

Memorandum

October 10, 2006

TO: MWAQC Technical Advisory Committee
FROM: Jeff King, Sunil Kumar, COG/DEP
Subject: Contingency Plan for the 8-hour Ozone SIP

This memorandum provides background information on contingency plan requirements for consideration during development of the 8-hour ozone SIP for the Washington, DC region.

Contingency Requirement: Background and Criteria

Under the requirements of the Clean Air Act (CAA), a contingency plan for Reasonable Further Progress (RFP) and Attainment needs to be included in the 8-hour ozone SIP. According to the EPA guidance summarized in Attachment 1, the plan requirements include:

- The contingency measures should be included in the attainment demonstration SIP required for submission by June 15, 2007.
- The contingency plan must contain reductions from measures that total 3 percent of the adjusted 2002 base year inventory for both RFP and attainment. A minimum of 0.3 percent VOC must be included.
- The SIP should clearly state the trigger mechanism, a schedule of implementation of the measures, and an indication that the measures will be implemented with no further action by the State or EPA.
- States have several options available to provide reductions to meet contingency requirements, including: adopt measures that are required for the next higher classification to fulfill their contingency measures requirement; lower cutpoints for stationary or area sources; or apply credit from adopted measures that are already scheduled for implementation.

Washington Region Contingency Requirements and Timetable

Based on EPA guidance, staff developed information on the contingency requirements and timetable for implementation of contingencies for both Reasonable Further Progress (RFP) and Attainment failures.

The contingency plan must contain reductions from measures that total 3 percent of the adjusted 2002 base year inventory. A minimum of 0.3 percent VOC must be included. Some possible combinations of VOC/NO_x reductions are shown in the table below.

Contingency Requirement: Possible VOC/NOx Combinations for RFP and Attainment Contingency

	VOC (tpd)	NOx (tpd)	VOC %	NOx %	Total %	VOC (tpd)	NOx (tpd)
Adjusted 2002 Base Year							
Inventory	442.63	565.56	0.3%	2.7%	3.0%	1.3	15.3
Total contingency reduction must equal 3%.			0.5%	2.5%	3.0%	2.2	14.1
Minimum VOC required is 0.3%.			1.0%	2.0%	3.0%	4.4	11.3
RFP Contingency implemented in 2010			1.5%	1.5%	3.0%	6.6	8.5
Attainment Contingency implemented in 2010 or 2011			2.0%	1.0%	3.0%	8.9	5.7
			2.5%	0.5%	3.0%	11.1	2.8
			3.0%	0.0%	3.0%	13.3	0.0

Contingency reductions must occur on a timetable that is directly related to the RFP and attainment SIP schedule. According to EPA, states have no more than one year after notification by EPA of an RFP or attainment failure to achieve the contingency plan reductions. For a potential RFP failure, notification would be received in 2009, therefore the contingency reductions must be achieved no later than 2010. For a potential attainment failure, notification would be received in 2010, therefore the contingency reductions must be achieved no later than 2011.

In addition to adopting new regulatory programs, the region can meet its contingency requirement through reductions expected from adopted measures that are already scheduled for implementation. Such measures could include reductions expected from federal measures affecting the on-road and non-road sectors.

Possible Contingency Measures for the 8-hour Ozone SIP

For the 8-hour ozone SIP, the region can expect to achieve reductions in 2010 from measures already scheduled for implementation. The reductions from these measures would be above and beyond the reductions applied to demonstrate RFP and attainment. Such measures could include:

- Tier 2 Motor Vehicle Emission Standards
- Heavy Duty Diesel Engines Rule (2004 and 2007)
- Nonroad Heavy Duty Diesel Rule (2004)
- Ozone Transport Commission (OTC) Consumer Products Phase II

The process to calculate the benefits will include staff development of modeling inputs for 2010 with development of a draft emission inventory by the end of October.

In addition, new programs are being considered, that if adopted could provide reductions to meet the contingency requirements for the 8-hour ozone SIP. These include:

- OTC AIMs Phase II (2.5 tpd VOC)
- Additional EGU Controls (5-10 tpd NOx)
- ICI Boiler Standards (2-3 tpd NOx)
- MSW Incinerator Controls (3-4 tpd NOx)
- Distributed Generation Rule (1-3 tpd NOx)

Recommendation

Staff recommends that the Technical Advisory Committee (TAC) request that mobile and non-road emission inventories be developed for 2010 to determine the magnitude of expected reductions from these source sectors. At the same time, staff will evaluate the potential reductions from other measures already scheduled for implementation and other alternatives. By November, staff expects to provide options for a contingency plan to be included in the SIP.

Attachment 1. Clean Air Act and EPA Guidance on Contingency Plan

General

CAA 172(c)(9) specifies that "Such plan shall provide for the 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 by the attainment date applicable under this part. Such measures shall be included in the plan revision as contingency measures to take effect in any such case without further action by the State or the Administrator."

EPA has also promulgated regulations that address the need for a contingency plan. According to the 69 FR No. 84 p.71650, "under the CAA, 8-hour ozone nonattainment areas subject only to subpart 1, as well as those classified under subpart 2 as moderate, serious, severe, and extreme must include in their SIPs contingency measures consistent with sections CAA 172(c)(9) and 182(c)(9), as applicable. Contingency measures are additional controls to be implemented in the event the area fails to meet a RFP milestone or fails to attain by its attainment date. These contingency measures must be fully adopted rules or measures which are ready for implementation quickly upon failure to meet milestones or attainment."

Plan Submittal

"The contingency measures SIP should accompany the attainment demonstration SIP required for submission by June 15, 2007." (69 FR No. 84)

Required Reductions

"The CAAA preamble requires that the contingency measures generally must provide reductions of 3 percent of the emissions from the adjusted base year inventory. The reductions must be achieved in the year following that in which the failure has been identified. Three percent represents one year's worth of reductions under the post 1996 rate-of-progress requirement. EPA has determined that States must adopt a minimum of 0.3 percent in VOC measures of the 3 percent contingency measure requirement to be legally defensible. The minimum contingency plan could contain up to 2.7% of the baseline NOx emissions." (appendix D of the Post-1996 Rate of Progress Plan and Attainment Demonstration Guidance).

"For milestone failures, EPA only requires that contingency measures be implemented to compensate for the degree of failure. 2 % => 2%. For attainment failures, EPA requires all contingency measures be implemented." (page 50 EPA Guidance on the Post-1996 Rate of Progress Plan and Attainment Demonstration).

Trigger Mechanism

"The SIP should clearly state the trigger mechanism, a schedule of implementation of the measures, and an indication that the measures will be implemented with no further action by the State or EPA." (page 49 EPA Guidance on the Post-1996 Rate of Progress Plan and Attainment Demonstration).

Potential Contingency Measures

EPA also writes: "States could adopt measures that are required for the next higher classification to fulfill their contingency measures requirement. The cutpoints for stationary or area sources could also be lowered for already adopted control measures in the control strategy." (page 50 EPA Guidance on the Post-1996 Rate of Progress Plan and Attainment Demonstration).

EPA has approved contingency reductions from measures already scheduled for implementation [see, "Phase 2" final rule preamble at page 71651, 3rd column (70 FR at 71651, November 29, 2005)]:

The CAA states that contingency measures are to be 'specific measures to be undertaken if the area fails to make reasonable further progress, or to attain * * * by the attainment date.' The April 16, 1992 General Preamble provided the following guidance: 'States must show that their contingency measures can be implemented with minimal further action on their part and with no additional rulemaking actions such as public hearings or legislative review. In general, EPA will expect all actions needed to affect full implementation of the measures to occur within 60 days after EPA notifies the State of its failure.' (57 FR 13512). This could include Federal measures and local measures already scheduled for implementation.

The EPA has approved numerous SIPs under this interpretation—i.e., that use as contingency measures one or more Federal or local measures that are in place and provide reductions that are in excess to the attainment demonstration or RFP plan. (62 FR 15844, April 3, 1997; 62 FR 66279, December 18, 1997; 66 FR 30811, June 8, 2001; 66 FR 586 and 66 FR 634, January 3, 2001.) The key is that the statute requires extra reductions that are not relied on for RFP or attainment and that are in the demonstration to provide a cushion while the plan is revised to meet the missed milestone. In other words, contingency measures are intended to achieve reductions over and beyond those relied on in the attainment and RFP demonstrations. Nothing in the statute precludes a State from implementing such measures before they are triggered.

Use of Mobile Benefits for Contingency Requirement

EPA also refers to action on a Connecticut SIP (for an area with a 2007 attainment date). This statement was made in response to a comment that there was no contingency plan for failure to attain.

"The attainment demonstration SIP for this area does not specify any specific measures as contingency measures. After 2007, the attainment date that EPA is approving for the area, there are a number of EPA measures that will achieve significant emission reductions that the SIP does not rely on or take credit for. These include continuing reductions from EPA's Tier 2 tailpipe standards and EPA's standards for a variety of non-road sources. The EPA has analyzed the Greater Connecticut SIP and has estimated that the contingency obligation would be approximately 10.5 tons per summer day (tpsd) in ozone precursor emission reductions. Reductions from the federal non-road and the Tier 2 tailpipe standards during

the time frame contingency measures would need to be implemented for failure to attain (i.e., by May 2009) are estimated to be at least 12.1 tpsd, which would cover the contingency obligation for this area."

Attachment 2. Contingency Measures in the 1-hour Ozone SIP

The 1-hour ozone SIP for the Washington, DC-MD-VA nonattainment area contained several measures that were included in the Contingency Plan. The contingency measures in the 1-hour ozone SIP included:

- Phase II Reformulated Gasoline (RFG) program.
- Ozone Transport Commission (OTC) Portable Fuel Containers Rule
- Ozone Transport Commission (OTC) Mobile Repair and Refinishing Rule
- Ozone Transport Commission (OTC) Solvent Cleaning Rule
- Ozone Transport Commission (OTC) Consumer Products Rule

Severe Area SIP Excerpts

12.1.2 Identified Contingency Measures

Implemented contingency measures identified for 1999 must deliver the required benefits in calendar year 2000. The Phase II Reformulated Gasoline (RFG) program was implemented in the Washington region on January 1, 2000. See Section 7.7.2. In calendar year 2000, the benefits of this program totaled 19.1 tons per day of VOC and 8.5 tons per day NO_x. See Appendix I for details of this calculation. The benefits from this program exceed the required 13.0 tons per day VOC; therefore this measure fulfills the region's contingency measure requirement for 1999.

12.2.1 Identification of Contingency Measures

Table 12-3 lists the contingency measures identified by the District of Columbia, Maryland and Virginia for the 2002 Rate-of-Progress. These measures deliver total benefits of 12.8 tpd VOC, exceeding the 12.6 tpd VOC or 22.7 tpd NO_x contingency measure requirement calculated in Table 12-2.

Table 12-3
Contingency Measures for 2002 Rate-of-Progress
(Ozone Season tons per day)

Ref. No.	Contingency Measure	VOC (tons/day)	NO_x (tons/day)
12.2.3.1	Ozone Transport Commission (OTC) Portable Fuel Containers	3.5	0
12.2.3.2	Ozone Transport Commission (OTC) Mobile Repair and Refinishing	2.6	0
12.2.3.3	Ozone Transport Commission (OTC) Solvent Cleaning	2.7	0
12.2.3.4	Ozone Transport Commission (OTC) Consumer Products	4.0	0
TOTAL REDUCTIONS		12.8	0