



**STATE OF TENNESSEE**  
**DEPARTMENT OF ENVIRONMENT AND CONSERVATION**  
NASHVILLE, TENNESSEE 37243-0435

**ROBERT J. MARTINEAU, JR.**  
COMMISSIONER

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GOVERNOR

January 13, 2017

Heather McTeer Toney  
Regional Administrator  
USEPA, Region 4  
61 Forsyth Street, SW  
Mail Code: 9T25  
Atlanta, GA 30303-8960

**Subject: Revisions to Tennessee's Sulfur Dioxide Designation Recommendations  
Modeling Analyses for Sources Subject to Data Requirements Rule for 2010 SO<sub>2</sub> NAAQS**

Dear Ms. Toney:

On June 2, 2010, the United States Environmental Protection Agency (EPA) revised the primary National Ambient Air Quality Standard (NAAQS) for sulfur dioxide (SO<sub>2</sub>). EPA established the revised primary SO<sub>2</sub> standard at 75 parts per billion (ppb) which is attained when the 3-year average of the 99<sup>th</sup> percentile of the 1-hour daily maximum concentrations does not exceed 75 ppb (75 FR 35520, published June 22, 2010).

On May 26, 2011, I submitted designation recommendations for Tennessee as required by section 107 of the Clean Air Act. In that letter, I recommended that Sullivan County and portions of Bradley and McMinn Counties be designated nonattainment for the revised primary SO<sub>2</sub> standard and that the remaining counties of Tennessee and portions of Bradley and McMinn Counties be designated as unclassifiable. On January 28, 2013, I submitted a revised boundary recommendation to designate only a portion of Sullivan County<sup>1</sup> as nonattainment and revised the recommendation for all of Bradley and McMinn County to unclassifiable. On September 16, 2015, I further revised Tennessee's designation recommendation by recommending that all of Sumner and portions of Cannon, Cheatham, Davidson, DeKalb, Macon, Robertson, Rutherford, Smith, Trousdale, Williamson, and Wilson be designated attainment. In response to this September 16, 2015, recommendation and due to insufficient information, EPA responded by designating Sumner County to "unclassifiable" on July 7, 2016.

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<sup>1</sup> The January 28, 2013, letter recommended a partial area consisting of a 4.3 kilometer radius circle centered on the Eastman Chemical facility as nonattainment. On August 5, 2013, EPA designated a portion of Sullivan County to nonattainment as follows, "That portion of Sullivan County encompassing a circle having its center at the B-253 power house coordinates 36.5186 N; 82.5350 W and having a 3-kilometer radius"

With this letter, I am formally revising Tennessee's designation recommendation to "unclassifiable/attainment" for all counties in Tennessee with the exception of the portion of Sullivan County which is currently designated nonattainment (see attachment A).

On August 21, 2015, U.S. EPA promulgated the Data Requirements Rule for the 2010 1-Hour Sulfur Dioxide (SO<sub>2</sub>) Primary National Ambient Air Quality Standard (NAAQS) in the Federal Register (the Data Requirements Rule or DRR)<sup>2</sup>. As required by that rule, the Tennessee Division of Air Pollution Control (APC) submitted a list to EPA Region 4 on January 15, 2016, of four sources that require further air quality characterization in accordance with the DRR. These sources are: Tennessee Valley Authority – Gallatin Fossil Plant, Tennessee Valley Authority – Johnsonville Fossil Plant, Tennessee Valley Authority – Allen Fossil Plant, and Tennessee Valley Authority – Cumberland Fossil Plant. On June 7, 2016, as required by the Data Requirements Rule, APC notified EPA that Tennessee has chosen to characterize peak 1-hour SO<sub>2</sub> concentrations in each of the four areas using air quality modeling. Paragraph 51.1203(d)(3) of the DRR requires air agencies to submit these modeling analyses to the EPA Regional Office by January 13, 2017. For each of the four areas, APC has already submitted modeling analyses to U.S. EPA Region 4 on the following dates:

Tennessee Valley Authority – Gallatin Fossil Plant: July 6, 2016  
Tennessee Valley Authority – Cumberland Fossil Plant: September 21, 2016<sup>3</sup>  
Tennessee Valley Authority – Johnsonville Fossil Plant: October 12, 2016<sup>3</sup>  
Tennessee Valley Authority – Allen Fossil Plant: November 2, 2016<sup>3</sup>

The Tennessee Division of Air Pollution Control has reviewed the modeling reports and files to ensure that the dispersion modeling was conducted in accordance with the final DRR and Modeling Technical Assistance Document (TAD) using the most recently available information. Based on the modeling analysis, SO<sub>2</sub> emissions from each of these facilities, and nearby facilities included in each analysis as appropriate, do not cause or contribute to any violations of the 1-hour SO<sub>2</sub> NAAQS (75 ppb, which is equivalent to 196.5 µg/m<sup>3</sup>), as summarized below.

Facility	Maximum 1-hour SO <sub>2</sub> Impact	
	µg/m <sup>3</sup>	ppb
Tennessee Valley Authority – Gallatin Fossil <sup>4</sup>	196.4	74.96
Tennessee Valley Authority – Cumberland Fossil Plant	121.8	46.5
Tennessee Valley Authority – Johnsonville Fossil Plant	127.6	48.7
Tennessee Valley Authority – Allen Fossil Plant	172.9	66.0

<sup>2</sup> 80 FR 51052, Data Requirements Rule for the 2010 1-Hour Sulfur Dioxide (SO<sub>2</sub>) Primary National Ambient Air Quality Standard (NAAQS), August 21, 2015

<sup>3</sup> The modeling packages for these facilities were originally submitted to Rick Gillam of Region 4 on the dates indicated and were submitted again on November 10, 2016, to Chris Howard of Region 4.

<sup>4</sup> Maximum impact based on permitted allowable emissions

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On March 18, 2016, EPA responded to APC's January 15, 2016, letter and identified one additional source DRR applicable source: Cargill Corn Milling, Inc., in Shelby County. Paragraph 51.1203(c) of the DRR allows air agencies to establish limits to reduce allowable emissions below the DRR applicability threshold of 2000 tons per year in lieu of conducting monitoring or modeling. On March 24, 2016, the Shelby County Health Department notified U.S. EPA that it will reduce allowable SO<sub>2</sub> emissions from the Cargill Corn Milling facility to below the Data Requirements Rule applicability threshold through modification of the facility's Title V Operating Permit<sup>5</sup>. For areas for which an air agency will adopt federally enforceable requirements in lieu of characterization through monitoring or modeling, paragraph 51.1203(e) of the DRR requires air agencies to submit documentation to EPA by January 13, 2017, showing that such requirements have been adopted, are in effect, and have been made federally enforceable. Attachment B includes a final Title V renewal operating permit issued to Cargill Inc. on November 1, 2016, that includes federally enforceable requirements that limits sulfur dioxide emissions to below 2000 tons per year<sup>6</sup>. Attachment C is an emissions summary table that summarizes the allowable SO<sub>2</sub> emissions from the Cargill facility. You will note that allowable SO<sub>2</sub> emissions are less than one ton per year, well below the DRR applicability threshold of 2000 tons per year.

Should you have any questions comments, please feel free to contact Jimmy Johnston at 615-253-7319 or [james.johnston@tn.gov](mailto:james.johnston@tn.gov).

Sincerely,



Robert J. Martineau, Jr.  
Commissioner

Attachment

cc: Beverly Bannister, EPA Region 4  
Scott Davis, EPA Region 4  
Lynorae Benjamin, EPA Region 4  
Twunjala Bradley, EPA Region 4  
Rick Gillam, EPA Region 4  
Michelle Owenby, Division of Air Pollution Control  
Quincy Styke, Division of Air Pollution Control  
Jimmy Johnston, Division of Air Pollution Control

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<sup>5</sup> The Tennessee Division of Air Pollution Control also notified EPA Region 4 of this intent in its June 7, 2016, selection of characterization letter.

<sup>6</sup> The Title V renewal permit reflects the closure of corn milling operation which included the conversion of the Stoker coal-fired boiler and the Pulverized Coal coal-fired boiler to natural gas-fired only units in February, 2015, and the permanent shut down of the remaining significant sources of SO<sub>2</sub> emissions during 2015. See March 24, 2016, letter from Shelby County Health Department to EPA Region 4, as attached to APC's June 7, 2016, letter to Region 4.

**ATTACHMENT A**

**STATE OF TENNESSEE 2010 SULFUR DIOXIDE  
NAAQS DESIGNATION RECOMMENDATION - REVISED JANUARY 13, 2017**

The following table identifies the Tennessee counties and partial county and the corresponding designation that the State of Tennessee is recommending for the 2010 sulfur dioxide NAAQS.

<b>Area</b>	<b>Recommended Designation</b>
Anderson County	Unclassifiable/Attainment
Bedford County	Unclassifiable/Attainment
Benton County	Unclassifiable/Attainment
Bledsoe County	Unclassifiable/Attainment
Blount County	Unclassifiable/Attainment
Bradley County	Unclassifiable/Attainment
Campbell County	Unclassifiable/Attainment
Cannon County	Unclassifiable/Attainment
Carroll County	Unclassifiable/Attainment
Carter County	Unclassifiable/Attainment
Cheatham County	Unclassifiable/Attainment
Chester County	Unclassifiable/Attainment
Claiborne County	Unclassifiable/Attainment
Clay County	Unclassifiable/Attainment
Cocke County	Unclassifiable/Attainment
Coffee County	Unclassifiable/Attainment
Crockett County	Unclassifiable/Attainment
Cumberland County	Unclassifiable/Attainment
Davidson County	Unclassifiable/Attainment
Decatur County	Unclassifiable/Attainment
DeKalb County	Unclassifiable/Attainment
Dickson County	Unclassifiable/Attainment
Dyer County	Unclassifiable/Attainment
Fayette County	Unclassifiable/Attainment
Fentress County	Unclassifiable/Attainment
Franklin County	Unclassifiable/Attainment
Gibson County	Unclassifiable/Attainment
Giles County	Unclassifiable/Attainment

**ATTACHMENT A**

**STATE OF TENNESSEE 2010 SULFUR DIOXIDE  
NAAQS DESIGNATION RECOMMENDATION - REVISED JANUARY 13, 2017**

Grainger County	Unclassifiable/Attainment
Greene County	Unclassifiable/Attainment
Grundy County	Unclassifiable/Attainment
Hamblen County	Unclassifiable/Attainment
Hamilton County	Unclassifiable/Attainment
Hancock County	Unclassifiable/Attainment
Hardeman County	Unclassifiable/Attainment
Hardin County	Unclassifiable/Attainment
Hawkins County	Unclassifiable/Attainment
Haywood County	Unclassifiable/Attainment
Henderson County	Unclassifiable/Attainment
Henry County	Unclassifiable/Attainment
Hickman County	Unclassifiable/Attainment
Houston County	Unclassifiable/Attainment
Humphreys County	Unclassifiable/Attainment
Jackson County	Unclassifiable/Attainment
Jefferson County	Unclassifiable/Attainment
Johnson County	Unclassifiable/Attainment
Knox County	Unclassifiable/Attainment
Lake County	Unclassifiable/Attainment
Lauderdale County	Unclassifiable/Attainment
Lawrence County	Unclassifiable/Attainment
Lewis County	Unclassifiable/Attainment
Lincoln County	Unclassifiable/Attainment
Loudon County	Unclassifiable/Attainment
McMinn County	Unclassifiable/Attainment
McNairy County	Unclassifiable/Attainment
Macon County	Unclassifiable/Attainment
Madison County	Unclassifiable/Attainment
Marion County	Unclassifiable/Attainment
Marshall County	Unclassifiable/Attainment
Maury County	Unclassifiable/Attainment
Meigs County	Unclassifiable/Attainment
Monroe County	Unclassifiable/Attainment

## ATTACHMENT A

### STATE OF TENNESSEE 2010 SULFUR DIOXIDE NAAQS DESIGNATION RECOMMENDATION - REVISED JANUARY 13, 2017

Montgomery County	Unclassifiable/Attainment
Moore County	Unclassifiable/Attainment
Morgan County	Unclassifiable/Attainment
Obion County	Unclassifiable/Attainment
Overton County	Unclassifiable/Attainment
Perry County	Unclassifiable/Attainment
Picket County	Unclassifiable/Attainment
Polk County	Unclassifiable/Attainment
Putnam County	Unclassifiable/Attainment
Rhea County	Unclassifiable/Attainment
Roane County	Unclassifiable/Attainment
Robertson County	Unclassifiable/Attainment
Rutherford County	Unclassifiable/Attainment
Scott County	Unclassifiable/Attainment
Sequatchie County	Unclassifiable/Attainment
Sevier County	Unclassifiable/Attainment
Shelby County	Unclassifiable/Attainment
Smith County	Unclassifiable/Attainment
Stewart County	Unclassifiable/Attainment
Sullivan County - That portion of Sullivan County encompassing a circle having its center at the B-253 power house coordinates 36.5186 N; 82.5350 W and having a 3-kilometer radius	Currently Classified as Nonattainment
Sullivan County - remainder	Unclassifiable/Attainment
Sumner County	Unclassifiable/Attainment
Tipton County	Unclassifiable/Attainment
Trousdale County	Unclassifiable/Attainment
Unicoi County	Unclassifiable/Attainment
Union County	Unclassifiable/Attainment
Van Buren County	Unclassifiable/Attainment
Warren County	Unclassifiable/Attainment
Washington County	Unclassifiable/Attainment
Wayne County	Unclassifiable/Attainment
Weakley County	Unclassifiable/Attainment
White County	Unclassifiable/Attainment

**ATTACHMENT A**

**STATE OF TENNESSEE 2010 SULFUR DIOXIDE  
NAAQS DESIGNATION RECOMMENDATION - REVISED JANUARY 13, 2017**

Williamson County	Unclassifiable/Attainment
Wilson County	Unclassifiable/Attainment

**ATTACHMENT B**

**Title V Renewal Operating Permit issued to Cargill, Inc.  
By Shelby County Health Department, November 1, 2016**