

UPS EXPRESS

September 10, 2004

Mr. James I. Palmer, Jr.
Regional Administrator
US EPA, Region IV
Atlanta Federal Center
61 Forsyth Street, SW
Atlanta, GA 30303

RE: Tennessee's response to EPA's recommended PM_{2.5} nonattainment designations

Dear Mr. Palmer:

Tennessee offers the following comments regarding the PM_{2.5} nonattainment designations recommended by the Environmental Protection Agency (EPA) as outlined in EPA's June 29, 2004 letter.

McMinn and Roane Counties:

EPA has proposed the inclusion of McMinn and Roane Counties as PM_{2.5} nonattainment areas primarily because of a large source in each county despite the fact that these two counties are not in a metropolitan statistical area (MSA). Apparently, the sources of concern are Bowater Newsprint and the TVA Kingston Steam Plant. The EPA June 29, 2004 letter declares that meteorology or geography/topography are not factors in the EPA rationale for including the counties.

Tennessee avers that the naming of these rural counties as nonattainment based upon a large source in that county is patently unfair to the citizens of that county. The monitors currently measure PM_{2.5} attainment, so it has to be an argument of contribution. Tennessee agrees that in general, the larger sources do have a potential to be contributors to the formation of PM_{2.5}, but there has been no plausible demonstration to show that these sources actually impact either the Chattanooga or Knoxville MSAs where air monitoring measures PM_{2.5} nonattainment.

Therefore, with respect to McMinn and Roane counties, Tennessee declares the following:

- Neither county should be listed as significantly contributing to the nonattainment of another county.
- If a source(s) in a county outside of an MSA is to be listed as significantly contributing to the nonattainment of another county, it should be listed only after modeling confirms that.
- Ultimately, a state implementation plan to ensure that all of Tennessee will attain the PM_{2.5} standard will be required.
- In preparing the PM_{2.5} State Implementation Plan, Tennessee commits to model the two sources to ascertain their impact upon the Knoxville and Chattanooga MSAs and to the extent necessary, require sufficient control on the facilities to attain the standard.
- EPA extends the invitation to discuss a partial county designation to capture these sources of concern as long as the ultimate nonattainment boundary in that county captures the source and is contiguous to an MSA nonattainment area. Tennessee rejects this offer, as it has no scientific or technical merit. The counties measure attainment, so it is not an argument over how large an area a nonattaining monitor should represent. This argument concerns contribution from point, rather than area sources. If a boundary is to be drawn, it must be point limited without a peninsula connecting it to a nonattaining MSA.
- Upon designation of nonattainment, existing sources are expected to meet a RACT level of control for the pollutants causing nonattainment. In the case of the TVA Kingston Plant, oxides of nitrogen control in the form of Low NO_x burners and Selective Catalytic Reduction units is underway. Lower sulfur fuels are being used in the interim and ultimately scrubbers will be installed. Details of the control efficiencies and timeline for implementation are enclosed as attachments to this letter. Since the facility of concern will have controls for SO_x and NO_x that far exceed the requirements of RACT, it seems useless to name a county or a well-controlled facility as being nonattainment contributing without a specific modeling study done at the controlled level making a demonstration of attribution.
- The "urban excess" evaluations conducted by EPA and proposed as a method for "L factor" ranking of the counties within an area (MSA), according to their relative emissions of direct and indirect PM_{2.5} related air contaminants, also provides a method to evaluate potential reductions needed. An evaluation of the urban excess data for Knoxville, Tennessee area reveals that approximately 3 ug/m³ total urban excess is present. This can be apportioned based on the emission inventory. The approximate amount of reduction needed, based on the urban excess calculations is equal to about 2% of the inventory. This is the projected amount needed to reduce the PM_{2.5} levels below the 15.0 ug/m³ threshold for the Knoxville area. When the entire emission reduction amounts are actually realized, the PM_{2.5} monitored levels could be reduced to approximately 14.0 ug/m³ (assuming a reduction equal to the total urban excess amount).
- The existing reductions proposed as part of the NOx SIP call and the NOx RACT requirements along with the other federal program reductions planned and the TVA NOx reductions already underway, should produce reductions that will achieve these goals.

- It is unreasonable to include the Roane and McMinn county areas that are monitoring attainment for the PM_{2.5} standard, when it is highly likely that the emission reductions described above will alone be significant enough to bring the Knoxville area into attainment. The implementation of the federal programs and the NOx SIP/RACT requirements will also bring about similar reductions for the sources in those counties as well. These reductions will also have a positive impact if the areas are considered to be contributing to PM_{2.5} nonattainment in the Knoxville region.

Chattanooga MSA:

Tennessee does not object to the naming of Hamilton County, as it is consistent with our most recent recommendation and the fact that it is measuring nonattainment of the PM_{2.5} standard. Tennessee does object to the naming of Marion County as there are essentially no point source emissions and most of the county's emission inventory is mobile source emissions from through commuters (heavy duty trucks) along Interstate 24. Because of federal preemptions on fuels and the fact that these trucks are not stationed in Marion County, there is nothing that the county or the state can do but wait on the federal fuels and diesel rules to take effect. It makes no sense to place a county in economic growth jeopardy by declaring them to be nonattainment contributing when the facts so clearly justify otherwise.

There have been numerous meetings since June with local city & county representatives, Metropolitan Planning Organizations, Economic and Community Development, environmental groups, industry and the public. This has also provided an opportunity for additional discussions regarding the potential PM_{2.5} nonattainment areas. Control measures that are being implemented to address ozone nonattainment will also have positive impacts in mitigation of PM_{2.5} nonattainment. Tennessee is also planning to implement, in a number of areas, including Knoxville and Chattanooga, PM_{2.5} forecasting or Air Quality forecasts (in areas with existing Ozone forecasting programs). The opportunity to educate the public and encourage business participation and involvement in reducing PM_{2.5} emissions and precursors will also provide a positive benefit toward achieving and maintaining PM_{2.5} attainment.

Knoxville MSA:

Tennessee does not object to the naming of Knox County, as it is consistent with our most recent recommendation and the fact that it is measuring nonattainment of the PM_{2.5} standard. The additional consideration of the "L" factor analysis proposed by EPA as a method to rank the emission component of the 9 factors to be considered in including or excluding counties in a given area as contributing to nonattainment, identifies several counties other than Knox as significantly contributing to nonattainment in the Knox County area. Tennessee agrees that Anderson and Loudon counties have a significant "L factor" score. However, the "urban excess" contributions should be further discussed.

Blount County has an attaining PM_{2.5} monitor and relatively lower emissions than either Knox, Anderson or Loudon counties. In fact the reported NOx emissions are the lowest in the MSA except for Sevier County. Carbon and nitrates are identified as significant in the EPA calculated “urban excess” for the Knoxville region. The fact that nitrates are a significant component of the “urban excess” with Blount County demonstrating monitored attainment for PM_{2.5} does not support naming Blount county nonattainment. Tennessee agrees that there are other components of the “9” factors that are identified as significant for Blount County in the EPA analysis. However, attainment of the standard is the true test for significant contribution. Again, Blount County has measured attainment with the PM_{2.5} standard and should be given due credit for this.

The following control measures are being considered: more stringent controls for open burning, a NOx RACT rule for portions of West Tennessee and for the Tennessee Valley connecting Chattanooga and Knoxville. Statewide anti-tampering rules for vehicles have been adopted by the State Air Pollution Control Board in addition to a vehicle emission testing program in Hamilton County.

Tennessee recommends that Marion, Anderson, Blount, Loudon, McMinn, Roane and Sevier be classified attainment and if that is not possible, they should be designated as unclassifiable.

Tennessee commits to examine its counties in accordance with PM_{2.5} SIP requirements and further commits to prepare a SIP for the attainment of the Federal PM_{2.5} standards in accordance with Federal guidance and regulations. Sources will be analyzed and if additional controls are needed, they will be imposed in order to achieve the PM_{2.5} standards within the Federally established compliance deadlines.

I urge you to take our comments into consideration when making the final designations for PM_{2.5} nonattainment. If you have any questions please feel free to contact me at 615 532-0554.

Sincerely,

Barry R Stephens, P. E.
Director
Division of Air Pollution Control

Attachments

cc: EPA, Region IV - Kay T. Prince, Anne Marie Hoffman & Dick Schutt,
 Tennessee Air Pollution Control Board Members
 Tennessee Local Air Pollution Control Program Directors

Factor 9: Level of control of emission sources

EPA's decision to recommend Roane Count for nonattainment status is based on a 9-factor analysis that did not take into account that large sources in Roane County are well controlled. The largest source in the county, TVA's Kingston Fossil plant, is well controlled, having made significant emission reductions since 2001, the date of the emission inventory used in Factor 1 of EPA's 9-factor test. It makes little sense to place counties with monitored attainment and well-controlled coal-fired plants into nonattainment status.

All 9 Kingston units have NOx controls. Units 1-8 have low-NOx burners, and unit 9 has boiler optimization controls. Units 1, 2, 3, 4, 7 and 8 have selective catalytic reduction (SCRs) systems in use. SCR construction on Units 5 and 6 is nearly complete, and the SCRs will be in operation for the 2005 ozone season. SCR construction on unit 9 will be complete for ozone season 2006. These SCRs represent state-of-the-art NOx controls. For the 2004 ozone season, NOx emissions are down more than 50 percent, with annual reductions on-track for a 30 percent reduction of emissions compared to those used in EPA's analysis. The SCRs represent an investment of more than a \$250-million for NOx-reduction control equipment.

SO2 emissions are on-track to be around 13 percent lower this year than in 2001 through the use of lower-sulfur coal. A planned switch to even lower-sulfur coal should result in reductions of 36 percent below 2001 levels by next year. These fuel switches will put the plant near a 1.2 lbs/mmBtu emission rate. These SO2 reductions will proceed in advance of flue gas desulfurization equipment slated for installation before the end of 2010.

EPA stated in its 8-hour ozone implementation rule of June 2, 2003, at Federal Register page 32839, that sources subject to the NOx SIP Call are deemed to meet RACT requirements with respect to ozone. By similar logic, sources proposed to be covered by the more stringent SO2 requirements of the Clean Air Interstate Rule should be RACT-equivalent for SO2 with respect to PM 2.5. All of Kingston's units would be subject to the rule as proposed.

Total Emissions by Source per County per Pollutant

2002 Inventory

County Name	Inventory Source	NH3 (ton/yr)	NOX (ton/yr)	PM25-PRI (ton/yr)	SO2 (ton/yr)
Anderson	Point Sources	14	19,571	2,068	44,692
	Area Sources	134	300	784	273
	Onroad Sources	81	3,622	55	106
	Nonroad Sources	-	940	39	66
	Total Emissions	229	24,434	2,946	45,137
Blount	Point Sources	-	387	1,412	4,264
	Area Sources	487	215	1,062	61
	Onroad Sources	104	2,342	40	105
	Nonroad Sources	-	1,170	69	134
	Total Emissions	591	4,114	2,583	4,564
Hamilton	Point Sources	32	4,847	407	3,892
	Area Sources	303	820	1,894	510
	Onroad Sources	354	12,542	209	428
	Nonroad Sources	-	4,206	223	430
	Total Emissions	688	22,415	2,734	5,261
Knox	Point Sources	-	4,745	18	4
	Area Sources	528	1,888	2,756	1,926
	Onroad Sources	504	18,844	304	616
	Nonroad Sources	-	3,338	244	372
	Total Emissions	1,032	28,815	3,322	2,917
Loudon	Point Sources	-	2,309	266	4,221
	Area Sources	289	72	453	19
	Onroad Sources	69	5,239	79	122
	Nonroad Sources	-	1,116	54	105
	Total Emissions	358	8,736	852	4,467
McMinn	Point Sources	-	6,739	1,602	9,434
	Area Sources	1,178	124	581	72
	Onroad Sources	72	6,042	91	136
	Nonroad Sources	-	942	36	67
	Total Emissions	1,250	13,848	2,310	9,708
Marion	Point Sources	-	11	17	3
	Area Sources	441	157	437	282
	Onroad Sources	58	5,680	85	123
	Nonroad Sources	-	579	38	73
	Total Emissions	500	6,427	577	481
Roane	Point Sources	35	26,284	3,284	77,882
	Area Sources	165	157	438	152
	Onroad Sources	65	4,381	65	106
	Nonroad Sources	-	1,167	69	124
	Total Emissions	265	31,989	3,856	78,264
Sevier	Point Sources	-	24	0	66
	Area Sources	393	137	759	89
	Onroad Sources	105	3,176	52	117
	Nonroad Sources	-	412	42	61
	Total Emissions	498	3,750	852	332