Triggers for Contingency Measures for

PM2.5 Redesignation Request & Maintenance Plan

EPA requires that the maintenance plan must include contingency measures, as necessary, to promptly correct any NAAQS violation that occurs after redesignation of an area. It should include measures to be adopted, a schedule and procedures for adoption and implementation, and a specific time limit for action. This plan is considered to be an enforceable part of the SIP and should ensure that the contingency measures are adopted explicitly once they are triggered. For this purpose, EPA suggests that specific triggers that would put the plan into motion must be identified.

A number of states have recently submitted PM2.5 maintenance plans to EPA. These states have included different types of triggers in their PM2.5 maintenance plans. The number of triggers used varied from one to three.

Following is a list of these triggers. The first three are recommended by COG staff.

1. Annual mean PM2.5 concentration exceeds 15.0 ug/m3 in any year
2. Two-year avg of the annual means of PM2.5 concentrations exceeds 15.0 ug/m3
3. Annual PM2.5 NAAQS violation (Three-year avg of annual means of PM2.5 concentrations exceeds 15.0 ug/m3)
4. Emissions exceed regional emissions budget in PM2.5 maintenance plan
5. Rolling 12 quarter average exceeds 15.0 ug/m3

Following is a description of triggers included in the PM2.5 maintenance plans submitted by North Carolina, Indiana, Kentucky, and Ohio. In addition, triggers included in Virginia's Fredericksburg ozone maintenance plan are also described below.

Fredericksburg Ozone Maintenance Plan (Virginia)

There are two types of triggers identified in this plan.

Trigger 1 (Increase in emissions or two or more ozone exceedances in consecutive years)
A specific set of measures will be implemented in the event that emissions exceed the regional emissions budget or if two or more ozone exceedances (any fourth highest 8-hour average above 0.08 ppm recorded in any year) occur in consecutive years.

Tracking mechanism for emissions

Emissions and growth rates used for developing various emissions source categories will be tracked in two different ways.

a. Yearly tracking for observed growth rates for vehicle miles traveled, population, and point source emissions
b. 3-yearly tracking to estimate emissions, concentrating on areas identified in the less rigorous yearly evaluations mentioned above as being potential problems.

Trigger 2 (Ozone standard violation)

If a violation (any 3 year average of each annual fourth highest 8-hour average) of the ozone standard occurs, a second set of planned mandatory contingency measures will be implemented.

Trigger 3 (Ozone standard violation in Any Subsequent Ozone Season)

If a violation of the ozone standard occurs following the implementation of contingency measures in response to the trigger 2 above and in any subsequent ozone season, a third set of planned mandatory contingency measures will be implemented.

Hickory & Greensboro/Winston-Salem/High Point PM2.5 Maintenance Plan (North Carolina)

There are three triggers identified in this plan.

1. Primary Trigger (PM2.5 NAAQS violation)

The trigger date for the primary trigger will be 60 days from the date that the state observes the PM2.5 NAAQS violation.

2. Secondary Trigger (Rolling 12 quarter average exceeding annual PM2.5 NAAQS)

The trigger date will be 60 days from the date that the state observes a rolling 12-quarter average greater than 15.0 μg/m3 at any monitor.

Upon either the primary or secondary triggers being activated, the NCDAQ will commence analyses to determine what additional measures, if any, will be necessary to attain or maintain the annual $PM_{2.5}$ standard.

3. Tertiary Trigger (Monitored annual average exceeding annual PM2.5 NAAQS)

This trigger will be a first alert as to a potential air quality problem on the horizon. The tertiary trigger will be activated when a monitor in either of the PM2.5 nonattainment areas has an annual average greater than 15.0 μg/m3, starting the first year after the maintenance plan has been approved. The trigger date will be 60 days from the date that the State observes an annual average greater than 15.0 μg/m3 at any monitor. Activation of the tertiary trigger will result in an analysis to understand the cause of the exceedance and to identify voluntary measures if needed.

Tracking mechanism for VMT and emissions
This involves a comparison of the actual emissions inventory submitted under the Federal Consolidated Emissions Reporting Rule (CERR) and Air Emissions Reporting Rule (AERR) to the projected interim and attainment year inventories. VMT data will be reviewed to determine if any unexpected growth in VMT may endanger the maintenance of the annual $PM_{2.5}$ standard.

Cincinnati – Hamilton (OH-KY-IN) PM2.5 Maintenance Plan (Kentucky & Indiana)

There is only one trigger identified in this plan.

Trigger 1 (PM2.5 NAAQS Violation)

In this case, measures that can be implemented in a short time will be selected in order to be in place within eighteen months from the close of the fine particles season that prompted the Action Level.

Huntington-Ashland (OH-KY-WV) PM2.5 Maintenance Plan (Ohio)

There are two types of triggers identified in this plan.

Trigger 1 – Warning Level Response (Annual mean PM2.5 concentration exceeding 15.0 ug/m3 in any year)

Implementation of necessary controls will take place no later than 12 months from the conclusion of the most recent calendar year.

Trigger 2 – Action Level Response (Two or three-year avg of the annual means of PM2.5 concentrations exceeding 15.0 ug/m3)

Measures that can be implemented within 18 months from the close of the calendar year that prompted the action level will be adopted.