



STATE OF TENNESSEE
DEPARTMENT OF ENVIRONMENT AND CONSERVATION

DIVISION OF AIR POLLUTION CONTROL
WILLIAM R. SNODGRASS TENNESSEE TOWER
312 ROSA L. PARKS AVENUE, 15TH FLOOR
NASHVILLE, TENNESSEE 37243

June 7, 2016

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

RE: Selection of Characterization method for Sources Subject to Data Requirements Rule for 2010 SO₂ NAAQS and Modeling Protocols for sources to be characterized through modeling

Dear Ms. McTeer Toney:

On August 21, 2015, U.S. EPA promulgated the Data Requirements Rule for the 2010 1-Hour Sulfur Dioxide (SO₂) Primary National Ambient Air Quality Standard (NAAQS) in the Federal Register (the Data Requirements Rule).¹ The Data Requirements Rule, at 40 CFR 51.1203(b), requires air agencies to notify EPA by July 1, 2016, for each source area subject to the rule, whether it has chosen to 1) characterize peak 1-hour SO₂ concentrations through ambient air quality monitoring, 2) characterize peak 1-hour SO₂ concentrations through air quality modeling techniques, or 3) to provide federally enforceable emission limitations by January 13, 2017, that limit emissions of applicable sources to less than 2000 tons/year. The Data Requirements Rule, at 40 CFR 51.1203(d), also requires air agencies to submit, by July 1, 2016, modeling protocols for those areas for which SO₂ concentrations will be characterized through modeling.

On January 15, 2016, the Tennessee Division of Air Pollution Control submitted a list of four sources that require further air quality characterization in accordance with the Data Requirements Rule. 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 March 18, 2016, U.S. EPA responded to Tennessee's letter and added Cargill Corn Milling, Inc., located in Shelby County, to Tennessee's list of applicable sources under the Data Requirements Rule.

Tennessee has chosen to characterize peak 1-hour SO₂ concentrations in each of the four areas associated with the Tennessee Valley Authority facilities using air quality modeling. On March 24, 2016, the Shelby County Health Department notified U.S. EPA that it will reduce allowable SO₂ 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 during 2016, which is prior to the January 13, 2017, deadline. A copy of the Shelby County Letter is attached.

¹ 80 FR 51052, Data Requirements Rule for the 2010 1-Hour Sulfur Dioxide (SO₂) Primary National Ambient Air Quality Standard (NAAQS), August 21, 2015

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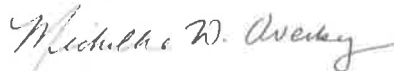
For the four Tennessee Valley Authority facilities, the Division of Air Pollution Control has already submitted modeling protocols to U.S. EPA Region 4 on the following dates:

Tennessee Valley Authority – Gallatin Fossil Plant: January, 2016
Tennessee Valley Authority – Johnsonville Fossil Plant: February 11, 2016
Tennessee Valley Authority – Allen Fossil Plant: February 11, 2016
Tennessee Valley Authority – Cumberland Fossil Plant: February 23, 2016

These modeling protocol submittals satisfy the requirements of 40 CFR 51.1203(d). The Division of Air Pollution Control will continue to consult with Region 4 staff regarding comments on the protocols and the final modeling, which is required to be submitted by January 13, 2017.

Should you have any questions, please contact Jimmy Johnston of my staff at 615-253-7319 or james.johnston@tn.gov.

Sincerely,



Michelle W. Owenby
Division Director
Air Pollution Control

c: Bob Rogers, Shelby County Health Department, Pollution Control Section
Beverly Bannister, EPA Region 4
Carol Kemker, EPA Region 4
Scott Davis, EPA Region 4
Lynorae Benjamin, EPA Region 4
Twunjala Bradley, EPA Region 4

attachment



SHELBY COUNTY HEALTH DEPARTMENT



MARK H. LUTTRELL, JR.
MAYOR

ALISA R. HAUSHALTER, DNP, RN
DIRECTOR

HELEN MORROW, MD, MPA
HEALTH OFFICER

Public Health
Prevent. Promote. Protect.

March 24, 2016

Ms. Heather McTeer Toney, Regional Administrator
USEPA REGION 4
61 Forsyth Street, S.W.
MailCode: 9T25
Atlanta, GA 30303-8960

RE: Removal of Cargill Corn Milling, Inc. from the sources to be categorized under the sulfur dioxide (SO₂) Data Requirements Rule (DRR).

Dear Ms. Toney:

The Shelby County Health Department, Pollution Control Section (The Department) is submitting the following in response to the USEPA Region 4 letter addressed to Robert Martineau, Commissioner, Tennessee Department of Environment and Conservation (TDEC) regarding State of Tennessee sources categorized under the SO₂ DRR.

The USEPA stated in this letter that available information indicated that the Tennessee submittal did not include all sources of SO₂ with emissions at or in excess of 2,000 tpy that are not located in a nonattainment area. USEPA specifically referenced and added Cargill Corn Milling Company, Inc. (Shelby County).

The Department believes that this Cargill Corn Milling Company, Inc. (Cargill) facility, located at 2330 Buoy Street, Memphis, Tennessee, should be excluded from the SO₂ DRR categorized source list for Tennessee due to the permanent shutdown of corn milling operations at the facility. The following is a summary of permanent SO₂ emission reductions for this Cargill facility. These reductions will be made enforceable through the modification of Title V Operating Permit No. 0045-01TV in 2016.

1) Conversion from Coal to Natural Gas

The largest single permanent reduction in SO₂ emissions from the facility is associated with the conversion of the Stoker coal-fired boiler and the Pulverized Coal (PC) coal-fired boiler to natural gas-fired only units. Coal burning permanently ceased at this facility in February 2015.

Cargill submitted an application on July 7, 2015 requesting enforceable limits restricting these boilers to the use of only natural gas using existing natural gas burners associated with these boilers.

Mission

To promote, protect and improve the health and environment of all Shelby County residents.

814 Jefferson Avenue ♦ Memphis, Tennessee 38105
(901) 222-9000

TWOUT-
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Conversion to natural gas has significantly reduced the heat capacity and SO₂ emissions from these boilers as follows:

Boiler Description	Emission Unit No.	Heat Capacity (MMBtu/hr)		Allowable SO ₂ Emissions Prior to Conversion to Natural Gas ^{1,2} (tpy)	2013 Actual SO ₂ Emissions (tpy)	SO ₂ FTE after Conversion to Natural Gas (tpy)
		Coal Burner	Natural Gas Burner			
Stoker	8001	247	70	4,009.3	1,076	0.18
PC	8301	247	90		1,368	0.24

¹ See Title V Operating Permit No. 0045-01TV and Consent Decree

² The Consent Decree third modification limited the combined SO₂ emissions from these boilers to 3,450 tons per year through March 3, 2016.

Actual SO₂ emissions from the boilers have been reduced by 2,443 tons per year (based on 2013 data) as a result of this fuel type conversion.

The Department notes that Cargill also submitted a Notification of Compliance Status in accordance with 40 CFR Part 63, Subpart DDDDD and classified these 70 and 90 MMBtu/hr boilers under the "Units Designed to Burn Gas 1 Fuels" subcategory.

2) Corn Milling Plant Closure

During the 2015 calendar year the corn milling operations at this Cargill facility were permanently shutdown. Cargill submitted a permit application on December 11, 2015 and supplemented it on January 15, 2016 for the removal of multiple emission units and processes from Title V Operating Permit No. 0045-01TV. Removal of these emission units and processes represents a further reduction in SO₂ emissions as follows:

Emission Group or Unit No.	Description	Status	Allowable SO ₂ Emissions to be removed from Title V Operating permit No. 0045-01TV (tpy)
EG-2000	Steephouse	Permanently Shutdown	8.76
EG-3000	Millhouse	Permanently Shutdown	13.15
EG-4000	Feedhouse	Permanently Shutdown	191.9
EG-5000	Starch Modification	Permanently Shutdown	9.28
EG-6000	Syrup Refining	Permanently Shutdown	13.14
EG-7000	Starch Loadout	Permanently Shutdown	0.00
EU-8500	Foster-Wheeler 312 MMBtu/hr Natural Gas-Fired Boiler	Permanently Shutdown	0.81
EG-9000	Fructose Plant	Permanently Shutdown	18.69
TOTAL			255.73

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The facility has continued to operate or is maintaining the following operations available for future use:

- ✓ Emission Group 1000 - Elevator Department
- ✓ Emission Group 8000 - Power Plant
(Only the two boilers converted from coal to natural gas burning remain. The 312 MMBtu/hr Foster-Wheeler natural gas-fired boiler was permanently removed from operation on April 29, 2015.
- ✓ Emission Group 10000 - Germ Preparation
- ✓ Emission Group 11000 - Germ Oil Extraction and Refining
- ✓ Emission Group 12000 - Emergency Generators (2) and Fire Pump Engine

SO₂ Emission Reduction Summary

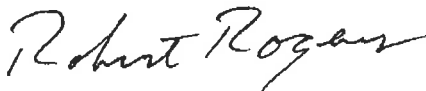
The combined potential to emit SO₂ from these remaining sources is 21.6 tpy. Potential SO₂ emissions from the entire Cargill facility have been reduced by > 4,200 tpy and actual SO₂ emissions have been reduced by > 2,500 tpy (based on 2013 data).

2015 calendar year SO₂ emissions for this facility totaled 177 tons and 2016 calendar year SO₂ emissions are projected to be less than 10 tons.

Allowable SO₂ emissions for this Cargill facility will be reduced to 21.6 tpy and this limitation will become effective upon the modification of Title V Operating Permit No. 0045-01TV in 2016. Based on this summary, it is the belief of the Department that this Cargill, Inc. facility should not be included as a categorized source under the SO₂ DRR.

Should you have any questions or comments; please do not hesitate to contact me at (901) 222-9578.

Very Truly Yours,



Robert Rogers, P.E.
Technical Manager
Pollution Control Section

cc: Robert Martineau, Commissioner, TDEC
Michelle Walker Owenby, Director, TDEC
Jimmy Johnston, Environmental, Program Director, TDEC