMP, EIS review

OTHER RELEVANT FACTORS:

Air/Energy

DESCRIPTION:

Evaluate the impact on air quality of the potential increase in SO₂ emissions through fuel switching; and develop additional control regulations as needed.

GOALS:

Achieve a greater control of SO₂ emissions in critical AQCR's with a significant air pollution potential.

SPECIAL ATTRIBUTES:

CURRENT STATUS:

New program - Existing regulations may be inadequate.

STRATEGY:

Encourage and provide assistance for the local adoption of approvable regulations.

CONSTRAINTS:

More stringent regulations may not be locally acceptable because of energy needs. Availability of low sulfur oil is limited.

TACTICS:

Support ARB study to quantify potential increase in SO₂ emissions and their impact on air quality. Provide technical assistance for model regulation develop by ARB. Provide grant support for adoption of model regulation by APCD's.

APPLICABILITY:

Los Angeles, Sacramento, San Joaquin, Bay Area, San Diego North Central Coast (Long Term).

RELATED PROGRAMS:

New source review, emission inventory development, EPA compliance verification.

OTHER RELEVANT FACTORS:

Undefined energy policy
Extent of natural gas curtailments

EIS REVIEW

DESCRIPTION:

Review and comment on the air quality impact of all Federal projects on which NEPA statements are submitted to EPA.

GOALS:

Insure that the projects direct or indirect impact on air quality is taken into consideration and any adverse impacts are minimized.

SPECIAL ATTRIBUTES:

Allows EPA a window into decisions which can have a considerable effect on future air quality.

CURRENT STATUS:

EPA comments on all projects. Owing to resource and policy limitations, many comments are ineffective.

STRATEGY:

Focus EPA reviews on those projects with the most significant potential impact, and on those geographic areas with the worst problems. Adopt review policy for critical non-attainment areas consistent with new source review; i.e., no net increase in emissions.

CONSTRAINTS:

EPA is required to review all projects submitted to the agency (although specific air quality comments are not required in each case). Many Federal agencies object to critical EPA comments.

TACTICS:

In-house review with the time spent on each project made roughly proportional to its priority.

APPLICABILITY:

Region-wide but particularly important in urban "growth areas" with significant oxidant problems.

RELATED PROGRAMS:

Air/Energy, Air/Transportation

PREVENTION OF SIGNIFICANT DETERIORATION

DESCRIPTION:

Program designed to protect air quality in areas where air is cleaner than NAAQS for SO₂ and TSP only; growth of SO₂ and TSP emissions can be limited by controlling construction of 19 specific source types through new source review and reclassifying areas not now exceeding NAAQS according to amount of change from current air quality considered significant for each specific area.

GOALS:

To protect air quality in pristine areas and prevent degradation of them.

SPECIAL ATTRIBUTES:

EPA has no authority to reclassify areas; only States, Federal Land Managers, and Indian governing bodies can reclassify.

CURRENT STATUS:

No delegations have been made. Education to AZ, CA and NV with regard to EPA regulations and guidelines completed.

STRATEGY:

To develop equivalent State regulations and guidelines. To perform new source reviews in house until program delegated. To encourage FLM's and IGB's to act on authorities granted.

CONSTRAINTS:

CAA Amendments may "kill" PSD. CA regulations likely to be similar, but not strictly equivalent to EPA regulations.

TACTICS:

Intergovernmental coordination with large Indian nations. Inhouse pre-permit conferences. Inhouse review of SIP revisions.

APPLICABILITY:

All States, especially CA and AZ due to their interest. Navajo and Hopi nations, Federal lands in pristine areas.

RELATED PROGRAMS:

New Source Review
NSPS

OTHER RELEVANT FACTORS:

INDIRECT SOURCE REVIEW (NV)

DESCRIPTION:

Review indirect sources such as shopping centers, hotel complexes, roads, airports, etc., to be sure that these sources do not create violations of NAAQS.

GOALS:

Prevent build-up of CO hot spots in areas with a high level of public exposure.

SPECIAL ATTRIBUTES:

Helps to insert air quality considerations in planning decisions in areas with low environmental awareness.

CURRENT STATUS:

Low level State/local program

STRATEGY:

Unless EPA acts, this program will self-destruct in January, 1977. In the interim, fulfill EPA's moral commitment by providing support for State/local activity.

CONSTRAINTS:

TACTICS:

Provide grant funding to support those agencies technically capable of performing the review. (Should total no more than \$10,000.)

APPLICABILITY:

Nevada only, primarily Tahoe Basin, Reno and Las Vegas.

RELATED PROGRAMS:

OTHER RELEVANT FACTORS:

NEW SOURCE REVIEW

DESCRIPTION:

Review and issue permit for the construction of new sources or the modification of existing sources.

GOALS:

Ensure that new or modified sources do not cause violations of NAAQS, interfere with the applicable control strategy for attainment, or violate an allowable increment of degradation in "clean air" areas.

SPECIAL ATTRIBUTES:

CURRENT STATUS:

EPA has the legal authority to issue permits for routine review in much of California and for the 19 categories of sources covered by PSD in all states. In other cases it is a state/local program.

STRATEGY:

Delegate authority to state or local agencies ASAP. In CA, ensure agencies receiving delegation are required to perform effective reviews. For PSD, seek joint review with states and local agencies until the program is delegated.

CONSTRAINTS:

Considerable resistance to new ARB model regulations which require an effective review. The procedures for delegation of review authority under PSD are very cumbersome. Many states/locals do not want to bother to seek it.

TACTICS:

Enforce existing grant agreement with ARB and many local agencies which required delegation in California during FY-80. Assist ARB to develop review guidelines to assist locals in conducting effective reviews.

APPLICABILITY:

Regionwide

RELATED PROGRAMS:

Air/Energy Coordination (S. California), Emission Inventory Development.

OTHER RELEVANT FACTORS:

NEW SOURCE PERFORMANCE STANDARDS

DESCRIPTION:

Program which requires installation of BACT on certain categories of new or modified sources.

GOALS:

Promote application of available control technology.
Minimize emission of various criteria and non-criteria pollutants.

SPECIAL ATTRIBUTES:

CURRENT STATUS:

The Region is attempting, with limited success, to delegate program to the States and locals, through the grant mechanism.

STRATEGY:

Delegate to those agencies who seek delegation, but phase down the resources committed to delegation after FY-76.

CONSTRAINTS:

Delegation procedures are cumbersome. Many State/locals do not want delegation, given the effort required.

TACTICS:

In-house review until delegation.

APPLICABILITY:

Regionwide.

RELATED PROGRAMS:

NESHAPS (delegation procedures)

OTHER RELEVANT FACTORS:

No permit involved.
More categories being added each year.

OTHER RELEVANT FACTORS:

ARB and major local agencies in California feel this program is a long-term necessity.

NESHAPS

DESCRIPTION:

Apply RACT to sources of hazardous air pollutants.

GOALS:

Minimize emission of toxic (non-criteria) pollutants.

SPECIAL ATTRIBUTES:

Can be directly related to public health.

CURRENT STATUS:

Ongoing program implemented by both local/State agencies and EPA, depending on the status of delegation. Only 4 agencies have received formal delegation.

STRATEGY:

Delegate review authority to any agencies who seek it.
Continue EPA oversight where program not done by States or locals.

CONSTRAINTS:

Many agencies do not desire delegation. Efforts to delegate under the grant have failed.

TACTICS:

In-house effort.

APPLICABILITY:

RELATED PROGRAMS:

NSPS (delegation procedures)

OTHER RELEVANT FACTORS:

Only 4 source categories covered - Mercury, Beryllium, Asbestos and Vinyl Chlorides (proposed).

111(d) Non-criteria Pollutants

DESCRIPTION:

Order SIP revision to require certain existing sources of non-criteria pollutants to apply RACT.

GOALS:

Reduce emissions of specified non-criteria pollutants.

SPECIAL ATTRIBUTES:

CURRENT STATUS:

New program with no current Regional involvement. It will begin very slowly with one source category covered in FY 77.

STRATEGY:

Devote no resources to this program until HQ acts, probably in mid FY 77. There after, encourage state action.

CONSTRAINTS:

TACTICS:

Notify states of pending requirement.

APPLICABILITY:

Regionwide

RELATED PROGRAMS:

OTHER RELEVANT FACTORS:

Not related to violations of NAAQS.

EPA Compliance Verification

DESCRIPTION:

Direct EPA inspections of sources: (1) as an overview of state/local compliance verification; (2) in support of EPA enforcement actions; (3) in support of local agencies (particularly for Federal Facilities); (4) as part of an audit of an agency's permit and inspection program.

GOALS:

To determine the compliance status of the source inspected. To encourage thorough, accurate inspections by state/local agencies. To improve the capability of state/local agencies.

SPECIAL ATTRIBUTES:

Provides EPA with first-hand information.

CURRENT STATUS:

Growing program. 5 man-years in-house. Conduct 250 inspections in-house; 20-40 source test observations. Other inspections by contract and NEIC (Denver) total 150.

STRATEGY:

Concentrate on major sources which contribute to non-attainment in areas with high populations at risk. Increase use of program audits to assist state/local agencies to improve their programs. Handle Federal facilities with the same priority scheme.

CONSTRAINTS:

HQ pressure to treat all unknowns the same regardless of their potential contribution to air quality problems. HQ pressure to inspect large numbers of Federal facilities despite their importance.

TACTICS:

Largely an in-house program. HQ contract funds and NEIC also used.

APPLICABILITY:

Primarily urban AQCR's with significant problems.

RELATED PROGRAMS:

State/local Compliance Verification, EPA Enforcement, Other Organics, NESHAPS

OTHER RELEVANT FACTORS:

State/local Compliance Verification

DESCRIPTION:

Annual verification of the compliance status of point sources by state or local agencies.

GOALS:

Ensure that sources are in compliance with local rules there by reducing emissions and improving air quality.

SPECIAL ATTRIBUTES:

CURRENT STATUS:

Two year old rapidly expanding program with established reporting mechanism in all states. To date, the program has concentrated on accounting for all sources greater than 100 tons (potential emissions).

STRATEGY:

Encourage State/local verification. Concentrate on major point sources which emit pollutants which contribute to the non-attainment of NAAQS. With one exception, do not require reporting on minor sources.

CONSTRAINTS:

State/local resentment of reporting requirement. HQ push to expand program to include minor sources. Competing resources at the local level, particularly for vapor recovery.

TACTICS:

Use grant to require reports on all major point sources. Use grant to insure adequate verification of sources of critical pollutants in selected non-attainment areas. Use reports and in-the-field EPA overview to insure annual verification of all pollutants.

APPLICABILITY:

Regionwide for major sources, minor sources only in the LA metro AQCR (and only for HC).

RELATED PROGRAMS:

EPA Compliance Verification, EPA Enforcement

OTHER RELEVANT FACTORS:

EPA ENFORCEMENT

DESCRIPTION:

Direct EPA enforcement action against non-complying sources.

GOALS:

Provide incentive for local/state agencies to run fair but firm enforcement programs.
Bring individual sources into compliance.

SPECIAL ATTRIBUTES:

CURRENT STATUS:

Program operates with a quota of EPA enforcement actions.

STRATEGY:

Use this program to apply pressure to Hearing Boards and agencies with poor enforcement records. Assist those agencies operating under political constraints by taking action. Yield to effective local action whenever possible. Go after problem pollutants.

CONSTRAINTS:

Direct Federal action is nearly always resented by local elected officials.

TACTICS:

Basically an in-house program that involves extensive coordination with states/locals. Local enforcement action is mandated by the Basic Program portion of the grant requirements.

APPLICABILITY:

Region wide-priority given to areas under the jurisdiction of bad enforcement agencies and sources of problem pollutants.

RELATED PROGRAMS:

EPA Compliance Verification. Isolated Point Sources

OTHER RELEVANT FACTORS:

EMERGENCY EPISODES

DESCRIPTION:

Take coordinated areawide control measures to predict and to reduce pollutant concentrations which pose an immediate danger to the public health.

GOALS:

Protect public health.

SPECIAL ATTRIBUTES:

Implementation results in direct reduction of emissions.

CURRENT STATUS:

California plan for Ox in Los Angeles faces litigation. Other areas have programs in place. EPA role diminishing.

STRATEGY:

Minimize EPA involvement. Episode programs are intended to be operated by local and/or State agencies.

CONSTRAINTS:

Litigation on L. A. EPA could be ordered to promulgate a plan of its own.

TACTICS:

Approve ARB plan for L. A. and take our chances in court.

APPLICABILITY:

Primarily L. A. (Ox), Phoenix and Las Vegas (CO) and Guam (SO₂).

RELATED PROGRAMS:

OTHER RELEVANT FACTORS:

Improvements in air quality has probably eliminated Stage 3 episodes. There will apparently be few, if any, Stage 2 episodes in Los Angeles.

Vapor Recovery

DESCRIPTION:

Bring about the installation of control equipment on tanks and vehicles involved in the transfer and marketing of gasoline. (Transfer to retailers is Phase I, Transfer to private vehicles Phase II)

GOALS:

Achieve expeditious control of gasoline vapors in areas with significant Ox problems.
Over 5 year period, increase the % of emissions controlled.

SPECIAL ATTRIBUTES:

Directly reduces a significantly large category of emissions of a problem pollutant. Comparatively cost effective.

CURRENT STATUS:

Phase I completed or nearing completion in California.
Phase II being implemented with technical and legal problems.
EPA regulations still legally in force despite existence of local regulations.

STRATEGY:

Support continued local agency implementation of local regulations including those requiring vapor balance systems.
Accept less than 90% control in the short run to achieve some control ASAP. Re-evaluate local rules in 2-3 years. Encourage adoption and implementation of Phase I in Las Vegas.

CONSTRAINTS:

Legal challenges (resistance) by oil companies. Slow certification of safety of control equipment. Outstanding technical issues related to the effectiveness of control systems.

TACTICS:

Encourage implementation of local regulations through grant support. Displace EPA regulations by approving local regulations ASAP. Do not enforce EPA regs in the interim. Use executive liaison to encourage ARB to adopt controls for small valley floor APCD's which have not acted. Use grant to require implementation in Las Vegas.

APPLICABILITY:

Los Angeles, Bay Area, Sacramento Valley, San Joaquin Valley, San Diego, Las Vegas.

RELATED PROGRAMS:

Other organics - Control of other types of fuels may use similar technology.

OTHER RELEVANT FACTORS:

Other Organics

DESCRIPTION:

Evaluate the effectiveness of the HC control regulations in selected AQCR's, quantify the extent of unregulated emissions and revise and/or develop additional regulations as needed.

GOALS:

Achieve a greater control of non-methane HC emissions in AQCR's with significant Ox attainment problem.

SPECIAL ATTRIBUTES:

CURRENT STATUS:

New Program - Existing regulations are inadequate.

STRATEGY:

Encourage and provide assistance for the local adoption of approvable regulations.

CONSTRAINTS:

Incomplete inventories of HC sources. Reactivity definition unresolved with Southern California APCD. Some APCD's may resist additional controls.

TACTICS:

Support ARB study to evaluate existing regulations, quantify emissions. Provide technical assistance for model regulation development by ARB. Provide grant support for adoption of model regulation by APCD's.

APPLICABILITY:

Los Angeles, Sacramento, San Joaquin, Bay Area, San Diego

RELATED PROGRAMS:

New Source Review, emission inventory development, EPA compliance verification.

OTHER RELEVANT FACTORS:

Inspection/Maintenance

DESCRIPTION:

Annual, mandatory inspection of all light duty vehicles to determine compliance with emissions limitations.

GOALS:

Insure the maximum effectiveness of vehicle control devices, thus reducing emissions of CO, HC and NO_x

SPECIAL ATTRIBUTES:

The program can support itself by charging no real inspection fees.

CURRENT STATUS:

Pilot program in California (LA area); limited to change of registration in NV (Las Vegas); and in danger of being scrapped in AZ (Phoenix-Tucson).

STRATEGY:

Encourage adoption of regulations and proliferation of programs to areas with automobile-related problems. (This is a 5-year strategy.)

CONSTRAINTS:

Effectiveness of program unquantified. EPA lacks legal authority to require implementation. Public and political opposition.

TACTICS:

Encourage adoption, etc, through executive liaison, and public relations.

APPLICABILITY:

Over 5 years - Phoenix-Tucson, L.A., Bay Area, San Diego Las Vegas and Reno.

RELATED PROGRAMS:

Federal Motor Vehicle Control Program (HQ activity).

OTHER RELEVANT FACTORS:

FUEL ADDITIVES

DESCRIPTION:

Inspection of gasoline retailers to check for the availability of non-leaded gasoline. Analyze gasoline samples for lead content.

GOALS:

Protect catalytic control devices on late model automobiles, Poisoned catalysts result in increased emission of NOx, CO and HC.

SPECIAL ATTRIBUTES:

Program also protects the consumer.

CURRENT STATUS:

EPA and contracted inspections. State handles program under contract in California. Number of inspections phasing down.

STRATEGY:

Continue phasing down the number of inspections and concentrate on major urban areas with significant oxidant or CO problems. If a very low violation rate occurs, phase out program.

CONSTRAINTS:

TACTICS:

Use HQ contract funds.

APPLICABILITY:

Urban areas with significant oxidant or CO problems.

RELATED PROGRAMS:

Federal Motor Vehicle Control Program (HQ)

OTHER RELEVANT FACTORS:

IN STACK MONITORING

DESCRIPTION:

Install continuous monitors in the stacks of certain types of sources.

GOALS:

Improve quality of emission data and provide continuous enforcement oversight.

SPECIAL ATTRIBUTES:

Major step forward in source monitoring.

CURRENT STATUS:

EPA regulations proposed on 4 source categories. Similar legislation enacted in California and proposed in Nevada.

STRATEGY:

Yield to State requirements whenever possible, particularly in California. Press implementation areas with known or pending problems first.

CONSTRAINTS:

Applies to small number of sources. Covers only SOx, NOx, and PM.

TACTICS:

Executive liaison and intergovernmental coordination to get State programs enacted and implemented.

APPLICABILITY:

Primarily California, but also relevant in other States in the Region.

RELATED PROGRAMS:

Air/Energy Coordination, EPA Enforcement.

OTHER RELEVANT FACTORS:

Special Air Monitoring

DESCRIPTION:

Special monitoring done to improve knowledge of an apparent air quality problem or analysis of trends in air quality data.

GOALS:

Provide information needed to decide whether or not to develop and implement control strategies.

SPECIAL ATTRIBUTES:

CURRENT STATUS:

Commitment to SO₂ monitoring in Hawaii.

STRATEGY:

Very low level effort which should be coordinated with appropriate state or local agency.

CONSTRAINTS:

TACTICS:

Coordination with States and locals - some in-house work with selective contract support.

APPLICABILITY:

Hawaii (SO₂), California - Obtain SO₂ data in North Central Coast; Analyze trends in South East Desert.

RELATED PROGRAMS:

OTHER RELEVANT FACTORS:

This program responds to known data problems and cannot be effectively projected over a 5-year period.

Emission Inventory Development

DESCRIPTION:

Develop an accurate, relevant emission data base.

GOALS:

Define the cause of air quality problems so control strategies can be developed and analyzed.

SPECIAL ATTRIBUTES:

Good data is critical to an effective control strategy.

CURRENT STATUS:

Data base poor in many areas of the Region. Problems range from no inventory at all to lack of sufficient sophistication.

STRATEGY: (5 year)

In major urban areas, and in cooperation with State and local agencies, review and refine the data for problem pollutants as necessary to pinpoint targets for additional control. In selected non-urban areas, develop an inventory in sufficient detail to determine the cause of NAAQS violations.

CONSTRAINTS:

Emission data development is time consuming and resource intensive. Contractual efforts can easily be ineffective.

TACTICS:

Whenever possible, carry out joint Federal/State/local effort to insure that all parties buy into the results. Support with grant and (selectively) with contract funds. In some instances, perform in-house "quickie" evaluations to bring deficiencies into focus.

APPLICABILITY:

Regionwide with emphasis on AZ-NM So. Border (PM), Phoenix/Tucson (HC, PM) Los Angeles (HC), North Central Coast (HC), San Diego (PM), San Francisco Bay (HC) and South Central Coast (HC).

RELATED PROGRAMS:

Emission Inventory (Data Handling), AQMP, New Source Review, Air/Transportation, Air Energy, EIS, Other Organics.

OTHER RELEVANT FACTORS:

EMISSION INVENTORY (DATA HANDLING)

DESCRIPTION:

Development of a computerized system of handling large volumes of emission data where needed.

GOALS:

Make data accessible to those who need it, especially for modeling purposes. Standardize formats so trends, and control measures can be analyzed by ARB and EPA.

SPECIAL ATTRIBUTES:

Long term, resource intensive effort. Necessary for sophisticated modeling techniques.

CURRENT STATUS:

Essentially, a new program. Most emission data are not accessible for modeling. Data which are available are incomplete and/or inaccurate. ARB is beginning statewide data management system in FY-76.

STRATEGY:

5-year. Install software (EPA's EIS/P&R) where needed and convert existing emission data to the required format. Begin periodic updates in CA and continue them in other States via NEDS.

CONSTRAINTS:

Overall cost of program could approach \$1 million in CA and consume considerable manpower. Effective use of contractors, aside from software installation, is limited.

TACTICS:

Joint effort with ARB providing overall administrative direction and technical assistance, the local agency providing manpower, and EPA providing oversight, technical assistance and contract and grant support on a matching basis.

APPLICABILITY:

California, although Arizona is also installing the software system in FY-76.

RELATED PROGRAMS:

Emission Inventory Development, AQMP, New Source Review and other programs employing math modeling.

OTHER RELEVANT FACTORS:

There is a minority staff view that EIS review is still cost/effective without the "no net increase" policy.

Air Monitoring Quality Assurance

DESCRIPTION:

On site inspections of air monitoring stations and laboratories. Standardization of equipment operation and calibration procedures, and inter-laboratory sample exchanges.

GOALS:

The production of consistently accurate air quality data.

SPECIAL ATTRIBUTES:

A sense of the accuracy of data is a pre-requisite to any control strategy.

CURRENT STATUS:

EPA involvement very low level except for selected site visits and inter-laboratory cross checks. Some states are developing quality assurance programs for extension to locally operated networks.

STRATEGY:

Continue selected EPA site visits and network evaluations. Phase down EPA involvement as standardized operation and calibration procedures are implemented by state and local agencies.

CONSTRAINTS:

Wide variation in type of equipment operating in Region. EPA-HQ policy still unclear in some areas.

TACTICS:

In-house site visits in selected areas. Continued grant support for local agency implementation of statewide procedures.

APPLICABILITY:

Regionwide but need site visits to Phoenix/Tucson, AZ/NM South Border, Clark/Mohave (AZ), L.A., N. Central Coast, San Diego, So. Central Coast and Sacramento, In Nevada, Las Vegas and Reno.

RELATED PROGRAMS:

Nearly all programs.

OTHER RELEVANT FACTORS:

Air Monitoring - Data Processing

DESCRIPTION:

Provide computerized handling of air quality data where needed at the state level and input to the NADB. (SAROAD)

GOALS:

Make air quality data available to those who use it.

SPECIAL ATTRIBUTES:

CURRENT STATUS:

Software systems (AQDHS-II) being installed in Arizona, Nevada, California.

STRATEGY:

Complete installations - Phase down EPA involvement.

CONSTRAINTS:

TACTICS:

Contract funding.

APPLICABILITY:

RELATED PROGRAMS:

OTHER RELEVANT FACTORS:

Isolated Point Sources

DESCRIPTION:

Combination of regulatory development and enforcement action directed toward bringing isolated major sources under control.

GOALS:

Reduce emissions from these sources in order to attain NAAQS.

SPECIAL ATTRIBUTES:

CURRENT STATUS:

Involved in disputes over regulations for SO₂ and PM control for smelters. SO₂ for power plants.

STRATEGY:

Pick our fights more carefully. We should be careful to have reliable air quality and emission data available before imposing or proposing to impose additional controls on these sources. Phase down EPA involvement in favor of state/locals.

CONSTRAINTS:

Political power of the sources. Program has a long history and national visibility. We lack good data, particularly for PM.

TACTICS:

Involve the cognizant state and local agencies in all steps we take. Use contractors carefully. Place low priority on sources in areas with no NAAQS violations.

APPLICABILITY:

Primarily Arizona but also have problems in Guam, Hawaii and Nevada.

RELATED PROGRAMS:

EPA Enforcement. Air Monitoring. Emission Inventory Development. EPA Compliance Verification.

OTHER RELEVANT FACTORS:

National policy on tall stacks/SCS.

VI. ~~Programmatic~~ ~~Screening~~
AQCR's were ranked by the following procedure:

1. Programs and AQCR's were arranged in a matrix.
2. Programs were evaluated for their role in each AQCR based upon the following criteria:
 - A. Directly reduce emissions of problem pollutant and improve air quality. 3 points.
 - B. Critical to definition of known or suspected air quality problem. 2 points.
 - C. Direct beneficial effect as minor air quality problem or necessary to maintain standards. 1 point.
3. Summation of points for programs serving the defined roles within the AQCR provides an index of the number and importance of EPA programs within the AQCR. Some programs were found to be either non-critical in the AQCR or of only administrative importance and hence did not appear in the matrix.
4. Some subjective judgement was necessary to place planning programs within the definition of roles.
5. The highest point total would represent the highest priority AQCR using this analysis.

RANKING OF AQCR'S

Priority Ranking

LA Metro
SF Bay Area
San Diego
NV Clark-Mohave
San Joaquin Valley
Phoenix-Tucson
Sacramento Valley
N. Central Coast
S. Central Coast
N. W. Nevada (Reno)
Guam
AZ Southern Border
AZ Clark-Mohave
AZ Four Corners
NV Intrastate
CA S. E. Desert
North Coast
Hawaii
Great Basin Valley
CA N. E. Plateau

Population Ranking

LA Metro
SF Bay Area
San Joaquin Valley
San Diego
Phoenix-Tucson
Sacramento Valley
Hawaii
S. E. Desert
North Central Coast
NV Clark-Mohave
North Coast
S. Central Coast
Four Corners
N. W. Nevada (Reno)
Lake Tahoe
AZ Southern Border
AZ Clark-Mohave
Guam
N. E. Plateau
Nevada Intrastate
Great Basin Valley

GLOSSARY

Gross	Ox = 3-6x 1 hr. Standard
	CO = 3-6x 8 hr. Standard
	PM = 3-6x AGM
	SO ₂ = 3-6x 24 hr. Standard
Moderate	Ox = 2-3x 1 hr. Standard
	CO = 2-3x 8 hr. Standard
	PM = 2-3x AGM
	SO ₂ = 3-6x 24 hr. Standard
Slight	Ox = 1-2x 1 hr. Standard
	CO = 1-2x 8 hr. Standard
	PM = 1-2x AGM
	SO ₂ = 3-6x 24 hr. Standard
	NO ₂ = 1-2x AA

VIII. NARRATIVES

The Basic Program

Several years ago, in response to a major national redirection of EPA's "105" air program grant policy, Region IX developed the "Basic Program" concept. In essence, the Basic Program describes what EPA feels should be an agency's routine operation; a minimum standard for agency capability to conduct an air pollution control program in any AQCR with significant air quality problems.

The Basic Program concept also underlies the Regional Air Strategy. Many important program areas are not mentioned specifically in the narrative portions of the Strategy. Routine air monitoring, for example, is not highlighted in any AQCR, although it obviously forms a cornerstone for other programs. Effective enforcement action against violating sources is a second important example.

The Regional Air Strategy, then, assumes that the Basic Program will be carried out in each AQCR. To that extent it is part of the Strategy. In addition, in some AQCR's, Basic Program activities such as "State/Local Compliance Verification" are specifically mentioned because they are of special significance. Under no circumstances should any reader of the Strategy assume, that because a Basic Program activity such as air monitoring or major source compliance verification does not appear, that EPA is not concerned about its accomplishment.

The elements of the Basic Program follow:

- (1) Review, and, where needed, revision of the grantees' rules and regulations to assure consistency with the applicable state implementation plan (SIP). This may include revision of control strategies where indicated by air quality projections. Revisions will be submitted to EPA through the State in accordance with 40 CFR 51.4, 51.5, and 51.6.
- (2) Operation of an effective enforcement program, taking action as necessary to bring violating sources into compliance with applicable rules and regulations. This includes the development, submittal and (when appropriate) the revision and re-submittal, of compliance schedules (variances) to EPA for sources which are unable to come into prompt compliance. Sources on compliance schedules are to be monitored and their status reported to EPA via the Compliance Data System (CDS).

- (3) Operation of an effective source surveillance program which, as a minimum, involves annual verification of compliance of all major sources (>100 tons per year potential emissions) with all applicable regulations by an acceptable verification technique. (See attached table for more information on the acceptability of various techniques.) If the grantee has been delegated authority, in whole or in part, to operate a program to implement Section 112 of the Clean Air Act (NESHAPS), the grantee shall maintain surveillance over sources of hazardous pollutants in accordance with the terms of the delegation. Finally, in California, grantees are expected to require in-stack monitoring of certain sources consistent with ARB's Resolution 75-59, adopted on October 27, 1975.
- (4) Operation of an air monitoring network consistent with appropriate procedures and practices within the agency's jurisdiction. Reporting ambient air quality data in accordance with 40 CFR 51.7 and, where installed, operation of AQDHS-II software.
- (5) Development and maintenance of a current emission inventory which, as a minimum, includes all major point sources (100 T/y). Report emissions to EPA in accordance with 40 CFR 51.7 [and where installed, operation of EIS/P&R software]. (Note: California agencies are temporarily exempted from the emissions data reporting format specified in 40 CFR 51.7 by Region IX administrative policy.)
- (6) Implementation of an emergency episode program, including air quality forecasting capability and effective public information capability in accordance with 40 CFR 51.16.
- (7) Provision for the training and development of agency personnel in accordance with the requirements of the grantee's program.
- (8) Operation of an active public information program on air pollution control in the grantee's geographic area of responsibility.
- (9) Operation of a program for the receipt and investigation of citizen complaints.
- (10) Operation of a permit program for the review of new and modified sources in accordance with the requirements of the applicable SIP. If the grantee has been delegated authority, in whole, or in part, to operate a program to implement Section 111 of the Clean Air Act (NSPS), the grantee shall apply performance standards in accordance with the terms of the delegation.

- (11) Compliance with the requirements of EPA and other Federal grant regulations as to:
 - a. Application, expenditure and accounting of Federal funds,
 - b. Submission of periodic progress reports as provided by 40 CFR 35.530(c).
- (12) Review and comment on Federal or State Environmental Impact Statements (Environmental Impact Reports in California) from the standpoint of air quality.

ACCEPTABILITY OF TECHNIQUES FOR VERIFYING COMPLIANCE STATUS
 - EPA OR STATE ENFORCEMENT -

VALIDITY OF TECHNIQUES	INCREMENTS OF PROGRESS IN SCHEDULES				FINAL COMPLIANCE (in order of accuracy)
	Development of final control plan	Date of binding commitment to purchase control eqpt.	Initiate on site construction	Complete on site construction	
ACCEPTABLE Note: At least one increment of progress in every schedule should be verified by a preferred technique	<ul style="list-style-type: none"> • Copy of plan (preferred) • Letter from responsible corporate officer certifying achievement 	<ul style="list-style-type: none"> • Copy of contract (preferred) • Letter from responsible corporate officer certifying achievement 	<ul style="list-style-type: none"> • Inspection (preferred) • Letter from responsible corporate officer certifying achievement 	<ul style="list-style-type: none"> • Inspection (preferred) • Letter from responsible corporate officer certifying achievement 	<ul style="list-style-type: none"> • Emission test conducted and results evaluated by EPA (or State) • Emission test observed and results evaluated by EPA (or State). • Opacity observation, where applicable, by certified observer. • Inspection by qualified EPA (or State) personnel to obtain adequate operating data to calculate compliance or compare to operation during previous emission test. • Emission factors for SO₂ emissions at fuel burning installations with no pollution controls (data submitted as response to 5114 or equivalent State statute requirement) • EPA (or State) contractors report of inspection or emission test when evaluated by EPA or State. • Emission factors for SO₂ from combustion sources with controls and all other pollutants based on data from 5114 letter responses when calculated emissions are much less (generally a factor of ten) than allowed. • Unobserved emission test report submitted by source which is evaluated and believed to be accurate.
NOT ACCEPTABLE	Telephone calls or other such unsubstantiated evidence				<ul style="list-style-type: none"> • Emission test not observed & report unevaluated • Opacity observations not substantiated by inspection of plant operations • Unevaluated contractor's report • Unsubstantiated emission factor analysis • Emission inventory data

REGIONAL AIR STRATEGY

REGION IX

ENVIRONMENTAL PROTECTION AGENCY

Geographic Narrative on the
Air Quality Control Region(s)
for the State of
Arizona

March, 1976

REGIONAL AIR STRATEGY

REGION IX

ENVIRONMENTAL PROTECTION AGENCY

Geographic Narrative on the
Air Quality Control Region(s)
for the State of
Arizona

March, 1976

TABLE OF CONTENTS
FOR ARIZONA

<u>Section</u>	<u>Page</u>
I. General Introduction	1
II. Basic Program	BP-1
III. Narrative for Arizona AQCR's	
AQCR #12 - Southern Borders	A-1
AQCR #13 - Clark-Mohave	A-4
AQCR #14 - Four Corners	A-6
AQCR #15 - Phoenix-Tucson	A-9

AQCR #12 - ARIZONA SOUTHERN BORDERS

INTRODUCTION

This interstate AQCR includes the three southeastern Arizona counties of Graham, Greenlee and Cochise, as well as three counties in New Mexico. The Arizona portion of this region covers 12,753 square miles (11.2% of the state total) and has a population of 88,826 (5% of the state total). Large areas are unpopulated or only sparsely settled; approximately half of the population is concentrated in small towns of 2,000 - 13,000 people. Major industries are agriculture, copper mining and smelting and tourism. There are 38 identified point sources of air pollution.

PROBLEM

Sulfur dioxide: Both the annual and the 24-hour standard are exceeded in Morenci and Douglas. In Morenci, concentrations are equivalent to 3 times the annual standard and 3 times the 24-hour standard. In Douglas, concentrations are equivalent to 1-1/2 times the annual standard and 6 times the 24-hour standard. The Phelps-Dodge copper smelters are the source of these SO₂ violations.

PARTICULATE: Particulate standards are violated in both Morenci and Douglas. Particulate levels equal to 1-1/4 times the annual occur in Douglas and are widespread (three stations). The annual standard for particulate was violated in Morenci at only one station by about 1-3/4 times the standard. Violations of the 24-hour standard are more widespread in both areas; concentrations are about 1-1/2 times the standards. The Phelps-Dodge copper smelters are suspected to contribute to these violations. Also, the smelters' tailings (Morenci) and other sources (unpaved roads, etc.) contribute to fugitive emissions.

GOALS

18 months:

Determine respective contributions from stationary, fugitive and other particulate sources; relate emissions to ambient levels.

Achieve compliance for stationary sources.

Attain particulate and sulfur dioxide standards.

5 years:

Develop and enforce a program to maintain National Ambient Air Quality Standards for particulate and SO₂.

Develop and enforce a program to prevent significant deterioration.

PROGRAMS

ISOLATED POINT SOURCES

Particulates: The State will develop process weight regulations for the smelters and submit them as SIP revisions. Based upon the results of the particulate emissions inventory, new regulations for fugitive sources will be developed and submitted to EPA.

SO₂: The State is developing SO₂ regulations which they plan to adopt prior to EPA finalizing its proposed regulations. Both State and local proposed regulations should be jointly coordinated to avoid duplication and to insure approvability of the final State regulation. EPA must be prepared to finalize and enforce its proposed regulations if necessary.

Emission Inventory Development (particulate)

By contract effort, EPA will develop a particulate emission inventory to define particulate sources, determine the stationary source contribution (including fugitive emissions), and define other particulate sources. The contract would then relate particulate emissions to ambient TSP concentrations and hence to the standards.

Compliance Verification (sulfur dioxide, particulate)

State will do an annual compliance verification of major stationary sources of SO₂ and particulate emissions. As part of their basic program, the results will be submitted to EPA in CDS format.

EPA Compliance Verification (sulfur dioxide)

EPA will inspect only the smelters for compliance as a separate program to verify State inspections. The State will be invited to participate.

Emission Inventory Data Processing (particulate, sulfur dioxide)

The State will update and maintain the emissions inventory in NEDS format and submit it semi-annually to EPA. The process will include accounting for the missing data items and resolving rejects. This program is critical because controls are being planned and implemented at the smelters, especially at Morenci.

Quality Assurance (particulate, sulfur dioxide)

This is a State program to fully implement approved Quality Assurance procedures and practices to assure validity of ambient data (TSP and SO₂). The State will participate in the EPA (Headquarters) interlab testing program. EPA (R.O.) will maintain a minimal overview program to insure compliance with QA guidelines and approved State program.

STRATEGY

The strategy in this AQCR is to address the SO₂ problem first, and establish final regulations, preferably state regulations. The smelter at Morenci is lower priority; Because of its old age, the Douglas smelter presents a more serious problem. EPA will contract for an economic analysis of the impact of the SO₂ control regulations as the regulations are finalized.

When the issues surrounding the process weight table regulation are resolved, an assessment must be made of the percent control required, and the smelters' ability to meet the requirement.

The particulate problem needs to be better defined. Since the SIP control strategy was based on an example AQCR (Phoenix-Tucson), it is necessary to define the particulate sources and their contribution to the ambient concentrations in this AQCR, especially Douglas. This will be done by contract prior to revising the SIP.

INTRODUCTION

This interstate region is formed by the counties of Mohave and Yuma in Arizona and Clark County in Nevada. The two Arizona counties are 23,200 square miles in area (20.5% of the state) and have a population of 86,684 (4.9% of the state). Most of the area is sparsely settled; most of the population is concentrated in several small towns, of which Yuma is the largest (29,007). Major industries are tourism, especially along the Colorado River, agriculture, mining and commercial trade. Both counties exhibit an exceptionally high growth rate. There are 40 point sources of air pollution.

PROBLEM

Oxidant: Recent data indicates that concentrations in Yuma are twice the national standard. The source of such high levels is unknown, although resident motor vehicles, solvents, federal facilities and long-range transport are possibilities.

Particulate: In Yuma, total suspended particulate levels are about 1-1/2 times the annual standard, and in Bullhead City, about 2 times the standard. Fugitive emissions and stationary sources such as cotton gins are probable sources for high particulate levels.

GOALS

18 month:

Determine the source and magnitude of the oxidant problem in Yuma.

5 year:

Determine the source and magnitude of the particulate problem.

Develop and enforce a program to attain and maintain the oxidant and particulate standards.

PROGRAMS

Quality Assurance (oxidant): EPA will conduct a site inspection of the Yuma monitoring station to assess Quality Assurance procedures and practices for monitoring operations. The inspection will be directed toward evaluating sources in the vicinity, calibration, frequency and procedures, operator training and practices. Also, EPA will review 1975 data to evaluate the extent of the oxidant problem. State participation will be invited.

Compliance Verification (particulate): This program is a State and local program to annually verify stationary source compliance with particulate regulations. CDS reporting for these sources will be required under the state's basic program.

EPA Compliance Verification (oxidant, particulate): EPA will do a 10% overview of major stationary sources for compliance. State and local participation will be invited. Additionally, Federal facilities with known or suspected hydrocarbon or particulate emissions will be inspected in order to help define the problem and identify emission sources.

STRATEGY

The strategy in this AQCR is directed toward the oxidant problem in the short-term while maintaining the State and local role with respect to stationary sources. Our intent is to verify the existence and magnitude of the oxidant problem based upon an additional year of data (1976).

If verified, a comprehensive hydrocarbon emission inventory would be developed. Also in the long-term, a particulate emission inventory would be conducted. The inventories would include the impact of federal facilities and fugitive emissions.

Both inventories would be geared toward possible SIP revisions for hydrocarbons and particulates. Vapor recovery and transportation coordination/consistency would be included if indicated.

AQCR #14 - ARIZONA FOUR CORNERS

INTRODUCTION

This interstate AQCR includes the Arizona counties of Apache, Navajo, Coconino and Yavapai, and 13 counties or areas in Utah, Colorado and New Mexico. The Arizona portion of this region has an area of 47,712 square miles (42.1% of the state) and a population of 165,026 (9.3% of the state). The bulk of the population is concentrated in about a dozen small towns (Flagstaff, 26,117 and Prescott, 13,134 are the largest). Much of the area is Indian reservation and about half of Arizona's Indian population lives in these counties. Major industries are tourism (Grand Canyon), lumber, mining and cattle ranching. There are 36 identified point sources.

PROBLEM

Particulates: Widespread monitoring (14 stations) indicates violations of the annual standard at only one station, Eager (1-1/4 times the standard). Regarding the 24-hour particulate standard, the Page station records violations at about twice the standard. Open burning on the Apache land northeast of Phoenix has contributed to a recent CO episode in Phoenix and reduced visibility. Such occurrences emphasize the question of jurisdiction over Indian lands; this question is critical because of the predominance of Indian land in this AQCR.

GOALS

18 month:

Delegate responsibility to the State for New Source Review and Significant Deterioration.

Identify sensitive and pristine areas and reclassify to Class I (initiated by State and by Federal land managers).

5 year:

Develop a program to maintain national particulate standards.

Implementation of program to prevent significant deterioration.

PROGRAMS

Compliance Verification (particulate, sulfur dioxide):

This is strictly a State program to inspect annually and report compliance quarterly to EPA on CDS format. It is the State's responsibility to resolve any non-compliance.

Isolated Point Source (sulfur dioxide): For the Navajo power plant at Page, EPA will evaluate the results of the contract effort and assist the state in resolving the percent control required.

NSR/NSPS (sulfur dioxide, particulate): For power plants, NSR/NSPS is primarily a state program with minor EPA overview if necessary.

P/Significant Deterioration (sulfur dioxide, particulate): A low level effort should be made to inform Indians, Federal land managers, and the state of this program and the need to reclassify to prevent future air quality problems. Resources permitting, EPA should push Federal Land Managers to reclassify now.

INDIAN LAND JURISDICTION

The question of jurisdiction over Indian Lands has been a continuing problem and predominates in this AQCR. Arizona Attorney Generals in the past have been unable to develop a single, coherent interpretation.

The jurisdiction questions should be resolved. Because of the State's informal interest in reclassifying areas under PSD. They should be supported by EPA in formal reclassification procedures utilizing Indian lands as a test case. If the State is unable to unwilling, EPA should select a test case and cooperate with the State in forcing the jurisdiction issue.

STRATEGY

The strategy in the Four Corners AQCR is one of prevention of air pollution and hence the preservation of existing air quality. For the most part, this is a long-term program. A minimal short-term EPA program will be directed toward resolving the issue of what percent control is required on the Navajo Power Plant to meet standards, resolving the question of jurisdiction over Indian Lands, and informing the public about prevention of significant deterioration. State activity will be directed toward compliance verification of major point sources of particulate matter and review of new sources and new source performant standards. If requested, EPA will provide assistance and guidance in NSR.

Long-term efforts would essentially be the same programs as listed above with the addition of quality assurance.

AQCR #15 - ARIZONA PHOENIX-TUCSON

INTRODUCTION

This intrastate region is composed of the five counties of Maricopa, Pima, Gila, Pinal, and Santa Cruz. The region encompasses 29,753 square miles (26.2% of the state), and has a population of 1,431,954 (80.8% of the state). Most of the population resides in the Phoenix and Tucson metropolitan areas; these urban areas are growing at a very rapid rate. Major industries are manufacturing, wholesale and retail trade, tourism, agriculture, and copper mining and smelting. Of the 395 identified point sources in the state, 312 are located in this AQCR (Maricopa County, 181; Pima, 41; Other, 90).

PROBLEM

Carbon monoxide: In Phoenix, there are chronic violations of the 8-hour standard (approximately twice the standard). While Tucson is now barely meeting the CO 8-hour standard, violations are expected, and maintenance planning is necessary. The source of the CO problem is the automobile and unusually high VMT.

Oxidant: There are violations of the oxidant standard in both Phoenix (twice the standard) and Tucson (1-1/2 times the standard). The primary source is the automobile, although there is also a small amount of hydrocarbon emissions from point and area sources.

Sulfur dioxide: Violations occur in the non-urban areas due to copper smelters in Ajo, Miami, Hayden and San Manuel. Levels equal to 4 times the annual standard and 24-hour standard have been recorded.

Particulates: Violations of the standards are pervasive throughout the AQCR. These violations are due to fugitive emissions, fugitive dust (natural) and stationary sources (in that order). In Phoenix, about 50% of the fugitive emissions are related to agricultural activity; in Tucson, they are caused mainly by construction and unpaved roads.

GOALS

18 month:

Attainment of SO₂ standards through implementation of smelter regulations.

Implementation of the mandatory state I/M program.

Definition of HC and TSP problems through completion of HC emission inventory (Phoenix) and an urban particulate study (Phoenix).

5 year:

Maintain SO₂ standards in vicinity of smelters.

Attainment and maintenance of TSP standards and auto-related standards (CO, HC, Ox).

PROGRAMS

Isolated Point Source (sulfur dioxide, particulate): EPA has proposed SO₂ regulations for non-ferrous smelters and has held hearings. The State is developing its own regulations to be submitted to EPA before we finalize our regulations. EPA will then approve these State regulations, or if they are not approvable, EPA will finalize its own regulations.

The process weight regulation for smelters has been suspended by the State. It will be the State's responsibility to resolve this issue. EPA will assist with a testing program. If the current regulation cannot be supported, the BOA contract study may be needed to determine the contribution of smelters to TSP violations and hence provide guidance for the percent control required.

As the problem is defined and RACT is delineated, State and local agencies will add regulations to control fugitive emissions from agriculture, unpaved roads, construction.

CO/Oxidants: EPA will analyze the adequacy of the currently-approved control strategy, and order revisions as needed.

Emission Inventory Development (Particulate, oxidant): A Phoenix emission inventory for particulate matter is under development by BOA contractor and will be completed in July, 1976. Regional Office internal effort or BOA contract effort should be added to study non-urban areas. Joint agency evaluation of the results of these inventories is required. Pima County is interested in a longer term, and more refined fugitive study.

Recent emission data submitted to S&A by Motorola indicate inaccuracies in existing inventory (Large difference in THC). Maricopa County is working on a revised hydrocarbon emission inventory. ADHS must evaluate HC inventory for both Phoenix and Tucson and make recommendations for updated or revised controls. This effort is to be coordinated with AQMP efforts and any hydrocarbon regulation reviews related to the SIP.

EPA Compliance Verification (particulate, oxidant): S&A will perform by inspection, an overview of 10% of the major stationary sources. Emphasis will be on sources of particulate and hydrocarbon. Major Federal facilities are included. VEO compliance verification is hampered by a 40% standard.

State/Local Compliance Verification (particulate, sulfur dioxide, oxidant): State and local agencies will perform annual compliance verification on major stationary sources for which they are responsible. (State should delegate responsibility for all stationary sources except smelters to local agencies. CDS reports will be submitted. Minor sources will be considered after their contribution has been better defined by the TSP inventory contracts.

Emergency Episodes (carbon monoxide, sulfur dioxide): This is a State and local program. Since CO and SO₂ episodes occurred in 1975, only a minimal Regional Office overview is anticipated to insure compliance with approved SIP regulations.

Inspection and Maintenance (carbon monoxide, oxidant): The inspection portion of this program is now being conducted in Maricopa and Pima Counties by contract with Hamilton Systems. Passing the inspection will become mandatory in 1977 and maintenance will be required. The I/M program is in jeopardy in the State Legislature and may be repealed. The next 2-3 months are critical. Top management in Air Programs and OER should initiate a program in support of I/M. Air Programs will also provide a list of alternatives available for CO/Ox strategy if the State repeals I/M.

If the I/M program survives, the State will conduct an audit program. EPA should work with the state inspectors on joint audits of test stations and fleet dealers.

Data Processing (all pollutants): Air quality data contractors are currently installing AQDHS II at State level and in Pima County. This effort will allow quarterly air quality data reports to be submitted to the Regional Office in SAROAD format on magnetic tape. Contractor follow-up is provided for six months and training is included. Upon completion of the contracts, operation will be strictly State and local, including funding.

EPA will be involved only in evaluating submitted data and as State liaison for resolving data rejections.

Emission Data: Contractor assistance will be provided to ADHS to install EIS/P&R by about May 1976. After AQDHS II installation is completed, training, debugging and six-month follow-up will be provided. By the end of 1976, this will be strictly a State function except for EPA-Region IX receipt of data and liaison with State in resolving data rejections.

Quality Assurance (all pollutants): This is primarily a State and local program (both State and local agencies operate Air monitoring networks). The State is developing a quality assurance program, which, when finalized, will be implemented statewide. While EPA is providing guidance, EPA's primary role, now and in the future, is audit checking to assure validity of data. The program includes inter-lab testing of standard samples (i.e., State and local participation in collaborative testing) and field audits of continuous instruments to assure accuracy (using standards, calibration checks, etc.).

New Source Review (particulate, oxidant, sulfur dioxide): The review of new sources will be strictly a State and local program.

Fuel Additives (carbon monoxide, oxidant): This is an EPA program to insure availability of unleaded gasoline and uncontaminated gasoline. Regional Office inspection and sample analysis are involved. This program is necessary to prevent widespread inactivation of the catalysts.

Because of the I/M uncertainties, the fuel additives program is critical in this AQCR.

208, 201, Transportation Planning Consistency (carbon monoxide, particulate, oxidant): This involves EPA review of 201 construction projects, 208 planning and 3-c transportation plans for consistency with the SIP and strategies to maintain NAAQS.

Air Quality Maintenance Plan (particulate, oxidant, carbon monoxide): Phoenix is an AQMA for TSP, Ox, and CO. An analysis of air quality projections and possible strategies will be developed by a BOA contractor. The previously-mentioned emission inventory refinement for TSP and HC must be included in the AQMP baseline.

Tucson is an AQMA for Ox and particulates. An attainment and maintenance plan is under development now by the Pima County Air Quality Control District. Completion is scheduled for FY-78. Their preliminary oxidant analysis shows attainment by 1981.

Changes in the State I/M program would alter the situation.

The long-term programs and "r year strategy" for the Phoenix-Tucson AQCR are a continuation of existing programs and are dependent upon successful implementation of the short-term programs. With the exception of the visibility/fine particulate standard/secondary aerosol research work is needed to define the standard and control technology development.

STRATEGY

The short-term strategy in this AQCR has three major parts:

- 1) Obtain better definition of the sources and their respective contributions to ambient concentrations (TSP and HC).
- 2) Improve old regulations, establish new regulations and enforce existing regulations (TSP process weight and visible emissions, HC stationary sources).
- 3) Insure continuation of the State Inspection/Maintenance Program for vehicles in Maricopa and Pima Counties.

The emission inventory work for TSP is being done in Phoenix by contract, and for HC by Maricopa County. The contract results and EPA Headquarters guidance will be the basis for development of fugitive emission control regulations. Additional contracts for TSP in Tucson and the non-urban area of this AQCR have been suggested. Funding will depend on applicability of the results of the present contract (scheduled for completion by July, 1976) to Tucson and the non-urban area. The TSP inventory in the Southern Borders AQCR, when completed, could be applied to the smelters in this Region.

The hydrocarbon emission inventory being conducted by Maricopa County is now underway. The State will evaluate the results and supplement the data by HC source inspections if necessary.

Both the particulate and hydrocarbon inventory should lead to new or revised regulations to control emissions.

The strategy for compliance and enforcement is to have the appropriate State or local agency inspect all major sources annually to assure compliance. Minor sources may be looked at in the long-term, depending on the particulate matter emission inventory development. EPA will conduct a 10% overview of major stationary sources annually. While emphasis will be on PM and HC, inspections will include sources under the different agencies' jurisdiction. Enforcement of non-compliance is to be strictly a State and local effort with EPA involvement only in the event of State and local inaction.

The strategy for episode control is Abatement action by State and local agencies. Because of CO and SO₂ episodes in Phoenix, and Miami/Hayden in 1975, a minimal EPA surveillance overview must be maintained.

EPA's strategy on the Arizona I/M program is to insure its continuation. We should initiate three efforts immediately: (1) OER-related efforts to support I/M, (2) Air Programs preparation of an issue paper on the options and alternatives available to EPA, should the State repeal the program, (3) RC investigation of the possibility of providing support to the State in the event of a legal challenge.

In the data processing program our strategy is to have AQDHS II installed on the state computer by May, 1975. EIS and P&R data processing installation will follow immediately on the same computer.

The installation of this software is supported by joint Regional/Headquarters funding. EPA is monitoring the contracts and provides assistance through the first SAROAD and NEDS data submittals to us. Operational costs are to be paid for by the State. EPA is also funding contract effort for the installation of AQDHS II in Pima County. Once installed, the operation becomes part of the local program. Overall, once the State systems are operational, EPA's role is one of guidance (i.e., Headquarters changes in the software package), and the State is responsible for maintaining the data base and submitting the data.

EPA will take a low profile on NSR and defer to the State. In addition, EPA will encourage the State to develop its own PSD regulations.

Quality Assurance is to be a State and local program with minimal guidance from EPA. The State will insure a uniform QA program statewide while EPA will continue to provide an inter-lab testing program (from Headquarters RTP).

EPA's strategy on fuel additives is critical in this AQCR. Because of the automobile-related pollution problem, the program should be continued at the existing level. Similarly, the coordination between 201, 208 and air transportation consistency must remain a viable program in both Phoenix and Tucson.

The AQMP strategy is to let a contract for the Phoenix AQMP in March, 1976. The AQMP will have to be coordinated with the emission inventory development work (HC and TSP) even at the risk of delaying the plan. In Tucson, the County is proceeding on schedule with AQMP analysis and plan development. Submission of the plan is due in FY-78. Both AQMP's could be seriously affected if the inspection/maintenance program is repealed.

REGIONAL AIR STRATEGY

REGION IX

ENVIRONMENTAL PROTECTION AGENCY

Geographic Narrative on the
Air Quality Control Region(s)
for the State of
California

March, 1976

REGIONAL AIR STRATEGY

REGION IX

ENVIRONMENTAL PROTECTION AGENCY

Geographic Narrative on the
Air Quality Control Region(s)

for the State of

California

March, 1976

TABLE OF CONTENTS
FOR
CALIFORNIA
FY-77 REGIONAL AIR STRATEGY

<u>Section</u>	<u>Page</u>
I. General Introduction	1
II. Basic Program	BP-1
III. Narrative for California AQCR's	
AQCR #23 - Great Basin Valley	C-1 to C-2
AQCR #24 - Metropolitan Los Angeles	C-3 to C-8
AQCR #24 - North Central Coast	C-9 to C-11
AQCR #26 - Northcoast	C-12 to C-13
AQCR #27 - Northeast Plateau	C-14
AQCR #28 - Sacramento Valley	C-15 to C-18
AQCR #29 - San Diego	C-20 to C-21
AQCR #30 - San Francisco Bay Area	C-25 to C-26
AQCR #31 - San Joaquin Valley	C-32 to C-33
AQCR #32 - South Central Coast	C-36 to C-37
AQCR #33 - Southeast Desert	C-39 to C-40

AQCR #23 - GREAT BASIN VALLEY

INTRODUCTION

The Great Basin Valley AQCR lies on a narrow strip of central California between the eastern crest of the Sierra and the Nevada border. The AQCR is sparsely populated (24,700) and mountainous. The climate is characterized by very low rainfall and a large variation in winter/summer temperatures. Its scenic attractions include Mono Lake, the Owens Valley and the Death Valley National Monument. The primary industries are agriculture (Owens Valley) and tourism. The three counties in the AQCR, Mono, Alpine and Inyo, have formed the Great Basin Valley Unified APCD.

PROBLEM

Virtually no data is collected in this area. The ARB has some intermittent PM data for 1974 from Bridgeport showing an AGM of 31, less than half the standard. There is no data available on other pollutants.

GOALS

Eighteen-Month:

Work toward implementation of the State version of PSD.

Five-Year:

Work with ARB, the APCD, the City of Los Angeles (which controls land in the Owens Valley) and Federal land managers to avert air quality problems.

PROGRAMS

Prevention of Significant Deterioration - This would primarily be a State effort with a low level of involvement by EPA. EPA would coordinate with ARB in the establishment of Air Conservation Areas.

New Source Review - EPA must review and permit any sources in the 19 categories covered by PSD regulations until delegation occurs. EPA will coordinate the review with the Great Basin Valley APCD.

State/local compliance verification - The local district will verify the compliance status of the 14 major point sources located in the AQCR. EPA will require a quarterly status summary from ARB via the grant mechanism.

STRATEGY

Since there are no known problems there is no need for extensive Federal involvement.

AQCR # 24 - METROPOLITAN LOS ANGELES

INTRODUCTION

The Los Angeles Metropolitan AQCR contains almost ten million people, some 47% of the State's population. While the AQCR contains some mountainous, sparsely populated areas, it is largely urbanized and industrialized. Owing to the magnitude and intensity of emissions and the generally stable meteorological conditions of most of the AQCR, pollutant concentrations tend to be high. Since meteorological conditions are extremely favorable for photochemical reactions, oxidant (or ozone) concentrations are the highest in the nation. Problems persist despite long-standing controls on stationary sources and automobiles and the widespread use of clean fuels.

The AQCR has three local air pollution control agencies but one of them, the Southern California APCD, covers more than 90% of both the population and the total emissions of the AQCR. Santa Barbara and Ventura counties also operate air districts.

PROBLEM

Based on 1974 data, the AQCR experiences severe and pervasive violations of NAAQS for oxidants, CO, PM and NO₂. It is currently meeting SO₂ standards but pending fuel switching will likely cause violations.

All 45 stations reported violations for oxidants in 1974. The readings ranged from .15 ppm (max. 1 hour) along the coast to .63 ppm at Upland, some 40 miles inland. The high oxidant readings result from the emission of reactive hydrocarbons (HC) from a variety of sources in the AQCR.

The SCAPCD and EPA disagree significantly on the percentage of "reactive" HC emissions emitted by stationary sources. SCAPCD holds that only 27% of the total inventory comes from stationary sources, while EPA feels the contribution is closer to 40% with the percentage increasing yearly. (ARB largely concurs with EPA.) The difference is not with the data base (although it needs to be improved) but with differing definitions of reactivity.

Twenty-three out of 33 stations showed violations of the eight-hour CO standard in 1974, with a maximum of 30 ppm in Lennox. Only two stations, however, (Lennox and Lynwood) show violations of the one-hour standard.

Twenty out of 30 stations showed violations of the annual geometric mean (AGM) standard for PM. (Violations of the 24 hour standards are rare, however.) Violations occur in both urbanized and rural areas.

Ten of 18 NO₂ stations reporting an annual arithmetic mean (AAM) showed violations of the standard. The highest readings tend to be inland.

Mobile sources remain the largest emission source category, however, regardless of their share of the HC inventory. They account for more than 75% of the NO_x and over 99% of the CO. According to APCD data, they are also responsible for 50% of the PM emitted daily. Almost 90% of the SO₂, however, is stationary source related with the percentage on the increase as natural gas use decreases. Gasoline desulfurization will also increase SO₂ emissions if it becomes necessary because of State auto emission standards.

GOALS

These goals were selected on the basis of the air quality problems presented above. They are divided into short-term (18-month) and long-term (5-year) categories.

Eighteen-Month:

Implement available programs to reduce reactive HC emissions and survey other possible control measures.

Reach an agreement on the reactivity of all significant categories of HC. Resolve source test equivalency issue.

Improve the quality and accessibility of the data base through standardization of the emissions inventory and quality assurance measures on all air monitoring stations.

Insure the best possible local surveillance of existing stationary sources of all criteria and hazardous pollutants and the strict enforcement of existing regulations. HC sources merit top priority.

Define and establish the institutional relationships required for a viable, regional long-range air quality management process. Begin plan development.

Closely monitor growth-related projects in both the public and private sectors and, to the greatest possible extent, work to mitigate their impact on air quality.

Five-Year:

Eliminate all areas of significant technical disagreement among the SCAPCD, the ARB and EPA which interfere with the development of a unified approach to solving air quality problems.

Develop a complete, accurate and sophisticated data base that will enable all levels of government to improve their understanding of the various air quality problems.

Establish a long term planning process to enable cognizant agencies to periodically update their coordinated efforts to improve air quality and approach (and in some cases, achieve) NAAQS.

Establish an efficient and effective program for annual mandatory I & M on all light duty vehicles.

Modify regulations as required to require BACT control over all stationary sources of reactive HC.

Bring about a consistent annual net decrease in the emission of HC, CO, NO₂ and PM.

Maintain the NAAQS for SO₂ while promoting energy conservation and the effective use of clean fuels.

PROGRAMS

The following programs were developed to achieve the 18-month goals stated above.

Vapor Recovery - EPA will formally approve local regulations and support their implementation with 105 grant funding. EPA will try to avoid enforcement of EPA-promulgated regulations until they are formally rescinded.

Other Organics (HC Review and Revision) - Carry out a joint Federal/State/local effort to review and, if indicated, revise local regulations to increase the level of control on reactive solvents, petroleum refining, petroleum manufacturing, petroleum storage and other source categories of reactive HC. ARB will take the lead in developing model rules. ARB/EPA contract support is indicated during the rule development stage and EPA grant support may be used for rule revision. Local agencies aid in rule development, adopt and implement needed changes or additions.

I & M - ARB has the lead in monitoring the progress of the pilot program. EPA and ARB will carry out the required executive liaison with the Legislature and Administration to encourage full implementation.

New Source Review - EPA will carry out the review function in-house until delegated using a "no net increase in emissions" policy. EPA to delegate the program as called for in the FY76 grant agreements. ARB and/or local agencies to implement program.

Emission Inventory Development - Like many other high priority programs this must be a cooperative effort. Local agencies would have primary responsibility for improving their data base. EPA grant and contract support (see Emission Inventory (data handling) below) will supplement state and local resources. ARB is to coordinate the overall State effort, resolve technical issues (selection of industrial categories for example) and help set priorities. Top priority should be given to stationary sources of HC (the reactivity definition issue must be resolved) followed by SO₂, NO_x and PM.

Emission Inventory (data handling) - SCAPCD and Ventura/Santa Barbara will install the EIS/P&R software system with EPA contract and/or grant support. The grant would also aid in the tedious job of data conversion. EPA to use the grant to coordinate priorities with ARB and the locals. The total effort to bring about data base improvement is expected to take two to three years.

AQMP/208 - The AQMP effort is primarily a regional program with ARB and EPA oversight. Local APCD's have the responsibility to provide needed technical input to non-air agencies involved in the process. All parties must assure coordination with the "208" wastewater management effort.

ARB efforts should be directed primarily toward the building of the institutional relationships required for a viable process. EPA will use such tools as executive liaison, inter-governmental coordination, public information, and financial assistance to assist the overall effort. All participants, but particularly local APCD's should ensure that related programs (Example: emission inventory development) are operated with AQMP in mind.

Since their AQMP effort is farther along than the rest of the basin, Ventura County may operate a separate, but coordinated, program.

EPA Compliance Verification - Owing to the magnitude of the problem EPA oversight should be slightly above the normal 10% overview, concentrating on HC and PM sources. EPA may look closely at the inspection programs of the San Bernardino and Riverside portions of the SCAPCD.

State/Local Compliance Verification - EPA will provide direct grant funding for local review of HC sources including, in the SCAPCD, some categories of minor HC sources. (The APCD can choose the categories with EPA concurrence.) ARB will report on the status of all major sources plus the minor sources selected above.

Fuel Additive - Inspections and analyses will be performed by ARB under an EPA contract. Part of the contract is funded by Region IX and the rest by EPA HQ.

Quality Assurance - EPA will provide grant support for standardization of State and local operation and calibration procedures in accordance with ARB guidelines. ARB will assist local agencies in the implementation of their procedures.

Air/201, Air/EIS, Air/Transportation Coordination - Active EPA intermedia review, plus intergovernmental coordination, will occur to work toward the goal of no net increase in emissions from major infra-structure development. The ARB and local APCD's are expected to continue their past role in these review processes.

Air/Energy Coordination - Action in this area will key off the ongoing ARB effort to analyze the impact of fuel switching on air quality; particularly on SO₂ levels. If, as expected, a strategy revision is indicated by the ARB's analysis, rule revisions would occur through a joint State/Federal/local effort. The ARB would be expected to develop model rules for SO₂ and NO_x and the local APCD's would be expected to adopt and implement needed changes. EPA grant funding will support the effort.

All agencies, including EPA, should also be active in the public relations area to help the public to understand the effects of fuel switching and to promote support for stricter controls on industry.

Emergency Episodes - Air quality has improved to the point that Stage 2 episodes will be a rarity and Stage 3 episodes will not occur. The emergency episode program is a State/local program with only Basic Program EPA grant support.

In-stack Monitoring - EPA will defer to the State program as long as satisfactory progress continues.

STRATEGY

There are two major short-term themes: Improve cooperation with local agencies, particularly the SCAPCD, and concentrate our efforts on stationary sources of HC.

In the long run, all agencies should work to continue to tighten controls on all sources that contribute to air quality problems while realizing that attainment of the .08 oxidant standard is a goal we can approach but probably not attain. There is a need to have an overall AQCR control plan that all institutions can understand and support. We should support, tougher-than-national automotive emission controls by the ARB backed by an I & M program that insures that controls are being effective. Public support for all programs must be actively cultivated.

AQCR #25 - NORTH CENTRAL COAST

INTRODUCTION

The North Central Coast AQCR contains 425,000 residents in four counties around Monterey Bay. There are a few major population centers with many smaller communities spread throughout the area. The AQCR is not in attainment for oxidant and particulate. There is no monitoring for SO₂, CO and NO_x are apparently in attainment. Monterey County was proposed as an AQMA for oxidant in 1975, however, at the State's request that designation was not finalized. The unified district reports on 21 point sources.

PROBLEM

Oxidant:

Monitors are located at Salinas, Gonzales, Carmel Valley, Santa Cruz and Monterey. Four reported two or more violations during 1974. During 1974, the APCD revised the stationary source inventory and re-calculated the rollback required to demonstrate attainment. Based on the re-calculation and the revised inventory, the district projects attainment in 1976.

Particulate:

The Salinas station does not attain the primary annual geometric mean standard. In both 1973 and 1974, single violations of the 24-hour standard were recorded. Other stations do not report violations.

Sulfur Dioxide:

There is no monitoring for this pollutant. Some citizen complaints have been received regarding materials damage possibly caused by sulfuric acid mist. The Moss Landing power plant is permitted for both natural gas and low sulfur fuel oil with no emissions limitations nor ambient SO_x monitoring requirements. *Need to perform spot monitoring due to possible exacerbation of SO₂ ambient air quality due to fuel switching.

*modification per SAD
review and need for
clarification.

NO₂, CO:

No violations of these standards for these pollutants have been reported.

GOALS

Eighteen month:

Assess air quality data and inventory for hydrocarbons and oxidant.

Call for plan revision if appropriate.

Review need for SO₂ monitoring, planning.

Five Year:

Maintain air quality standards.

PROGRAMS

Quality Assurance (oxidant):

EPA to make site inspections of monitoring stations to provide a brief overview of the monitoring network and opinion on its reliability. Over the next six months the State should provide a more thorough quality assurance program to insure that the data is reliable. Program Grant funds could support this effort.

Inventory Assessment (hydrocarbon/oxidant):

Concurrent with Quality Assurance, The State should evaluate the inventory for hydrocarbons. Program grant funds could support this effort.

Monitoring (SO₂):

The State should investigate and implement any needed facilities to monitor SO₂ concentrations in the vicinity of the Moss Landing Power Plant and the San Ardo Oil Field

Other Organics (hydrocarbon/oxidant):

A joint State, Local, EPA review of hydrocarbon regulation may be indicated if data continues to demonstrate non-attainment for oxidant.

Air Energy Coordination (sulfur dioxide):

With the prospect of further natural gas curtailment, EPA's role will be one of providing public information, testifying at EPA/FEA hearings and executive liaison to establish a place for environmental considerations in fuel allocation decisions. In this AQCR the problem, if any, has not been documented.

AQCR #26- NORTH COAST

INTRODUCTION

The population of 250,000 is spread through smaller communities along major transportation routes (U.S. 1, U.S. 101). Communities tend to be located around recreation areas and industrial centers. Industry is predominantly wood products oriented including lumber, paper and intermediate processes. Particulate matter and odors appear to be the major air pollution problems. Around Humboldt County some total reduced sulfur monitoring is being done in an effort to measure some of the mercaptan or other sulfurous odor problems. 86 major sources are reported to EPA from this AQCR.

PROBLEM

Particulate:

Violations of the annual geometric mean are reported at five stations: Samoa, Ft. Bragg, Ukiah, Willets, and Calpella. Infrequent scattered violations of the 24 hour concentration occurred in 1974. Sources appear to be of smaller stationary types associated with wood waste disposal as well as a smaller number whose emissions are process oriented.

GOALS

Eighteen month:

Initiate program to solve wood waste disposal problems.

Support State's Prevention of Significant Deterioration program or its equivalent.

Low priority oversight of State/Local Compliance Verification Program.

Five Year:

Provide for attainment/maintenance of standards.

PROGRAMS

Intergovernmental Coordination (particulate):

Seek a program or process to reuse or to dispose of problem wood industry byproducts and wastes. Agencies to be contacted: Forest Service, Regional Water Quality Control Board, Air Resources Board, and Air Pollution Control Districts. In cooperation with the concerned industries try to interest State leadership in seeking a solution to the problem.

State/Local Compliance Verification (particulate):

Due to the nature of the problem for the widespread particulate violations, the activities of the APCD in keeping other sources in compliance is of interest for maintenance. Since this program is part of the normal district operation, the basic element of the \$105 program grant can be reduced and phased down in the next five years.

Prevention of Significant Deterioration (particulate):

As in other areas, this program has not been accepted by the State, which is promoting an independent approach encompassing all criteria pollutants. Region IX should provide policy support whichever program the State determines to implement.

AQCR #27 -- NORTHEAST PLATEAU

INTRODUCTION

This sparsely populated (60,000) Northeast Section of the State has small communities that are either recreation or lumber industry dependant. A single particulate monitor records a violation. 25 point sources are reported to EPA from this AQCR.

PROBLEM

Particulate:

The Mt. Shasta monitor shows a violation of the annual geometric mean. The violation appears to be associated with local lumber industry.

GOALS

Eighteen month:

State/local action to provide source compliance and attain standards.

Commence planning for prevention of significant deterioration

Five Year:

Maintain standards.

Prevent significant deterioration.

PROGRAMS

State/Local Compliance Verification (particulate):

The State's basic program should include inspection/enforcement to provide attainment of the particulate standard in this AQCR. No special EPA commitment is indicated.

Prevention of Significant Deterioration (particulate):

The State has not accepted EPA's PSD program and has commenced its own effort based on Air Conservation Areas which would apply to all pollutants. Whichever program the State ultimately adopts should receive EPA policy support.

AQCR #28 - SACRAMENTO VALLEY

INTRODUCTION

The Sacramento Valley AQCR is enclosed by the Coastal Range, Sierra Nevada, and Cascade Range on the West, East and North and is administratively dissected from the San Joaquin Valley at the Sacramento-San Joaquin County Line. The 1.4 million residents are concentrated in linearly distributed metropolitan centers following the major North-South transportation corridors (US-99/I-5). The major urban center is the city of Sacramento and its suburbs, which spread across county lines into Placer and El Dorado counties. The ARB has split out the foothill-mountain areas of this and the San Joaquin AQCR to form the Mountain Air Basin. Additionally, the ARB designated the California side of the Lake Tahoe area as an air basin. This action represents a desire to deal with Lake Tahoe's unique problems separately and to open communications with the State of Nevada. The AQCR is in violation of the primary standards for CO, TSP and oxidant.

PROBLEM

Particulate:

There are fourteen particulate monitors in the central portion of the AQCR; three report violations of the annual geometric mean (Chico, Live Oak, Yuba City); five have exceeded the 24-hour standard concentration once, which is allowed, but it clearly represents marginal attainment. The sources are largely fugitive agricultural emissions with limited point source contributions. The ARB is producing an agricultural burning inventory which should aid in defining the problem.

Carbon Monoxide:

A limited monitoring network indicates violations of the eight-hour standard at Chico. The Sacramento monitors show values just under the eight-hour standard (9.6 ug/m^3) using sites that may be questionable in terms of sampling likely high CO concentrations.

Oxidant:

All six oxidant monitors in the AQCR report one-hour standard violations on from 19 to 136 days per year (1974). Exceedances of over twice the standard have been reported. Quality of data is good, although some stations reported for limited times during 1974. Hydrocarbon sources in the valley are dominantly mobile source related.

GOALS

Eighteen month:

Define the extent of the CO problem. Reduce hydrocarbon emissions through available controls.

Commence planning for attainment and maintenance through support of AQMP.

Five Year:

Oxidant and CO attainment through AQMP implementation.

Prevent significant deterioration.

PROGRAMS

Vapor Recovery (hydrocarbon/oxidant):

The ARB is interested in expanding vapor recovery on the valley floor and in highly developed areas; this approach should be supported by EPA since AQCR wide implementation would be resource intensive without significant increased emissions reductions. This will be supported through the \$105 grant to ARB.

Other Organics (hydrocarbons/oxidant):

Through a joint State, local and EPA review, insure consistency and appropriate hydrocarbon regulations throughout the AQCR. EPA will support through the \$105 grant to ARB.

Quality Assurance (all):

EPA site visits to the CO monitoring stations in Chico and Sacramento should be performed to insure that data is being properly collected and measured. The state program implemented in FY-76 should provide for quality assurance for other pollutants AQCR wide.

State/Local Compliance Verification (hydrocarbon/oxidant):

Although this is a part of the basic State-local program, EPA should support inspections of problem pollutant sources. In this AQCR EPA should support inspection of hydrocarbon sources only to districts receiving grant support. Other point sources are to be inspected and reported under the basic program.

EPA Compliance Verification (hydrocarbon/oxidant):

EPA has an oversight role in this AQCR and should concentrate its efforts on hydrocarbon sources. Similarly EPA Enforcement will be a low key effort centered on hydrocarbon control.

New Source Review (hydrocarbon/oxidant, particulate):

This is a state program which should continue to be a state/local effort with low level EPA oversight.

Agricultural Burning (particulate, CO):

A state program which both regulates burning and assesses the hydrocarbon, particulate and carbon monoxide emissions from burning practices in the Sacramento Valley.

Fuel Additives (hydrocarbon/oxidant, CO):

A state program operated under EPA headquarters contract to insure availability of proper fuels for catalytic converter equipt vehicles.

Transportation Coordination (hydrocarbon/oxidant, CO):

EPA should continue to be involved in this effort through

inter-governmental coordination with the Intermodal Planning Group, comments on the D.O.T. Overall Work Program, and comments to F.H.W.A. on transportation plan consistency with SIP under F.A.H.A. §109(j). EPA should try to involve the AQMP task force in impacting transportation decisions in the Metropolitan Sacramento AQMA.

EIS Review (hydrocarbon/oxidant, CO, others):

EPA should continue to comment on projects projecting an increase in emissions in this AQCR.

AQMP (hydrocarbon/oxidant, particulate):

The AQMP task force in Sacramento is progressing slowly. EPA should continue supporting this program through grants to the APCD and pass through funds from ARB. Particulate was included in recognition of the existing problem, however appropriate controls are not apparent at this time.

SPECIAL INTEREST AREA--Sacramento Valley AQCR--Lake Tahoe Portion

PROBLEM

The ARB operates two monitors in the Lake Tahoe Air Basin. The ARB is considering more stringent CO and particulate standards in this basin in recognition of the high altitude and great scenic beauty of the area respectively. CALTRANS monitors have detected violations of the oxidant standard. The air pollution problem is poorly defined and inadequate for strategy purposes. The ARB is expected to request that EPA designate the entire Lake Tahoe basin as an Interstate AQCR in hopes that this will assist their efforts in coordinating with the State of Nevada.

STRATEGY

EPA agrees that an Interstate AQCR would be desirable, however, EPA's ability to react is limited at this time. There is a possibility that the 1976(7) amendments will provide this flexibility.

While the problem is undefined, its resolution is left to State initiative and EPA will not undertake an extensive effort at this time.

PROGRAM

Intergovernmental Liaison:

Try to create an atmosphere of cooperation in which the states can meet to develop programs applicable to the meteorologically defined air basin.

AQCR #29 - SAN DIEGO

INTRODUCTION

With the exception of a narrow, sparsely populated strip on the eastern edge, the San Diego AQCR is coterminous with San Diego County. The climate is similar to Los Angeles in that meteorological conditions are conducive to the build up of high concentrations of both primary and secondary pollutants. Since the population is less than 1/6 of the Los Angeles Metro AQCR (1,508,000), and the degree of industrialization is also much less, San Diego's problems are not as severe as those to the north. Air quality in San Diego, however, is clearly influenced by its neighbors. The North County experiences occasional high concentrations of oxidants transported (at least in part) from Los Angeles. It appears that high particulate levels at San Ysidro in the south, may be influenced by heavily emitting Mexican sources. Uncontrolled Mexican vehicles also contribute to concentrations of CO, NO_x and oxidants.

Air quality planning in San Diego has drawn support from both the cities and the County APCD. The cities, through their COG (the Comprehensive Planning Office), have participated in the Air Planning Team which, in turn, has developed the Regional Air Quality Strategy (RAQS).

PROBLEM

NAAQS are violated for Ox, PM and CO. The oxidant problem is both significant and pervasive. In 1974 all 8 stations showed violations, ranging from a .18 ppm maximum 1 hour at San Diego (39 days in violation) to .33 ppm maximum at Oceanside (48 days in violation). The most consistently high readings occurred at Escondido which had a .27 ppm maximum with 112 days in violation.

Oxidant violations are the source of some controversy between local planners and EPA. The San Diego Air Quality Planning Team concluded that higher levels are caused by transport from LA and that .20 is the maximum level that could be produced by indigenous sources. EPA feels that past transport studies are not conclusive enough to permit quantification of concentrations. Approximately 40% of the "reactive" HC emitted in San Diego County come from stationary sources (1972 "Revised" Inventory).

The Annual Geometric Mean standard for PM was violated at 6 of 7 stations including urban, coastal areas. The highest readings were recorded at San Ysidro, immediately across the border from uncontrolled sources in Mexico. The AGM there in 1974 was 161.5 and there were also 3 violations of the 24 hour primary standard.

The source of the PM problem is unclear. The APCD attributes more than 90% of total emissions to unpaved roads.

Violations of the CO standard were few (14 days at 3 stations), extremely low level (11 ppm maximum) and involved only the 8 hour standard.

Based on the data alone, there is no indication that CO is anything but a borderline maintenance problem in San Diego. APCD monitoring stations, however, are not located to pick up CO "hot spots." Street level readings, to which much of the population is exposed, are not a part of the data base.

NAAQS were not violated for NO_x or SO₂ in 1974.

GOALS

The following short term (18 month) and long term (5 years) goals were developed in response to the air quality problems outlined above.

18 MONTH

- Implement available programs for the control of reactive HC. Survey other possible controls.

- Complete RAQS II (AQMP/Phase II) including the adoption and implementation of rule changes contained therein.

- Improve the quality and accessibility of the data base through standardization of the emissions inventory format with ARB.

- Insure the best reasonable surveillance of existing sources of RHC, PM and hazardous pollutants (if any). Insure adequate surveillance of all others.

- Closely monitor growth-related projects in both the public and private sectors and, to the extent possible, work to mitigate their impacts on air quality.

- Define the source of the PM problem.

5-YEAR GOALS

Maintain the coalition of agencies responsible for the Regional Air Quality Strategy as a permanent air management planning process.

Develop a complete, accurate and sophisticated data base to enable all concerned parties to understand and "buy-in" to control strategies.

Determine the magnitude of the LA contribution to Ox violations in San Diego County. (The APCD feels this is a high short term priority.)

Begin an efficient and effective program for the annual mandatory inspection of vehicles.

Modify regulations as required to require BACT control over all stationary sources of HC.

Bring about a consistent annual net decrease in the emission of HC and CO and PM.

Participate as required in a nationally directed effort to reduce emissions from sources located in Mexico. (Including the control of vehicles.)

Achieve NAAQS for CO at all monitoring locations and maintain standards for SO₂.

PROGRAMS

The following programs were developed to achieve the 18-month goals listed above.

Other organics (review and revision of HC controls) - This is a joint local/state/federal program. ARB is primarily responsible for identifying deficiencies and developing model rule revisions. The APCD will assist in the identification of deficiencies and will adopt needed changes. EPA will provide technical assistance and grant support.

Vapor Recovery - This is a local program. EPA will continue to encourage the District to complete Phase II through the use of grant funding.

EPA Compliance Verification - EPA will conduct approximately a 10% overview unless pending ARB evaluation of the APCD inspection program shows a need for a higher level of activity. EPA will concentrate on sources of HC and PM.

State/Local Compliance Verification - This is primarily a local program. The APCD will verify the compliance status of all major point sources and report to ARB. ARB will insure APCD performance and report to EPA. EPA will provide direct grant support for the verification of sources of HC and indirect (Basic Program) support for the verification of sources of other criteria pollutants and for reporting.

AQMP - This is a regional program with ARB/EPA oversight. EPA will insist on close coordination of RAQS-II completion with the "208" wastewater management planning process. EPA financial support of these processes will be closely coordinated to avoid duplication.

The APCD will begin implementation of RAQS-II control measures. EPA will, for the short run, agree to having RAQS-II proceed toward a target of .20 ppm maximum oxidant concentration.

Fuel Additive - EPA will continue to provide needed contractual financial support to the ARB for State inspections and analyses.

Air/Energy Coordination - EPA and ARB will continue to encourage the PUC to make natural gas available in the basin. Upon completion of the ARB study of the quantitative relationship between fuel switching and air quality, ARB will, if appropriate, develop and adopt model rule revisions to control SO₂, NO_x and PM. The APCD will adopt needed changes. EPA will provide technical assistance and contract and/or grant support.

All agencies should carry out active public information programs to educate the public to the impact of fuel switching on air quality.

Emission Inventory Development - EPA will perform an in-house analysis of the adequacy of the APCD's inventory for reactive HC and PM. If indicated, the APCD will begin a multi-year effort to improve the inventory working closely with the EPA and the ARB on priorities. EPA will request R&D or other contractual study of transport from LA and insure involvement of SCAPCD.

New Source Review - Full authority for local control of new sources should be delegated as quickly as possible. A timetable is described in EPA's FY 1976 grants with ARB and the SDAPCD.

Emission inventory (Data Handling) - This is a joint local/state/federal effort to improve the APCD's data handling system to allow routine access for modeling in support of AQMP and other programs. It will probably mean installation of EIS/P&R software and conversion of existing data to the new format. If required, EPA will participate financially with grant and/or contract assistance. ARB will also contribute resources to the effort and coordinate with statewide data management system.

Air/Transportation Coordination - All agencies will continue the current level of liaison with transportation planning (109(j)).

EIS Review - All agencies will insist on a thorough treatment of the air quality impact of any projects in the AQCR.

Air/201 Coordination - ARB and EPA will continue to work through pre-certification liaison and the EIS/EIR mechanism to mitigate air quality impacts of any expansion of treatment capacity in the AQCR. The APCD will continue its current role.

Quality Assurance - This is primarily a state/local program to standardize operation and calibration procedures. ARB will assist the APCD to implement ARB-developed operation and calibration guidelines.

In-stack monitoring - EPA will defer to the State program if satisfactory progress is maintained.

STRATEGY

The oxidant problem is the most serious and challenging of San Diego's problems and merits top priority. Programs which directly reduce emissions should be implemented immediately. Further definition of the oxidant and particulate problems (refinement of the emission inventory) are also required. The APCD feels that transport from LA (which definitely exists under certain meteorological conditions) needs further study immediately. EPA agrees that it must be addressed but sees it more as a long term goal. A similar situation exists with respect to Mexican emissions. In the long run, San Diegans will not support highly restrictive controls which they feel are only necessary to compensate for the excesses of others.

The institutional framework that has produced the Regional Air Quality Strategy must be preserved and, if possible, integrated with the "208" planning process.

AQCR #30 - SAN FRANCISCO BAY AREA

INTRODUCTION

The Bay Area is a major metropolitan center with a well defined, dense urbanized core surrounded by low density residential suburbs. Older suburbs are developing individual financial/commercial centers as they mature. The AQCR has 4 million residents, or about 23% of the state population. The Bay Area APCD does not control all of the area included in the AQCR since Northern Sonoma and Eastern Solano counties are controlled by other agencies in accordance with the ARB's air basin boundary amendments. The area has air quality violations of the oxidant and carbon monoxide standards. There have been historical violations of the SO₂ standard, although they were related to specific industries which have since discontinued operation; SO₂ remains a significant issue with the prospect of fuel switching and curtailment of natural gas supplies. Current EPA contracts should provide guidance on further SO₂ control efforts. The BAAPCD reports to EPA on 106 major stationary sources in the district.

PROBLEM

Oxidant:

The region experiences widespread, significant oxidant standard violations with occasional Stage I episodes in the South Bay Area. Some stations reported more than 400 violations of the one hour standard during 1974 with the maximum value being 3.4 times the standard. Of the 25 stations reporting in 1974 ARB data, only one demonstrated attainment; the monitoring system is judged adequate to characterize the problem.

Carbon Monoxide:

Areas of the Bay Region do experience violations of the 8-hr CO standard. These are local conditions. Monitors at Burlingame, San Francisco, San Jose and Vallejo showed more than one exceedance during 1974. San Jose and Vallejo have the most significant problem with over 20 days of violation reported in 1974.

Nitrogen Oxides:

The AQCR is apparently not in violation of the annual arithmetic mean standard, however, NOx control is part of the oxidant control program. Violations of the 24-hour State standard (NO2 0.25 ppm) were recorded at Redwood City, San Jose, San Leandro and Sunnyvale in 1974.

Sulfur Dioxide:

The AQCR has apparent attainment of this standard. Due to the likelihood of natural gas curtailment and attendant switching to fuel oils with higher sulfur content, the AQCR was designated an AQMA for SO2.

Particulate:

The AQCR is in technical compliance with this standard as the annual geometric mean reaches within only a couple micrograms per cubic meter of the annual geometric mean standard. The problem of maintenance is at issue with the prospect of natural gas curtailment and the combustion of particulate forming fuels. The AQCR was designated an AQMA for particulate.

GOALS

Eighteen month:

Encourage and actively support comprehensive regional environmental planning providing for the attainment and maintenance of air quality standards. [Environmental Management Task Force jointly with and including the Bay Area Air Pollution Control District].

Advance, support and enforce available technological controls to ensure appropriate levels of control of new or existing stationary sources.

Support and oversee development of an accurate and updated data base.

Five Year:

Oversee implementation of Environmental Management Plan, approve AQMP elements as revisions to applicable SIP.

PROGRAMS

Vapor Recovery (hydrocarbon/oxidant):

The local effort should be supported through \$105 grant funds if requested. The vapor balance system being implemented can be upgraded to vacuum assist should the increase in capture appear to be significant and cost-effective considering the long lead time required to implement it. To require vacuum assist now would delay existing efforts for a year while regulations are amended to match an EPA promulgation.

Other Organics (hydrocarbon/oxidant):

The existing program for hydrocarbons control should be reviewed to check for exemptions of significant sources. Such a regulation review should be performed jointly by the ARB, BAAPCD and EPA. Should the district not act to upgrade a weak regulation the State would be in a position to adopt appropriate regulations. The program grant will be employed to provide timely ARB/BAAPCD cooperation. The results of this program are to be fed into the inventory/baseline requirements of the EMTF (AQMP).

Energy Coordination (sulfur dioxide, particulate):

In most respects this program will be aimed at mitigating the impacts of natural gas curtailment and educating the public as to the consequences of fuel allocation programs.

Through the \$105 grant the BAAPCD should be encouraged to consider regulations for SO₂ emissions from all fuel oil burning sources specifying an emission limitation and providing for both annual update, reporting (of percentage of time fuel oil was burned, etc.) and requiring appropriate monitoring to detect violations of the standards. [The current approach by the district has been to consider sulfur content regulations, however, this approach assumes an adequate, economical supply of 0.5 sulfur fuel oil which is not necessarily going to be the case. The district has estimates that fuel oil of up to 4% sulfur may in fact be all that is available.]

The EPA role in this program should begin with projections of the SO₂ impact potential should all interruptable customers be curtailed with varying percentages of sulfur fuel oils being available. Proper preparation and distribution of these results through the Office of External Relations could aid in building public support for allocation of natural gas based on impact. EPA should also testify on the impacts of natural gas curtailment at FPC, FEA, and PUC public hearings to insure that the issue is properly presented to those decisionmakers.

Fuel Additives (hydrocarbon/oxidant, carbon monoxide):

This is a program funded by EPA headquarters through a statewide contract to ARB which provides for 2500 inspections for a FY'77 budget of \$44,000. It is an important program in terms of preserving the efficacy of the catalytic devices in use, but requires no local and little or no Region IX funding or effort.

Transportation Coordination/EIS Review:

As in other AQMA's EPA should remain active in reviewing the efforts of other Federal agencies. The baseline review criteria is a zero net increase in emissions resulting from project construction and operation. [This criteria is consistent with that used in New Source Review and recommended for 201 facility Air/Water coordination.] Implementing this program shall be through coordinating with the Intermodal Planning Group by commenting on the Overall Work Program. Further EPA shall comment to FHWA as required during the §109(j) consistency review process. Comments to the IPG and FHWA shall be made utilizing whatever contribution is possible from the EMTF, thus providing EMTF with a conduit to these important transportation decision points.

EPA Compliance Verification (hydrocarbon/oxidant):

EPA should ensure that all major point sources are in CDS and are being followed by the district. Emphasis should be on sources of hydrocarbons. This effort would be ongoing in order to pick-up any sources included in the program following any regulatory changes found necessary and after review of existing regulations. EPA to commence the

process by requesting a justification as to why all reported NEDS sources are not included in CDS. EPA will oversee the district program by inspection of selected sources.

EPA's role will include compliance verification for Federal facilities. Of specific note in this area are the unknown emissions from jet engine test cells and jet fuel dumping during simulated emergency conditions. An effort will be pursued to identify the magnitude of these emissions and include them in the inventory.

State/Local Compliance Verification (hydrocarbon/oxidant):

The major compliance verification effort remains a State local responsibility, reporting their progress through C.D.S. Since this is essentially a part of the basic program the \$105 grant would provide specific funding for inspection of hydrocarbon sources only.

Air/Water Coordination - 201/208:

Most of the major regionalizations under the construction grant program will be granted within the next 19 months. EPA's position with regard to these facilities should be consistent with its position on similar actions [New Source Review, 109j consistency, EIS comments, etc.], that is, that the operation of the facility (secondary impacts in this case) not result in a net increase in emissions. This policy would have a direct effect on the issuance of grants to those future projects prior to completion of the AQMP (Environmental Management Plan) and to those projects not yet past the final EIS stage. While this step does not, of itself, directly reduce emissions and thereby improve air quality, it would preserve options for AQMP and 208 planning to improve air quality/reduce population exposure through planned decisions for amount, location and phasing of increased capacities. For comments on 208 see AQMP.

AQMP (oxidant, sulfur dioxide, particulate):

In this AQMA, the AQMP task force has been combined with the 208 citizens advisory group to form the Environmental Management Task Force (under ABAG's Regional Planning Committee) which will carry out both functions. The significance of the merger has been emphasized as a national

precedent and should continue to receive EPA support. The mechanism for support is twofold. The \$105 grant to ARB can embody funds to be 'passed through' for tasks required by the EMTF for AQMP needs. Similarly the \$105 grant to the BAAPCD should provide for its policy representation, guidance, technical assistance, staff liaison and staffing commitment to the EMTF. Direct EPA support through staff assistance will continue through the double representations of one air staff member and one water staff member, thereby insuring a consistent, unified EPA voice to the EMTF.

Instack Monitoring:

This program will be of benefit in terms of monitoring emissions from power plants and certain refinery processes for NOx and SO2. The mechanism is through straight Federal Regulation. The results of this program will support the EMTF (AQMP) effort as well as efforts to improve the inventory. It may provide a way of verifying compliance (or provide basis for enforcement actions) for major source of these pollutants.

Imported Auto:

The Bay Region is a major port involved in offloading imported vehicles. Currently headquarters has an agreement with Customs to inspect these vehicles for compliance with Federal requirements. The regional office has no role in this program and should make sure that staff know proper referral agencies.

New Source Review:

This program is not specifically mentioned since the ARB is providing consistent NSR regulations and procedures statewide. The BAAPCD regulations will either be found equivalent to the State regulation or the State will adopt regulations for the district.

STRATEGY

The operating principles in the AQCR are to continue potentially productive planning efforts, support measures contributing directly to emissions reductions and to avoid administrative disagreement with local agencies over levels

of control attainable by programs unless the discrepancy becomes significant. Enforcement activity will be primarily aimed at controlling emissions from hydrocarbon sources, beginning with a joint review of existing regulations and carrying through to enforcement against sources that are out of compliance. Enforcement against sources of pollutants not currently in violation of standards will have a lower priority. Review of EPA actions unrelated to air programs, EIS reviews, transportation plans, etc. shall be uniformly judged against a 'no net increase in emissions' criteria.

* See Errata for additional program narrative on Quality Assurance and Emissions Inventory Development

ERRATA

FY-77 REGIONAL AIR STRATEGY

AQCR #30 - SAN FRANCISCO BAY AREA

Quality Assurance (all pollutants): This is primarily a State and local program (both State and local agencies operate air monitoring networks). The State is implementing a quality assurance program statewide. EPA's primary role is to provide guidance and perform audit checks to assure validity of the data.

Emissions Inventory Development: Like many other high priority programs, this must be a cooperative effort. The local agency would have primary responsibility for improving their data base. The improved data base will be instrumental in assisting both AQMP and New Source Review decisions. Owing to the large volume of data involved, and the anticipated need for areawide modeling, improvements to the District's data handling capability seem to be indicated. EPA grant and/or contractual support will supplement non-Federal resources. ARB is to coordinate the overall State effort, resolve technical issues (selection of industrial categories, for example) and help set priorities. Top priority should be given to stationary sources of HC, followed by PM, SO₂, NO_x, and CO.

AQCR #31 - SAN JOAQUIN VALLEY

Emissions Inventory Development: Like many other high priority programs, this must be a cooperative effort. The local agencies would have primary responsibility for improving their data base. The improved data base will be instrumental in assisting both AQMP and New Source Review decisions. Kern and Fresno counties may have to improve their data handling capabilities by installing the EIS/P&R system. EPA grant support will supplement non-Federal resources. ARB is to coordinate the overall State effort, resolve technical issues (selection of industrial categories, for example) and help set priorities. Top priority should be given to stationary sources of HC (the reactivity issue must be resolved) followed by CO and PM.

AQCR # 31 - SAN JOAQUIN VALLEY

INTRODUCTION

The San Joaquin Valley covers the area from the crest of the Coastal Range to the midline of the Sierra Nevada, from San Joaquin County on the North to Kern County on the South. The ARB has split out some of the northern foothill and mountain areas into the separate Mountain Counties Air Basin which extends North into the Sacramento Valley AQCR. Development is found in a string of medium sized metropolitan centers generally following the alignment of U.S. 99. Many smaller communities are distributed around the valley serving the agricultural community. The AQCR contains 1.74 million residents. The air quality is persistently in exceedance of the oxidant and TSP standards. Some urban areas experience CO violations. Enforcement receives reports on 347 point sources in the AQCR.

PROBLEM

Oxidant problem is persistent, pervasive and significant. Three stations violated the 1 hour standard more than 100 days. Kern County recorded a stage I episode during 1975. The data base is acceptable for strategy development. Sources are mainly vehicle related with more work necessary to ascertain oil field emissions.

GOALS

Eighteen month:

Support local implementation of programs having direct effect of reducing emissions of problem pollutants. This does not include particulate matter since the problem appears to be non-point source generated.

Support State/local planning, particularly AQMP as the favored program for providing attainment and maintenance. State program equivalent to Prevention of Significant Deterioration should be supported.

5 Year:

Support implementation of AQMP and equivalent of P.S.D.

Carbon Monoxide violations of the 8-hour standard have been found at four of the five monitoring station (Bakerfield (79), Modesto (2), Stockton (28) and Visalia (23)). The data is acceptable and identifies a wintertime, vehicle related urban problem.

Particulate violations of the annual geometric mean occurred pervasively over the valley with three station exceeding the 24 hour primary standard more than once (Bakerfield, Fresno, Kern Refuge). Agriculturally related fugitive dust appears to be the major cause of the particulate problem; none appear to be specifically associated with major point source problems.

GOALS

PROGRAMS

Vapor Recovery (hydrocarbon/oxidant)

Several districts adopted Phase I V.R. under the FY-75 program grant. While the overall effort should be state responsibility EPA will continue to support Phase II in funded districts. ARB will support the program in metropolitan areas on the valley floor with foothill implementation being a lower priority. The State's effort will be supported as there are doubts whether EPA's effort to expand the areal scope of the program would be accompanied by significant decreases in emissions.

Other Organics (hydrocarbon/oxidant)

A joint EPA, ARB, local review of regulations will be conducted in order to see if currently exempt sources are significant. The effort can be supported by inventory improvement in such areas as oil-field emissions. Solvent controls are adopted by EPA-funded districts, the State should insure that all districts have equivalent regulations; this can be accomplished by a grant objective in the State.

Quality Assurance (Oxidant, CO)

CO data for the AQCR is acquired by relatively few mointors. EPA site visits should be conducted to see that available instruments are properly located, exposed, and operated. Evaluation of the adequacy of the network itself may be an output of the AQMP effort.

State/Local Compliance Verification (hydrocarbon/oxidant, etc.)

This is the major mechanism for assuring source compliance with existing regulations. Since it is a part of the basic program conducted by districts; EPA will provide funding for inspection of sources contributing to the hydrocarbon/oxidant problem.

EPA Compliance Verification (hydrocarbon/oxidant)

This an overview of local efforts conducted by EPA personnel of 10% of the sources. Since most sources in this AQCR are particulate emitters and work is also scheduled to review the hydrocarbon regulations, this program should be directed principally at hydrocarbon sources for which there are rules now and will be included under new rules as they are adopted.

Air Quality Maintenance Planning (oxidant, particulate)

There are three areas in the AQCR that are identified as Air Quality Maintenance Areas. The progress in these areas has been relatively slow. Continued support through funding by 'pass through' to ARB and by direct \$105 funding to concerned APCDS should be provided. The reluctance on the part of local agencies, officials and the public may well be traced to a low public awareness of the costs of air pollution. A State or EPA Public Relations effort highlighting the cost of agricultural crop damage may be beneficial.

Prevention of Significant Deterioration

The State has not accepted the EPA PDS program and is in the process of developing a concept using Air Conservation Areas which would apply to all criteria pollutants. Whichever program the State ultimately endorses and implements should receive EPA policy support.

Air Transportation Coordination (hydrocarbon, CO)

This effort will continue through EPA participation as an ad-hoc member of the Intermodal Planning Group, comments on the D.O.T. Overall Work Program and advisory comments to F.H.W.A. under Section 109(j) of the Federal Aid Highway Act. AQMP task force comments should be solicited by EPA to ensure their involvement and eventual assumption of the major technical review task.

201 A/W Coordination

This effort will continue, especially in AQMAS. The effort will be to involve the AQMP task forces and the ARB in making the decisions necessary to insure intermedia consistency.

EIS Review

Continue to offer comments on projects whose emissions will further deteriorate or prevent attainment of the NAAQS.

Fuel Additives (hydrocarbon, CO)

The State is implementing this program under a contract from EPA headquarters with small Region IX contribution. This should continue.

STRATEGY

1. The major issue is consistency of programs throughout the AQCR. The programs implemented in funded APCDs have little regional impact if non-funded APCDs don't have comparable regulations and implement them. This requires close coordination with ARB in sharing the the responsibility.
2. Coordination with BLM/Forest Service/Park Service to implement air conservation area scheme in mountain areas or PSD whichever appears to be the most visable. At this time the State's lack of interest in PSD and emphasis on their program would indicate that Federal cooperation with the State, encourage by EPA, would have benefits.
3. Long term programs (I/M, AQMP) have best chance of achieving/maintaining NAAQS. These programs are slow at present. AQMP is being received reluctantly. Greater EPA emphasis/presence at Task Force meetings might aid in convincing APCDS-local governments of EPA's seriousness for these long term efforts.

* See ERRATA for additional program narrative on Emissions Inventory Development.

AQCR #32 - SOUTH CENTRAL COAST

INTRODUCTION

This AQCR is located along the coast of central California, north of Los Angeles, stretched between Pt. Conception in the south and Monterey County in the north. The AQCR is scenic and mountainous with most of its 253,000 inhabitants located in scattered valley population centers. Petroleum production and refining (primarily associated with natural gas fields in northern Santa Barbara County) and electrical power production are the major industries of concern from an air quality standpoint.

Since there are only 12 known major stationary sources in the AQCR, the efforts of local control agencies are quite low key. The Santa Barbara County APCD expends the vast majority of its resources in the narrow strip of the county south of the Santa Ynez Range that lies in the Los Angeles Metro AQCR.

Geographically, the area has coastal areas suitable for deepwater/offshore port development. Owing to the strong protectionist sentiment of Santa Barbara, however, San Luis Obispo County seems the more vulnerable of the two counties to development pressures.

PROBLEM

NAAQS are attained for all pollutants except oxidants. All four monitoring stations showed low-level violations in 1974. The most serious was at Santa Ynez with 56 days in violation and a maximum one hour concentration of .17 ppm. San Luis Obispo had 11 days in violation and a .15 ppm maximum one hour concentration (ARB data - non adjusted). The cause of the problem is unknown. A refinery and a large gas field in Santa Barbara may contribute significantly to the problem there.

GOALS

The following goals are based on the problems outlined above. Both short-term (18-month) and long-term (5-year) goals are listed.

Eighteen-Month:

Work to improve the definition of the oxidant problem by seeking to verify the accuracy of air quality data.

Providing the data is verified, improve the emissions inventory for HC in order to determine the cause of the oxidant problem.

Five-Year:

Continue to monitor trends in the apparent oxidant problem and to determine its scope and its causes while building local agency capability to deal with it.

Monitor the effects of any changes in fuel use at the huge Morro Bay Power Plant in San Luis Obispo County.

Work to limit the introduction of additional emissions in the AQCR as necessary to maintain NAAQS for CO, PM, SO_x and NO₂.

PROGRAMS

The following programs are directed toward achieving the goals outlined above.

New Source Review - EPA will carry out a thorough review of new sources, particularly of HC, until the program is delegated. Delegation, particularly for San Luis Obispo, should be scrutinized by EPA and ARB to be sure they have the technical capability to make the required analyses.

Quality Assurance - EPA will conduct site visits to analyze the accuracy of oxidant monitoring data in the AQCR. This will be done before taking any further action on the apparent Ox problem. If the data is not valid, no action will be taken on the following two programs.

Emission inventory - Working with the APCD, EPA will perform a brief in-house review of the existing emission inventory for HC in northern Santa Barbara County to determine the scope of any needed improvements. EPA will then ask the APCD to make these improvements and will provide grant assistance. This may be a 2 year effort.

EIS and 201 Coordination - If the oxidant problem is verified by EPA's site inspections, careful air quality analyses of any growth related projects will be required by all agencies.

State/local compliance verification - The ARB will report to EPA quarterly on the status of major sources in the AQCR. EPA will support the reporting effort with grant assistance.

Prevention of significant deterioration - EPA will defer to state action. If indicated, EPA will be involved in low profile liaison with ARB in the classification of portions of the AQCR as Air Conservation Areas.

Air/Energy Coordination - A joint State/local EPA review of local regulations will be conducted to ensure that they are adequate to cope with changes in fuel use.

STRATEGY

The apparent oxidant problem must be verified before further action is taken. If it is real, its causes must be identified and dealt with. Overall, the AQCR must be watched closely so other problems can be prevented.

INTRODUCTION:

The Southeast Desert AQCR is a vast, arid, thinly populated area along the southeast border of California. Rainfall is less than 4 inches annually, so population centers and industry generally must depend on imported water. Industry is scattered with only 20 known major point sources operating in the AQCR.

The Region's population is fairly large at 661,000, but tends to be scattered in moderate sized population centers. The largest population centers are located at or near military bases (China Lake, Edwards), resort areas (Lake Arrowhead, Palm Springs) or irrigated agricultural areas (Imperial Valley).

On the surface there are two major factors which hinder progress on the AQCR's more serious air quality problem. First, the key air control agencies in the AQCR tend to concentrate on more severe problems elsewhere in their jurisdictions. Second, a major share of the AQCR's oxidant problem is imported. Fortunately, these problems tend to cancel out, rather than compound each other. The efforts of the Southern California APCD, the San Diego APCD and the ARB are directed toward reducing the same emissions which aggravate problems in the Southeast Desert.

PROBLEMS:

NAAQS were violated for oxidants and particulate matter in 1974. Oxidant concentrations more than triple the NAAQS are regularly recorded in the Coachella Valley. These levels are clearly influenced by transport from the Los Angeles area. Other lower level violations occur at Lancaster (.15 ppm maximum for 1 hour, 75 days), Victorville (.20 ppm, 108 days), Barstow (.15 ppm, 64 days) and El Centro (.17 ppm, 50 days). Transport is widely regarded as the most significant factor in all cases.

Particulate violations are widespread but are worst in the Imperial Valley where readings more than triple the NAAQS (Annual Geometric Mean) are recorded. With the exception of Calexico, violations are conventionally blamed on agriculture and fugitive dust. (Calexico is adjacent to some poorly controlled point sources in Mexico.) In fact, however, there is no data available to confirm this. Point sources may contribute significantly to the problem in areas like El Centro. (Note: The State standard for NO_2 (.25 ppm-1 hr.) was violated on 4 days in Barstow, but nowhere else. The Federal standard, which is an annual arithmetic mean, was not violated.)

GOALS:

The following short (18 month) and long (5 year) term goals are based on the problems described above.

18 month

Local APCD's will continue to conduct routine programs to control emissions from stationary sources.

EPA and ARB will maintain low profile surveillance of infrastructure investments (examples: highways, airports) which create development pressures in eastern Los Angeles and central Riverside counties. Local agencies may be asked for technical assistance on a case-by-case basis.

Begin development of a long-range plan to improve air quality in the Coachella Valley. (See also the "Los Angeles Metropolitan AQCR")

5 year

Overall, continue to assume that the solution to the oxidant problem lies in the solution to the Los Angeles and San Diego problems.

Mitigate the adverse environmental effect of development and population growth in areas like Palmdale and the Coachella Valley, to be sure localized problems do not develop.

Achieve a better definition of the PM problem in the AQCR. Initiate reasonable controls.

Monitor air quality trends in the AQCR to verify the assumption that the Los Angeles and San Diego AQCR's are responsible for oxidant problems in the Southeast Desert.

PROGRAMS:

The following programs are directed toward the accomplishment of the short-term goals described above:

AQMP/208 planning: EPA and ARB will use the AQMP process to involve local government in the Coachella Valley area in long-term planning. As the plan develops, it will probably be necessary to quantify the contribution of local sources to the Valley's air quality problems. AQMP will be largely a local effort with ARB oversight and EPA grant support.

201 Coordination: EPA and ARB will work with State and local agencies to ensure that 201 projects do not contribute to the deterioration of air quality in sensitive areas.

EIS Review: All agencies will carefully review projects which promote growth and development in order to mitigate adverse air quality impacts, particularly in the Palmdale/Lancaster area of Los Angeles County where there is no long-term planning effort (AQMP) to consider air quality problems.

State/Local Compliance Verification: Local agencies will determine, and the Air Resources Board will report, on the compliance status of major sources quarterly. Reporting will be funded by the EPA via the grant mechanism.

Air Monitoring: EPA will continue to insist on routine monitoring in order to track trends. Over a 3-year period, EPA will analyze trends in-house to determine if the trend in oxidant concentrations is consistent with that of the Los Angeles Metropolitan AQCR. If oxidant concentrations remain high, all agencies will need to look more closely at the emissions inventory to determine the cause.

STRATEGY:

Transport from Los Angeles is obviously a major factor in the high oxidant levels experienced in the AQCR. The basis of the EPA strategy is that the solution to the Los Angeles oxidant problem will also be the solution for the Southeast Desert. Since the PM problem appears to be related to fugitive emissions, there are no short-term programs to deal with it other than routine surveillance of major stationary sources.

REGIONAL AIR STRATEGY

REGION IX

ENVIRONMENTAL PROTECTION AGENCY

Geographic Narrative on the

Air Quality Control Region(s)

for the State of

Guam

March, 1976

REGIONAL AIR STRATEGY

REGION IX

ENVIRONMENTAL PROTECTION AGENCY

Geographic Narrative on the
Air Quality Control Region(s)
for the State of
Guam

March, 1976

TABLE OF CONTENTS
FOR
GUAM
FY-77 REGIONAL AIR STRATEGY

<u>Section</u>	<u>Page</u>
I. General Introduction	1
II. Basic Program	BP-1
III. Narrative	
AQCR #246 - Guam	G-1 to G-3

AQCR #246 - GUAM

INTRODUCTION

Guam is a small Pacific island characterized by a hot and humid climate, heavy rainfall, steady trade winds, and fairly even terrain except for a few small hills in the southern part of the island. The population (1970: 86,926) clusters in towns and villages and in the Air Force and Naval bases.

The air pollution problems are stationary source and fugitive dust related. Four steam generated power plants use high sulfur fuel and consequently violate sulfur dioxide standards. It is believed that the particulate violations are due both to such man-made activities as construction and unpaved roads.

PROBLEM

Based on 1974 data from the approved monitoring network, it appears that particulate matter is in violation of the primary national ambient air quality standards in Guam. Special spot sampling indicates that sulfur dioxide is in violation as well.

Particulate:

The island has one monitoring station which violated the primary annual geometric mean several times in 1974, with values as high as one and one-half times the standard. Fugitive dust and the power plants are believed to be the pollution sources.

Sulfur dioxide:

The power plants all burn high sulfur fuel (2.75 - 3.2%). Spot sampling indicates localized high sulfur dioxide levels, reaching four-five times the primary twenty-four hour standard.

GOALS

These goals were selected since they represent the best possible effort toward attaining the sulfur dioxide and particulate matter standards. We have grouped the goals according to those which can be reached within the next eighteen months and those achievable within five years.

Eighteen month:

Resolve sulfur dioxide attainment issue through the

upcoming court decision on power plants.

Insure local surveillance of major stationary sources and compliance with revised particulate and sulfur dioxide regulations.

Insure operation of the particulate and sulfur dioxide network in accordance with proper quality assurance practices and procedures.

5 year:

Prevent stationary source violations for particulate and sulfur dioxide.

PROGRAMS:

Compliance Verification: (particulate, sulfur dioxide):

GEPA will verify compliance of the six major stationary sources annually. EPA will support this effort through the 105 grant.

Isolated Point Source (particulate, sulfur dioxide):

GEPA has revised the particulate regulations, and designed a control strategy demonstrating attainment. The revision is awaiting Gubernatorial approval prior to submittal to EPA as an SIP revision. EPA executive liaison will be used to encourage final Guam approval of the regulations.

The current sulfur dioxide regulations are not approvable by EPA unless Guam requests an extension in the attainment date for this pollutant. We recognize Guam's concern about the economic infeasibility of requiring permanent controls or low sulfur fuel at this time. After the court decision regarding New Source Performance Standards and the Cabras power plant, EPA will work with Guam in designing an acceptable strategy dealing with sulfur dioxide.

Ambient Monitoring/Quality Assurance: (particulate, sulfur dioxide):

GEPA will be encouraged to follow accepted quality assurance practices and procedures for sampling and analysis, especially for the continuous sulfur dioxide instrument located at the maximum concentration sites. EPA will support this effort through the 105 grant.

Emergency Episodes (sulfur dioxide):

Until the Cabras court decision is made, GEPA will maintain this program minimally because of the potential for high sulfur dioxide build-up under certain meteorological conditions. The necessary regulations and use of power plant reduction plans will be enforced. The plan will be reevaluated, if necessary, after the court decision.

STRATEGY

Our strategy in air pollution control for Guam will be to encourage GEPA to assume most responsibilities. Since GEPA has indicated a low priority for air, we can assume the number of responsibilities carried will be few. EPA will continue to support one State assignee and contribute to the air pollution program through the consolidated grant in order to keep the program going. In summary, GEPA will continue to send EPA SAROAD, NEDS and CDS data, to conduct compliance verification inspections and to operate an air monitoring program with adequate levels of Quality Assurance.

REGIONAL AIR STRATEGY

REGION IX

ENVIRONMENTAL PROTECTION AGENCY

Geographic Narrative on the

Air Quality Control Region(s)

for the State of

Hawaii

March, 1976

TABLE OF CONTENTS
FOR
HAWAII
FY-77 REGIONAL AIR STRATEGY

<u>Section</u>	<u>Page</u>
I. General Introduction	1
II. Basic Program	BP-1
III. Narrative	
AQCR #60 - Hawaii	H-1 to H-3

AQCR #60 - HAWAII

INTRODUCTION

The Hawaii AQCR is an eight (major) island archipelago with strongly contrasting land forms which range from mountains, broad valleys, deserts to sandy beaches. Ambient temperatures remain fairly constant throughout the year. Rainfall varies throughout the islands, dependent more on location and elevation than season. Steady tradewinds from the northeast regularly sweep the islands clean of pollutants. The winds, plus the absence of large-scale industrial development have kept Hawaii free from large-scale air pollution problems.

Intensive use of the automobile in Honolulu has generated a carbon monoxide problem in the city. Hawaii's population (1970; 769,913) tends to cluster in urban centers like Honolulu, with the balance of the inhabitants spread throughout the largely rural agricultural areas that embrace the cities. Most air pollution problems in the rural areas are of a localized nature, for example, burning of cane fields and power plants.

PROBLEM

Based on 1974 data from the approved monitoring network, it appears that particulate matter is in violation of the primary ambient air quality standards in Hawaii. Special mobile monitoring indicates sulfur dioxide is in substantial violation of national standards.

Particulate: Fugitive dust is believed to be the chief cause for violations, which are low level. The primary annual geometric mean and primary second highest twenty-four hour value were well within standards for fourteen of the fifteen stations.

Sulfur dioxide: Special temporary monitoring near two power plants, Kahi on Oahu and Kahului on Maui, indicates violations four-five times the primary twenty-four hour standard. Based on data from permanent sulfur dioxide monitors, the sources are not in violation, but it is believed this is due to the location of monitors away from areas of maximum concentration.

GOALS

These goals were selected because they represent the best effort toward attaining the sulfur dioxide standard, attaining and maintaining the carbon monoxide standard, and preventing degradation of air quality for particulate matter. We have grouped the goals according to those which can be reached within the next eighteen months and those achievable within five years.

18 month:

Build up the stationary source inspection and compliance enforcement capability of the Department of Health.

Define clearly the extent and magnitude of the carbon monoxide problem, confirming its nature as hot spot or areawide.

Issue final sulfur dioxide regulations for the Kahi and Kahului power plants.

5 year:

Prevent stationary source violations for all criteria pollutants.

Develop and enforce a carbon monoxide attainment and maintenance program.

PROGRAMS

Compliance Verification (particulate matter, sulfur dioxide)

The State will conduct visible emission observations and some in-depth inspections of all 65 major stationary sources. EPA will support such efforts through 105 grant support. In addition, EPA plans a mid-year visit to conduct (1) an audit of the State's compliance verification program and (2) joint inspections with the State concentrating on sugar mills and federal facilities.

Isolated Point Source/Ambient Monitoring (sulfur dioxide)

EPA will design and set a contract to gather and analyze the sulfur dioxide from the two power plant sites to confirm the magnitude of sulfur dioxide violations. The State will then promulgate final regulations.

Ambient Monitoring (carbon monoxide)

The State will operate a temporary monitoring system to collect meteorological and carbon monoxide data both in Honolulu, and in various locations outside the city. EPA will support the State through the 105 grant program. The data will be used in reviewing new sources and in evaluating long-range land use and transportation planning.

Air/208 (particulate matter)

The 208 grant will encourage establishment of procedures to integrate air quality planning activities of the State with the 208 plan development.

STRATEGY

We recognize that annual or more frequent visits by EPA cannot substitute for permanent state presence. With the 105 grant and contracts, plus a mid-year visit by the Surveillance and Analysis Division personnel, we will support a minimum state presence. EPA will encourage development of sound, fundamental source surveillance and enforcement skills and ambient monitoring talents of State staff.

REGIONAL AIR STRATEGY

REGION IX

ENVIRONMENTAL PROTECTION AGENCY

Geographic Narrative on the

Air Quality Control Region(s)

for the State of

Nevada

March, 1976

REGIONAL AIR STRATEGY

REGION IX

ENVIRONMENTAL PROTECTION AGENCY

Geographic Narrative on the
Air Quality Control Region(s)

for the State of

Nevada

March, 1976

TABLE OF CONTENTS
FOR
NEVADA
FY-77 REGIONAL AIR STRATEGY

<u>Section</u>	<u>Page</u>
I. General Introduction	1
II. Basic Program	BP-1
III. Narrative for Nevada AQCR's	
AQCR #13 - Clark-Mohave	N-1 to N-5
AQCR #147 - Intrastate	N-6 to N-7
AQCR #148 - Northwest Nevada	N-8 to N-10

AQCR #13 - NEVADA CLARK - MOHAVE

INTRODUCTION

The Nevada portion of the Clark-Mohave AQCR, whose boundaries are contiguous with Clark County, is characterized by a semi-arid climate and varying terrain, ranging from desert basins to mountain peaks. The Las Vegas metropolitan area lies in a large bowl surrounded by mountains and is subject to inversion conditions, particularly in the fall-winter months. The population (1970: 273,300) concentration is in Las Vegas and the nearby communities of North Las Vegas, Henderson, and Boulder City.

Due to the sprawling low density nature of urban development and the reliance on automobiles for transit, the air pollution problems are predominantly mobile source related. Most of the fifty stationary sources are known to be in compliance with existing emission standards. Some problems remain with certain industrial processes (chlorine and similar compounds) located near Henderson.

It is suspected that the particulate violations are due to such manmade activities as construction and unpaved roads.

PROBLEM

Based on 1974 data from the approved monitoring network, it appears that carbon monoxide, oxidant, and particulate matter are the three pollutants in violation of the primary national ambient air quality standards in Clark-Mohave.

Carbon monoxide: Data from the two permanent stations posted, respectively seventy-two and sixteen violations of the eight-hour standard in 1974. Second highest readings were 1-1/2 times the standard. Near episode levels are reached occasionally; for example, during this winter, carbon monoxide levels were above 2-1/2 times the eight-hour standard.

Since the carbon monoxide network has been fully operational for only two years, no trend analysis has been performed. The violations are believed to be localized in areas such the length of the "Strip".

Based on an inventory completed in February, 1975, the majority of emissions are mobile source related.

Oxidant: Data from two permanent stations indicate a moderate oxidant problem, albeit a peculiar oxidant trend. In 1974, the second highest one-hour reading was twice the standard. The monitors posted forty-two and one hundred ninety one-hour violations, respectively.

The trend of oxidant violations over the past four years has been substantially downward. The number of violations in 1972 was 1500; in 1973: 775; 1974: 192; and in 1975: 29. The magnitude of the one-hour violation has remained the same, yet VMT has risen steadily. A satisfactory explanation for the contradictory evidence has not been found.

Based on the February, 1975 inventory, the majority of reactive-hydrocarbon emissions are mobile source related.

Particulate: The primary annual geometric mean (AGM) and second highest twenty-four hour value were well within standards for thirteen of the twenty particulate stations. Data from six additional stations was slightly over the AGM and 24-hour standard. Only one station posted readings up to 1-1/3 times the AGM and 24-hour standard.

An inventory currently under construction will help define the nature of the particulate problem.

GOALS

These goals were selected because they represent the best effort toward attaining and maintaining the carbon monoxide, oxidant, and particulate standards. We have grouped the goals according to those which can be reached within the next eighteen months and those achievable within five years.

eighteen month

Develop and enforce an oxidant control program that embraces vapor recovery and areawide transportation planning coordination.

Improve the carbon monoxide control program by upgrading the Inspection-Maintenance program, and continuing areawide transportation planning coordination.

Prevent stationary source violations, stressing particulate, carbon monoxide, and hydrocarbon sources.

five year

Broaden the oxidant control program to cover vapor recovery, State II, and possibly organics.

Prevent stationary source violations for all criteria pollutants.

PROGRAMS

Vapor recovery (oxidant): The Clark County District Health Department (CCDHD) will develop and enforce regulations to implement State I vapor recovery, which covers transfer from delivery trucks to gasoline stations storage tanks. These regulations will apply immediately to new stations and to existing stations through two-year retrofit. EPA will assist this effort through the 105 grant and will promulgate local regulations as part of the SIP.

Organics (oxidant): CCDHD will survey paint manufacturers, dry cleaning, degreasing, and architectural coating firms to understand the magnitude of their hydrocarbon contribution. No regulations will be developed at this time. EPA support will be via the 105 grant.

Ambient monitoring/quality assurance (oxidant, particulate, carbon monoxide): In association with EMSL, CCDHD will continue its quality assurance program for its air monitoring network. In addition, CCDHD will attempt to assess the unexplained trend in ambient oxidant levels. 105 grant support will be provided.

Inspection/Maintenance (carbon monoxide; oxidant): The existing program run by the Department of Motor Vehicles covers only change-of-ownership vehicles. Toward possible amendment of the I/M program, EPA will contract for a study that examines the cost, management, and air quality benefits of the current program and recommends means to improve the I/M program. EPA will work with the Environmental Commission, the State Department of Human Resources, and the CCDHD in designing a contract whose results will satisfy the information requirements of the Nevada Legislature.

Indirect source review (carbon monoxide): Program will be operated by CCDHD until January, 1977, when state statutory authority for indirect source reviews will expire. EPA grant assistance will be provided.

Air Quality Maintenance Planning/208 (oxidant, particulate matter, carbon monoxide): CCDHD will analyze the designation of the Las Vegas AQMA for carbon monoxide, particulate matter, and oxidant consistent with the requirements of 40 CFR 51.40 - 51.51. In addition, the CCDHD will review the PEDCO contract results which examined fugitive emissions and will adopt/amend local regulations to control emissions from agriculture, unpaved roads, construction, playgrounds, parking lots, and the like.

CCDHD will implement the public education campaign whose groundwork was laid in FY-76. In addition, a local citizens

advisory group will be developed, possibly dovetailed with the 208 citizen advisory group, to use as political means to support such control measures as vapor recovery, instack monitoring, and revision of old/development of new regulations. Control measures proposed would be sieved through such a task force prior to their formal proposal.

EPA will assist the AQMP effort through both assignment of an individual to the Health Department through the Interagency Personnel Act and the 105 grant.

CCDHD will be paid by the 208 grantee to oversee the secondary impact analysis of the 208 plan.

Non-criteria pollutants (chlorine): An investigation of the fugitive emissions associated with point sources in Henderson is warranted. EPA will support such an investigation through contractual assistance, possibly through EMSL. A scope of work will be designed jointly by CCDHD and EPA.

Instack monitoring (oxidant, particulate): CCDHD expresses support for the concept of continuous monitoring and is willing to develop equivalent regulations. EPA will support this effort through the 105 grant.

Air/Transportation planning (oxidant, carbon monoxide): CCDHD will continue to act as technical advisor to the Clark County Area Transportation Policy Committee. EPA will continue to foster this sound relationship as requested and will perform the annual 109(j) consistency reviews.

Compliance verification (particulate, carbon monoxide, oxidant): CCDHD will inspect all major stationary sources, and has expressed willingness to inspect some minors. EPA will support inspections of major sources of hydrocarbon and particulate matter and CDS reporting through grant priority objective; the balance of inspections supported through the basic program. It is anticipated that there will not be an EPA joint inspection overview for FY-77.

STRATEGY

Because the majority of carbon monoxide and hydrocarbon emissions are auto-related, the CCDHD has in the past two years expanded its approach to air pollution control to address mobile sources as well as stationary sources.

EPA will encourage this expanded approach and support adoption of regulations and programs dealing with mobile source related emissions. Because of the unexplained downward trend in oxidant violations, it is not advisable to adopt numerous, stringent hydrocarbon control regulations in FY-77

and expect easy public acceptance. Therefore, only Stage I vapor recovery will be adopted next year and an organic solvent survey conducted.

Stationary source compliance verification will continue as part of the basic program. Because EPA believes the compliance verification program to be sound (unless a spring 1976 visit proves otherwise), it will eliminate any overview function. Clark County will inspect major sources throughout the fiscal year for compliance verification and will report hydrocarbon and particulate source status to EPA through CDS quarterly.

EPA will commit through contract, grant and executive liaison work with the Nevada legislature to support indirect source review and inspection/maintenance as carbon monoxide control measures. If Congress breathes new life into indirect source review in the Clean Air Act amendments, then the local agency will ask for EPA assistance in ISR statutory extension. If Congress kills ISR, the State and locals will wage the battle alone, if at all.

Lastly, EPA will support the AQMP effort in Clark County through an IPA assignment and the 105 grant. A public education program developed in FY-76 will be launched in FY-77 in a low-key effort to raise consciousness about the definition and meaning of the pollution problems in Clark County. A local citizen task force will be developed to use as a political in support of a variety of control measures. Finally, the designation of the AQMA will be thoroughly analyzed and development of an AQMP launched.

NEVADA INTRASTATE AQCR # 147

INTRODUCTION

The Nevada Intrastate AQCR is a huge, sparsely populated (1970: 63,116) land mass cut by north-south mountain ranges interspersed with valleys. Rainfall, temperatures, and even economic activity vary considerably throughout the AQCR. Elko (1970: 7,600), the largest town in the region, is one of many settlements serving as economic centers for the livestock, agriculture, and mining industries in the region.

The AQCR has particulate and sulfur dioxide problems. It is believed that stationary sources are largely responsible.

PROBLEM

Based on 1974 data from the approved monitoring network, it appears that particulate matter and sulfur dioxide are the two pollutants in violation of the primary national ambient air quality standards (NAAQS) in the Nevada Intrastate.

Sulfur dioxide: Violations, which exceeded the twenty-four hour standard up to a factor of three, are caused by the Kennecott copper smelter located in Ely. EPA's suit requiring more stringent emission controls than either the smelter or state felt were necessary is now moot since Kennecott has decided to close the smelter.

Particulate: The primary annual geometric mean (AGM) and second highest twenty-four hour value were both just above standards for two of the twelve monitoring stations. Seven stations recorded no violations. The balance had violations for either the twenty-four hour or AGM standard. The 1973 emission inventory for particulate attributes the majority of particulate emissions to stationary sources as opposed to fugitive dust.

GOALS

These goals were selected because they represent the best effort toward attaining the particulate standard and preventing degradation of air quality.

eighteen month and five year

Prevent deterioration of air quality by enforcing current programs and revising regulations as needed.

PROGRAMS

Compliance verification: *The State will conduct compliance verification inspections of the fifty major stationary sources using acceptable techniques. EPA will support such efforts through 105 grant support. EPA also will conduct joint inspections and will audit the State's compliance verification program.

Instack monitoring: The State endorses the concept of continuous monitoring and will adopt equivalent regulations. EPA will provide 105 grant assistance.

Indirect source review: The State will conduct indirect source reviews until its authority expires. EPA will support this effort through the grant.

Prevention of Significant Deterioration (particulate, sulfur dioxide):

The State will develop equivalent regulations and request delegation of the program. EPA will develop delegation procedures and support the State effort through the 105 grant.

Isolated Point Sources (sulfur dioxide):

The Nevada legislature has ordered a study of the social and economic impacts of the existing power plant regulations. EPA will offer contractual assistance to the State in executing the study. In addition, if requested, EPA will testify on behalf of the stringent State regulations before the legislature in FY-77.

STRATEGY

The State's small environmental protection Division traditionally has been oriented toward stationary source compliance verification and enforcement. EPA will continue to support this orientation through the 105 grant, overview inspections, and an audit.

EPA will also support the ISR function via the grant through the first half of FY-77. There are two reasons: 1) The ISR has served to modify (to the advantage of air quality) the design of indirect sources built in the critical Tahoe Basin and 2) EPA has a moral commitment to support Nevada for six months since we persuaded them to adopt the regulations in the first instance.

The State has expressed desire to broaden its activities to include long-range air quality planning. EPA would support service as technical advisor to the State Department of Highways on transportation planning and to the local agencies for AQMP and 208 planning.

*modification per
ENF DIV request.

AQCR #148 - NORTHWEST NEVADA

INTRODUCTION

The Northwest Nevada AQCR is marked by a seasonally varied climate, desert and mountainous terrain, and varied rainfall. The northern part of the AQCR is very sparsely settled; most of the population is found in valleys, which accomodate small towns, and large cities such as Reno-Sparks (1970: 97,100) and Carson City (15,500). A large Paiute Indian tribe lives on a reservation north of Reno near a large lake (Pyramid Lake).

Reno-Sparks, which lies in a large north-south valley known as Truckee Meadows, has a confirmed particulate problem and an emerging carbon monoxide (and possibly oxidant) problem.

PROBLEM

Based on 1974 data from the approved monitoring network, it appears that particulate matter and carbon monoxide are in violation of the primary national ambient air quality standards (NAAQS) in Northwest Nevada. Data from an air quality study contracted by the Nevada Department of Highways will be formally released in early spring, but information received to date indicates the Study found carbon monoxide and possibly oxidant to be in violation of the NAAQS.

Particulate: The primary annual geometric mean and second highest twenty-four hour value were two-four times the standards for four of the nine permanent particulate monitors. Data from two additional stations indicates violations of the AGM just above the standard. The suspicion that fugitive dust is largely responsible for the particulate problem is being explored and confirmed by an emission inventory due in June, 1976; the contract will also characterize the nature of the fugitive dust and mitigation measures.

Carbon monoxide: The second highest eight hour values were slightly above the standard for the carbon monoxide monitor located in Reno. An emission inventory is scheduled for completion April, 1976.

GOALS

These goals were selected because they represent the best effort toward attaining the particulate standard and drawing up a plan of action to address the carbon monoxide (and oxidant) problem. We have grouped the goals according to those which can be reached within the next eighteen months and those achievable within five years.

eighteen month

Ensure the quality of data from the carbon monoxide and oxidant stations.

Develop a carbon monoxide control program, beginning with an AQMP designation for CO.

Implement where possible the particulate control measures outlined by contract.

five year

Develop and enforce an oxidant attainment and maintenance program, if necessary.

PROGRAMS

Air monitoring/quality assurance (carbon monoxide; oxidant): EPA jointly with the Washoe County District Health Department (WCDHD) will perform a formal audit of the carbon monoxide and oxidant network, including side-by-side monitoring.

Indirect source reviews (carbon monoxide): Program will be operated by WCDHD in Washoe County until January, 1977, when state statutory authority for indirect source reviews will expire. EPA will support ISR through the grant. The state will perform reviews for sources in the AQCR outside Washoe County.

Air/Transportation planning (carbon monoxide; oxidant): WCDHD will continue to act as advisor to the Washoe County Area Transportation Policy Committee. EPA will continue to foster this sound relationship as requested and will perform the annual 109 (j) consistency review.

201 - EIS (carbon monoxide; oxidant): In FY-77, a sewage treatment plant expansion grant may be offered to the City of Reno. One alternative plant plan would accomodate twice the current population. EPA will work closely with the EIS contractor to produce an acceptable secondary air impact analysis and to design reasonable mitigation measures.

Compliance verification (particulate): WCDHD will verify compliance of the six major stationary sources and report their status to EPA via CDS. EPA will support this effort through the grant.

Instack Monitoring: The WCDHD endorses the concept of continuous monitoring and will adopt equivalent regulations. EPA will offer 105 grant assistance.

AQMP/208 (carbon monoxide; oxidant; particulate):

WCDHD analyzes the designation of the Reno-Sparks AQMA for particulate matter consistent with the requirements spelled out in 40 CFR 51.40 - 51.51. WCDHD will also perform a similar analysis for carbon monoxide, and, if warranted, will designate the area as an AQMA. EPA will offer limited grant support.

WCDHD will also develop a public education forum for Reno's air pollution problems using the Blue Ribbon Task Force. The Task Force will review the particulate control measures outlined by contract and make a selection of feasible measures. EPA will cooperate and assist the program as requested, but no grant assistance will be offered. The HD will continue its liaison with W-COG, the 208 agency.

STRATEGY

The Washoe County District Health Department is in the process of improving its technical capability and professional credibility. This effort should be supported by EPA. EPA will provide training funds to cover, generally, compliance verification of stationary sources and short- and long-range air quality planning. Specific training needs will be identified by WCDHD; a specific plan to satisfy those needs will be worked out between EPA and WCDHD.

Starting now, EPA is committed to shaping the EIS for the 201 project to address air quality impacts and to mitigate adverse impacts. Early in the next fiscal year, EPA will audit the CO and Ox monitors to ensure that the data recorded is sound, and trends can be properly tracked. WCDHD will refine its AQMA effort and continue its liaison with the local transportation planning agency and the 208 grantee.