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M-E-13

FAX TRANSMITTAL

FROM: Norm Possiel, EPA

PHONE: (919) 541-5692 FAX: (919) 541-0044

MESSAGE

Art Fraas Randy Lutter

Attached is my interpretation of the two metrics you faxed to Bill Harnett on 6/11. I assume that you want both metrics calculated for the 1-Hr and 8-Hr daily max as well as for the 8-Hr avg 2nd high. We will discuss these metrics at 2 pm today. I will call both of you at that time.

Norm

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PLEASE FORWARD THIS FAX TO THE APPROPRIATE PERSON LISTED BELOW

NAME	Organization	PHONE/FAX

New Metrics Proposed by OMB -- June 12, 1998

OMB Metric-1. "Total Base Case Ozone Above the NAAQS"

Note: This metric quantifies the magnitude of ozone above the NAAQS in the Base Case to serve as a baseline for evaluating OMB Metric-2.

a. Equation for 1-Hr and 8-Hr Daily Max

SumGrid Cells { SumDays [(O3)Base - (125 or 85)] }

b. Equation for 8-Hr Avg 2nd High

SumGrid Cells [(O3)Base - 85]

OMB Metric-2. "Total Ozone Reduction Above the NAAQS"

a. Equation for 1-Hr and 8-Hr Daily Max

SumGrid Cells { SumDays [(O3)Base - max[(125 or 85), (O3)Control]] }

b. Equation for 8-Hr Avg 2nd High

SumGrid Cells [(O3)Base - max[85, (O3)Control]]

OMB Metric-3. "Total Population-Weighted Ozone Above the NAAQS"

Note: This metric quantifies the magnitude of ozone above the NAAQS in the Base Case to serve as a baseline for evaluating OMB Metric-4.

a. Equation for 1-Hr and 8-Hr Daily Max

SumGrid Cells { PopGrid Cell x { SumDays [(O3)Base - (125 or 85)] } }

b. Equation for 8-Hr Avg 2nd High

SumGrid Cells { PopGrid Cell x [(O3)Base - 85] }

OMB Metric-4. "Total Population-Weighted Ozone Reduction Above the NAAQS"

a. Equation for 1-Hr and 8-Hr Daily Max

SumGrid Cells { PopGrid Cell x { SumDays [(O3)Base - max[(125 or 85), (O3)Control]] } }

b. Equation for 8-Hr Avg 2nd High

SumGrid Cells { PopGrid Cell x [(O3)Base - max[85, (O3)Control]] }

Definition of Terms:

- (O3)Base -- ozone prediction in a grid cell for the 2007 Base Case
- (O3)Control -- ozone prediction in a grid cell for the Control Case
- max[(125 or 85), (O3)Control]
 - -- for calculations of this metric for the 1-Hr NAAQS, this is the higher of (a) 125 ppb or (b) the Control Case ozone prediction
 - -- for calculations of this metric for the 8-Hr NAAQS, this is the higher of (a) 85 ppb or (b) the Control Case ozone prediction
- SumDays[] -- perform the calculations within the brackets for each day, for a single grid cell, then sum the results across all days1

SumGrid Cells { }

-- perform the calculations within the brackets for each grid cell, then sum the results for all grid cells2

2. The metrics will be calculated for two types of grid cells: (1) "modeled + designated

^{1.} All "non-ramp up" days. For OTAG, the first few days of each episode were excluded from analysis because of the influence of "initial conditions" from the start of the model simulation.

⁽¹⁻Hr)/monitored(8-Hr) nonattainment" and (2) "modeled nonattainment only"

Proposed New Metrics

1. "Total Ozone Reduction Above the NAAQS"

a. Equation for 1-Hr and 8-Hr Daily Max

SumGrid Cells { SumDays [(O3)Base - max[(125 or 85), (O3)Control]] }

b. Equation for 8-Hr Avg 2nd High

SumGrid Cells [(O3)Base - max[85, (O3)Control]]

2. "Population-Weighted Total Ozone Reduction Above the NAAQS"

a. Equation for 1-Hr and 8-Hr Daily Max

SumGrid Cells { PopGrid Cell x { SumDays [(O3)Base - max[(125 or 85), (O3)Control]] } }

b. Equation for 8-Hr Avg 2nd High

SumGrid Cells { PopGrid Cell x [(O3)Base - max[85, (O3)Control]] }

Definition of Terms:

(O3)Base -- ozone prediction in a grid cell for the 2007 Base Case

(O3)Control -- ozone prediction in a grid cell for the Control Case

max[(125 or 85), (O3)Control]

-- for calculations of this metric for the 1-Hr NAAQS, this is the higher of (a) 125 ppb or (b) the Control Case ozone prediction

-- for calculations of this metric for the 8-Hr NAAQS, this is the higher of

(a) 85 ppb or (b) the Control Case ozone prediction

SumDays[] -- perform the calculations within the brackets for each day, for a single grid cell, then sum the results across all days1

SumGrid Cells { }

-- perform the calculations within the brackets for each grid cell, then sum the results for all grid cells2

2. The metrics will be calculated for two types of grid cells: (1) "modeled + designated (1-Hr)/monitored(8-Hr) nonattainment" and (2) "modeled nonattainment only"

^{1.} All "non-ramp up" days. For OTAG, the first three days of each episode are excluded from analysis because of the influence of "initial conditions" from the start of the model simulation.