

US EPA ARCHIVE DOCUMENT

**REASONABLE FURTHER PROGRESS**

**DRAFT CONCEPT/ISSUE PAPER**

9/16/98

REASONABLE FURTHER PROGRESS  
IMPLEMENTATION GUIDANCE FOR REVISED NAAQS

BACKGROUND

- This set of issues relates to RFP for the 8-hour ozone NAAQS (other than transitional classification). There is linkage, however, to the ROP process for the 1-hour O<sub>3</sub> NAAQS.
- For areas still nonattainment for the 1-hour O<sub>3</sub> NAAQS, RFP for the 8-hour O<sub>3</sub> NAAQS prior to the attainment date for the 1-hour NAAQS will be the rate of progress requirements for the 1-hour NAAQS under subpart 2, part D, Title I of the Clean Air Act.
- For particulate matter, RFP for PM<sub>10</sub> will remain as currently required. For PM<sub>2.5</sub>, EPA is still examining options, but until more ambient air quality data are available and more is known about the nature and extent of PM<sub>2.5</sub> problems, it is premature to provide any firm guidance.

Statutory

- Some form of RFP (linked to emissions reductions) is required for the SIP by CAA.
  - Subpart 1 (applicable to the 8-hour ozone NAAQS and the PM 2.5 NAAQS) contains a fairly general requirement that the SIP include a demonstration of RFP, and defines RFP as “such annual incremental reductions in emissions of the relevant air pollutant as are required by this part or may reasonably be required by the Administrator for the purpose of ensuring attainment of the applicable national ambient air quality standard by the applicable date.”
  - Subpart 2 (applicable to the 1-hour ozone NAAQS) contains a much more rigorous application of RFP for ozone nonattainment, and specifies fixed annual percent reductions.
  - Under the Clean Air Act Amendments of 1990, RFP has been less prescriptive for PM nonattainment (Subpart 4) than for O<sub>3</sub> under subpart 2.

Reactions

- States have mixed reaction to the prescriptive form of ozone RFP under subpart 2-- it levels the field across States, but some States feel that other amounts or schedules would make more sense.
- Ideas from FACA process included the use of administrative milestones and air quality, in addition to emissions reductions, as a means of demonstrating RFP.
- States, in general, oppose the use of air quality as a mandatory measure of RFP.
- States, in general, want some basic minimum emissions reduction requirement, with flexibility to tailor programs to needs of specific nonattainment areas.
- States, in general, prefer a fixed time period for the RFP demonstration.

Presidential Directive

- The 7/16/97 Presidential Directive notes “Nonattainment areas that do not attain the 1-hour standard by their attainment date would continue to make progress in accordance with the requirements of Subpart 2; the control measures needed to meet the progress requirements under Subpart 2 would generally be sufficient for meeting the control measure and progress requirements of Subpart 1 as well.”

ISSUE 1      Rate of emission reductions--What emission reductions should be targeted in the SIP for the 8-hour O<sub>3</sub> NAAQS for what period of time?

DISCUSSION:

--Definition is “*annual* incremental reductions in emissions. . .”

--Purpose is to ensure that not all reductions are held until last moment.

OPTIONS:

Option 1. All reductions needed for attainment must occur by the ozone season in the attainment year; none required earlier.

Option 2. Some fraction of the reductions needed for attainment must (or is recommended to?) occur at specified deadline (e.g., 1 year) prior to attainment date.

ISSUE 2      Timing of demonstrations-- when must states demonstrate that they have met their RFP targets for the 8-hour O<sub>3</sub> NAAQS?

DISCUSSION:

--All measures needed for attainment of the 8-hour O<sub>3</sub> NAAQS (additional beyond those needed for 1-hour standard) would have to be implemented within two or three years after the 1-hour standard attainment date (or after SIP submission in 2003); therefore, a mid-point check (at 1 or 1.5 years) would be inconsistent with the Subpart 2 three year milestone compliance period (and also the approach for transitional areas).

--Subpart 1 does not specifically require a milestone compliance check of whether RFP is being met. Sect. 172(c)(2): “Such plan provisions shall *require* reasonable further progress.” Sect 172(c)(9): “. . . plan shall provide for implementation of specific measures to be undertaken *if the area fails to make reasonable further progress* or to attain the national primary ambient air quality standard. . .” [Emphasis added.]

OPTIONS

Option 1. At mid-point of period between plan implementation and attainment date.

Option 2. After the 8-hour O<sub>3</sub> attainment date passes.

ISSUE 3. Measures of RFP--What is the test for assessing RFP?

DISCUSSION:

- CAA defines RFP in terms of emissions.
- Ideas from the FACA process included administrative and air quality metrics (although environmental groups and some State agencies opposed air quality metrics).
- Some States are wary of air quality metrics and favor administrative and emissions metrics.
- The test for an attainment date extension will rely on “clean air” and implementation of SIP control measures; this test should not be inconsistent with the measures used for assessing RFP.

OPTIONS:

- Option 1. Administrative--(e.g., level of compliance with adopted rules)
- Option 2. Emissions reductions (or surrogate indicators)
- Option 3. Air quality (e.g., attainment or clean air)
- Option 4. Combination (see Attachment 1)

ISSUE 4. Corrective mechanism: What should be the response for failure to meet RFP?

DISCUSSION--

- For comparison: Subpart 2 (Sect. 182(g)) (O<sub>3</sub>--1-hr NAAQS) requires election of one of 3 choices for serious and severe areas that fail meet the RFP requirements: (a) bump-up to next higher classification; (b) implement additional measures (including contingency measures) to catch up; (c) economic incentive program.
- FACA process generated idea of iterative RFP process that was well received by most parties. (See the flow diagram in Figure 1, which is adapted from the diagram generated in the FACA process.)
- State & local agencies expressed encouragement for use of the iterative process.

OPTIONS:

- Option 1. Iterative process with weight of evidence test (see flow diagram, Figure 1 and description).
- Option 2. Implement contingency measures & any other immediate penalty upon failure.

ISSUE 5. What should be the base year for RFP for the 8-hour O<sub>3</sub> NAAQS ?

DISCUSSION--

- Under subpart 2 for the 1-hour NAAQS, the base year was specifically defined (1990).
- A number of States complained about the fact that the base year did not allow credit for measures adopted prior to the base year.
- The RFP issue paper developed under the FACA recommended that under the new NAAQS, the base year be chosen so to avoid penalizing areas for early implementation of emission controls.

OPTIONS--

- Option 1. Base year of attainment demonstration for area

Option 2. Pre-selected standard base year across the country

ISSUE 6 What should the guidance say about contingency measures required for failure to make RFP or attain?

DISCUSSION--

--Section 172(c)(9) requires nonattainment SIPs to contain contingency measures to be undertaken if the area fails to make RFP or to attain the NAAQS by the attainment date. Such measures must be structured to “take effect in any such case without further action by the State or the Administrator.”

OPTIONS:

Option 1: Maintain current guidance in General Preamble and other policy memos (i.e., an additional 3 percent); require that the contingency measures provide for additional emissions reductions of the ozone precursor (NO<sub>x</sub> or VOC) that are providing most of the emissions reductions that are needed for attainment. Those reductions should come from the same general geographical area as most of the reductions that are needed for attainment.

Option 2: Option 1, but require an unspecified level of emission reductions.

Option 3: Remain silent on contingency measures

## ATTACHMENT 1

### OZONE -- RFP METRICS

A. A combination of three kinds of metrics would be used with a weight of evidence determination:

1. Air Quality:

a. Ozone concentrations

--Used to determine if area has clean air in attainment or subsequent year (test needs to be consistent or identical to the test for approval of a 1-year extension of the attainment date--guidance under development).

--Used to determine if other metrics are consistent with finding of whether progress is being made

b. Ozone precursor ambient concentrations (viz., VOC & NO<sub>x</sub>) where available

--Used to corroborate emissions trends

2. Administrative:

--Used to determine degree to which control measures are being implemented to bring about emission reductions; determined through compliance records?

3. Emissions:

--No requirement for full inventories in short term (other than under EPA Consolidated Emissions Reporting Regulation (CERR)) because they are:

--Too resource-intensive

--Too time-consuming and therefore not timely

--Full inventory under CERR can be used when available (generally two years after year of inventory). For purposes of RFP only, the inventory methodology would be frozen between base year and year of reconciliation to avoid the burden of recalculations..

--For more immediate reconciliation use instead:

--Assessment of those source categories with significant reductions required under the SIP

--Assessment of whether growth in other categories outstripped the growth assumed in SIP (using indicator indices such as industrial growth, population, VMT, gasoline sales)

--Other possible indicators.

B. Weight of Evidence Test

All of the above metrics would be used in a weight of evidence test to assess whether progress was being made, whether reanalysis or SIP revision was needed to correct lack of progress, or whether corrective action needed to be taken. See example in Table 1.

TABLE 1  
EXAMPLE WEIGHT OF EVIDENCE TEST

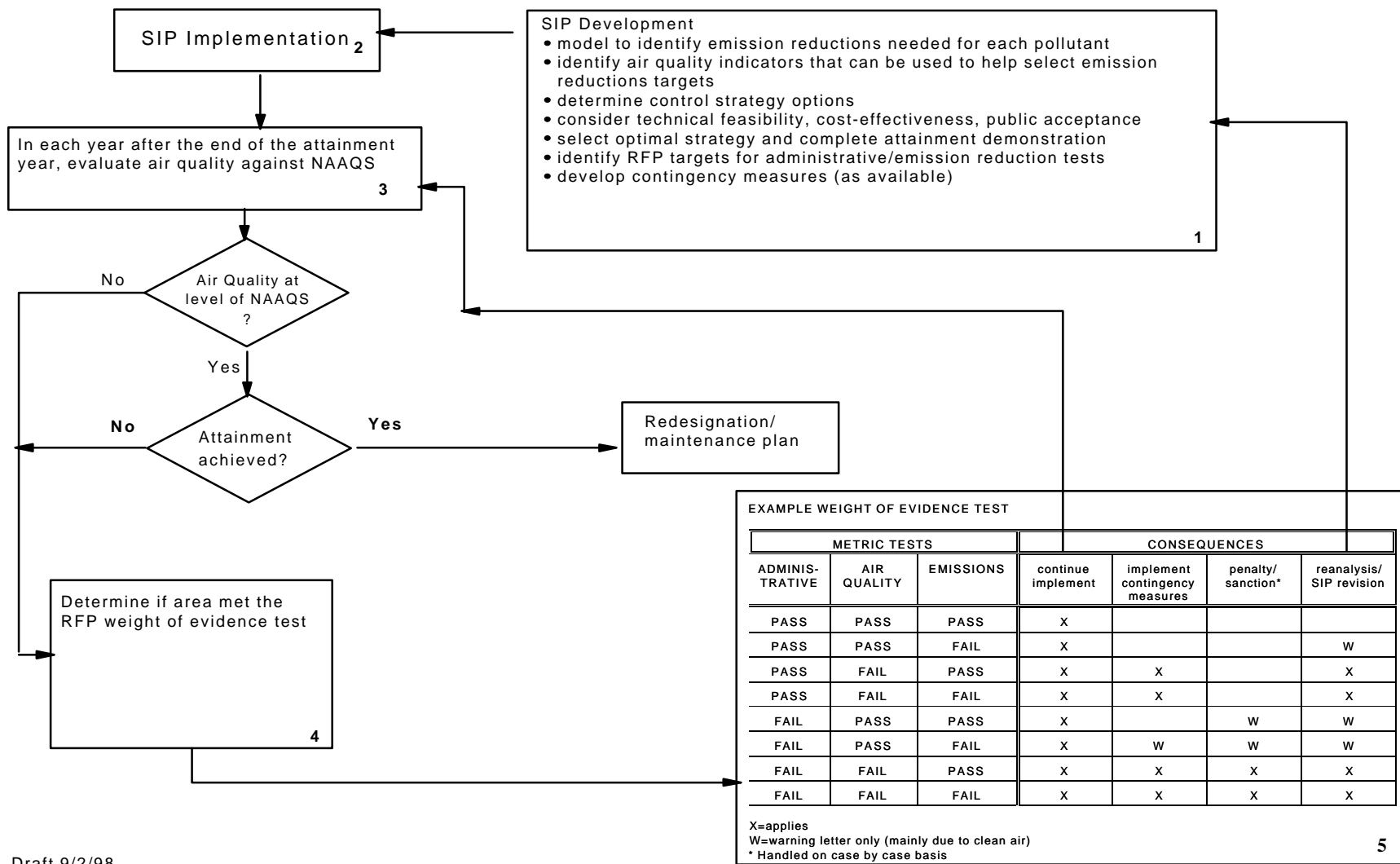
| METRIC TESTS        |                |           | CONSEQUENCES          |                                      |                       |                             |
|---------------------|----------------|-----------|-----------------------|--------------------------------------|-----------------------|-----------------------------|
| ADMINIS-<br>TRATIVE | AIR<br>QUALITY | EMISSIONS | continue<br>implement | implement<br>contingency<br>measures | penalty/<br>sanction* | reanalysis/<br>SIP revision |
| PASS                | PASS           | PASS      | X                     |                                      |                       |                             |
| PASS                | PASS           | FAIL      | X                     |                                      |                       | W                           |
| PASS                | FAIL           | PASS      | X                     | X                                    |                       | X                           |
| PASS                | FAIL           | FAIL      | X                     | X                                    |                       | X                           |
| FAIL                | PASS           | PASS      | X                     |                                      | W                     | W                           |
| FAIL                | PASS           | FAIL      | X                     | W                                    | W                     | W                           |
| FAIL                | FAIL           | PASS      | X                     | X                                    | X                     | X                           |
| FAIL                | FAIL           | FAIL      | X                     | X                                    | X                     | X                           |

X=applies

W=warning letter only (mainly due to clean air)

\* Handled on case by case basis





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**RFP PROCESS FOR 8-HOUR OZONE NAAQS**

**Figure 1**

## **ITERATIVE RFP PROCESS FOR 8-HOUR O<sub>3</sub> NAAQS (See Figure 1)**

**Adapted from “Final Report: Federal Advisory Committee Act (FACA) Subcommittee for Ozone, Particulate Matter and Regional Haze Implementation Programs, May 1998.**

### **Step 1.**

#### **SIP Development**

The iterative RFP process begins with the development of the nonattainment area SIP. In developing its SIP, an area devises a control strategy to reduce air pollutants in order to achieve the standard by the attainment date. From the control strategy, the tests for determining if RFP requirements have been met (i.e., emission reduction or project milestones) are identified.

### **Step 2.**

#### **SIP Implementation**

The area implements the control strategy developed in the SIP.

### **Step 3.**

#### **Air Quality and Attainment Tests**

In each year after the end of the attainment year approved in the SIP, an area determines if it has clean air and if so, whether it has achieved the air quality standard. If the standard has been achieved (and other criteria are met), the area can be redesignated as an “attainment area” by EPA. As part of the redesignation process, the area must submit to EPA a maintenance plan demonstrating how air quality will be maintained. If the area has not achieved the standard, it then proceeds to step 4 of the process.

### **Steps 4 and 5.**

#### **RFP Weight of Evidence Tests**

An area that has not achieved attainment of the air quality standard would determine whether it has met RFP defined in the SIP by conducting air quality, administrative and emission reduction tests. The determination of whether an area has met RFP would be done through a weight of evidence test involving these three measures. Regardless of the outcome, an area would continue implementing the control strategy in the SIP. Areas that fail the air quality test would determine the cause of failure and develop the appropriate corrective actions. When any administrative test is failed, any potential penalty, sanction, or contingency measure would be decided on a case-by-case basis. If the area has “clean air” but has not yet attained the NAAQS and the administrative and/or emissions tests are not met, warnings could be given to the area that they may need additional analyses, or could be found to have not implemented the SIP, depending on which test has not been met. The table “Example Weight of Evidence Test” in step 5 provides possible consequences for the possible combinations of test failure and success.