Enclosure 2

Tate & Lyle – South
Revised 2010 – 2014 Annual Emission Statements and Supporting Documentation
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December 22, 2015

Via Email: mderf@idem.IN.gov

Mr. Mark Derf
Section Chief – Technical Support and Modeling
Indiana Department of Environmental Management
Office of Air Quality
100 North Senate Avenue
Indianapolis, Indiana 46206-2251

Re: Rationale for the Recalculation of SO₂ Emissions Reported in AERs
Tate & Lyle Ingredients Americas
Lafayette, Indiana

Dear Mark:

Tate & Lyle’s corn wet milling plant located in Lafayette, Indiana ("Lafayette South") utilizes a stoker-type coal boiler ("Riley Coal Boiler") to provide steam to plant operations. Additionally, up until early December 2015, the boiler exhaust was routed to an electrostatic precipitator ("ESP") for particulate matter control. A portion of the exhaust from the ESP was routed to two co-product dryers (Gluten Dryer and Fiber Dryer) where the heat in the exhaust gas was used to dry co-products (gluten and fiber). The portion of the exhaust that was not routed to the boilers was discharged directly to atmosphere. Both dryers are equipped with pH-controlled scrubbers, so any SO₂ in the boiler exhaust was controlled in these scrubbers. Beginning in early December 2015, utilizing a portion of the boiler exhaust to dry co-products was discontinued. This was because of a change in the configuration of the co-product drying systems at the plant. The exhaust from all of the plant’s co-product dryers are now routed to three new regenerative thermal oxidizers ("RTO") for VOC and CO emissions control. The use of boiler exhaust was discontinued because of the detrimental impact on the RTOs of the boiler exhaust. To offset the loss of boiler exhaust SO₂ control provided by the dryers’ scrubbers, a pH-controlled scrubber was installed at the outlet of the ESP. In the current configuration, all SO₂ emissions in the boiler exhaust are controlled utilizing the new scrubber. Figure I provides a block flow diagram of the pre-December 2015 boiler/dryer configuration.

In conjunction with the RTO project and the "inclusion" criteria for the new 1-hour SO₂ NAAQS, Tate and Lyle reviewed the methodology used to calculate SO₂ emissions associated with the
Riley Coal Boiler and subsequently reported in the plant’s Annual Emissions Reports (“AER”). The following are the results of that review.

The AER calculation methodology used the following assumptions (the same assumptions that have been used since the initial AER submitted in 1999). They were as follows.

1. All boiler exhaust is routed to the two co-product dryers.
2. The SO2 removal efficiency of the dryers’ scrubbers is 50%.
3. The 50% control was chosen since all exhaust is not routed to the dryers (i.e., when the dryers are not operational, while the actual removal efficiency of the scrubbers is between 85% and 90%).

Review of these assumptions indicates that the more accurate assumptions would be:

1. Historically, 85% of the boiler exhaust is routed to the co-product dryers. This is based on damper position and plenum chamber temperature data.
2. The SO2 removal efficiency of the dryers’ scrubbers is 85%.

This is still a conservative approach to calculating emissions from coal combustion, since SO2 emissions are also reported from the co-product dryers (there is SO2 present in the dryer exhaust attributed to the process). So, in essence, some SO2 emissions are being double counted.

Using these assumptions, the SO2 emissions from the boiler for the period 2010 through 2014 were recalculated. The following are the results.

<table>
<thead>
<tr>
<th>Year</th>
<th>Total Site SO2 Emissions (tons)</th>
<th>Coal Boiler SO2 Emissions (tons)</th>
<th>Total Site SO2 Emissions (tons)</th>
<th>Coal Boiler SO2 Emissions (tons)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>2135.04</td>
<td>1761.24</td>
<td>1351.28</td>
<td>977.49</td>
</tr>
<tr>
<td>2011</td>
<td>2296.50</td>
<td>1924.83</td>
<td>1369.90</td>
<td>998.23</td>
</tr>
<tr>
<td>2012</td>
<td>2056.23</td>
<td>1679.96</td>
<td>1308.64</td>
<td>932.38</td>
</tr>
<tr>
<td>2013</td>
<td>2089.92</td>
<td>1723.30</td>
<td>1323.05</td>
<td>956.43</td>
</tr>
<tr>
<td>2014</td>
<td>2614.30</td>
<td>2253.39</td>
<td>1611.54</td>
<td>1250.63</td>
</tr>
</tbody>
</table>

The plant has revised and recertified the 2010 through 2014 AERs to reflect the recalculated SO2 emissions.
Please contact me if you have any questions regarding this information. My email is john.dent@talcandlyle.com and my telephone number is 217-421-2655.

Respectfully,

John Dent
Sr. Environmental Engineer

c: Brant Hamby – Lafayette South
AIR EMISSION STATEMENT CERTIFICATION

1. Company Name: Tate & Lyle Ingredients Americas LLC So
2. Source ID: 1816700033

3. Mailing Address:
   City: 
   State: 
   ZIP Code: 

4. Name of Emission Statement Preparer: Brant Hanby
5. Title of Emission Statement Preparer (optional): Environmental Mgr.
6. Telephone Number: (765)-477-5319
7. Facsimile Number (optional): 
8. Electronic Mail Address (optional): brant.hanby@tateandlyle.com

Part B: Emissions Summary

Part B is intended to aid in the review of data and to collect information about billable hazardous air pollutants.

Emissions Statement Pollutants (Plant Wide) Tons Emitted
Ammonia (NH3) 2.9970
Carbon Monoxide (CO) 258.3750
Lead (Pb) 0.0205
Nitrogen Dioxide (NO2) 508.1100
Particulate Matter <10 Microns (PM10) 453.9510
Particulate Matter 2.5 (PM2.5-PRI) 93.1840
Sulfur Dioxide (SO2) 1351.3100
Volatile Organic Compounds (VOC) 931.3400

Part 70 Permit Billable Hazardous Air Pollutants (Plant Wide) Tons Emitted
Hydrochloric Acid (CAS# 7647010) 1.9231
Hydrofluoric Acid (CAS# 7664393) 4.6800
Mercury and Mercury Compounds (CAS# 7439978 and TRI ID N458) 0.0022

Part C: Signature of Responsible Official

I hereby certify that the information in this emission statement is accurate based on reasonable estimates using data available to the preparers and on a reasonable inquiry into records and persons responsible for the operation of the source, and is true, accurate, and complete.

Daniel M. Kirk
Name of Responsible Official (typed or printed)

\[Signature\]

Title of Responsible Official

Date (month, day, year)

Report for 2010
Part A: Contact Information

1. Company Name: Tate & Lyle Ingredients Americas LLC Ste.
2. Source ID: 1815700033
3. Mailing Address: 
4. Name of Emission Statement Preparer: Brant Hamby
5. Title of Emission Statement Preparer (optional): Environmental Mgr.
6. Telephone Number: (765)-477-5319
7. Facsimile Number (optional): 
8. Electronic Mail Address (optional): brant.hamby@tateandlyle.com

Part B: Emissions Summary

Emissions Statement Pollutants (Plant Wide)

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Tons Emitted</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ammonia (NH3)</td>
<td>2.7380</td>
</tr>
<tr>
<td>Carbon Monoxide (CO)</td>
<td>248.0140</td>
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<tr>
<td>Lead (PB)</td>
<td>0.0165</td>
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<tr>
<td>Nitrogen Dioxide (NO2)</td>
<td>491.2800</td>
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<tr>
<td>Particulate Matter &lt;10 Microns (PM10)</td>
<td>452.9730</td>
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<tr>
<td>Particulate Matter 2.5(PM25-PRI)</td>
<td>92.7500</td>
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<tr>
<td>Sulfur Dioxide (SO2)</td>
<td>1369.9200</td>
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<td>Volatile Organic Compounds (VOC)</td>
<td>906.1100</td>
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</tbody>
</table>

Part 70 Permit Billable Hazardous Air Pollutants (Plant Wide)

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Tons Emitted</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydrochloric Acid (CAS# 7647010)</td>
<td>1.8996</td>
</tr>
<tr>
<td>Hydrofluoric Acid (CAS# 7664393)</td>
<td>4.8200</td>
</tr>
<tr>
<td>Mercury and Mercury Compounds (CAS#7439976 and TRI ID N458)</td>
<td>0.0024</td>
</tr>
</tbody>
</table>

Part C: Signature of Responsible Official

I hereby certify that the information in this emission statement is accurate based on reasonable estimates using data available to the preparer and on a reasonable inquiry into records and persons responsible for the operation of the source, and is true, accurate, and complete.

Name of Responsible Official (typed or printed): Daniel M. Kirk
Signature of Responsible Official:

Plant Manager
Title of Responsible Official
Date (month, day, year): 12/21/2015

Report for 2011
# AIR EMISSION STATEMENT CERTIFICATION

## Part A: Contact Information

Part A is intended to provide basic information about the company submitting an Air Emission Statement and Information on the Air Emission Statement preparer in case there is a question about the report.

1. **Company Name:** Tate & Lyle Ingredients Americas LLC So  
2. **Source ID:** 1815700033

3. **Mailing Address:**
   - City:  
   - State:  
   - ZIP Code:  

4. **Name of Emission Statement Preparer:** Brant Hamby

5. **Title of Emission Statement Preparer:** Environmental Mgr.

6. **Telephone Number:** (765)-477-5319  
7. **Facsimile Number:**

8. **Electronic Mail Address:** brant.hamby@tateandlyle.com

## Part B: Emissions Summary

Part B is intended to aid in the review of data and to collect information about billable hazardous air pollutants.

### Emissions Statement Pollutants (Plant Wide)

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Tons Emitted</th>
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</thead>
<tbody>
<tr>
<td>Ammonia (NH3)</td>
<td>2.9520</td>
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<tr>
<td>Carbon Monoxide (CO)</td>
<td>261.6910</td>
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<tr>
<td>Lead (Pb)</td>
<td>0.0205</td>
</tr>
<tr>
<td>Nitrogen Dioxide (NO2)</td>
<td>515.0800</td>
</tr>
<tr>
<td>Particulate Matter &lt;10 Microns (PM10)</td>
<td>454.5050</td>
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<tr>
<td>Particulate Matter 2.5 (PM2.5-PRI)</td>
<td>269.2170</td>
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<tr>
<td>Sulfur Dioxide (SO2)</td>
<td>1308.6000</td>
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<tr>
<td>Volatile Organic Compounds (VOC)</td>
<td>808.2200</td>
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</table>

### Part 70 Permit Billable Hazardous Air Pollutants (Plant Wide)

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Tons Emitted</th>
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</thead>
<tbody>
<tr>
<td>Hydrochloric Acid (CAS# 7647010)</td>
<td>1.7414</td>
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<tr>
<td>Hydrofluoric Acid (CAS# 7664393)</td>
<td>3.7000</td>
</tr>
<tr>
<td>Mercury and Mercury Compounds (CAS#7439976 and TRI ID N458)</td>
<td>0.0022</td>
</tr>
</tbody>
</table>

## Part C: Signature of Responsible Official

I hereby certify that the information in this emission statement is accurate based on reasonable estimates using data available to the preparer and on a reasonable inquiry into records and persons responsible for the operation of the source, and is true, accurate, and complete.

**Name of Responsible Official (typed or printed):** Daniel M. Kick  
**Title of Responsible Official:** Plant Manager  
**Date (month, day, year):** 12/21/2015  
**Signature of Responsible Official:**

*Report for 2013*
**AIR EMISSION STATEMENT CERTIFICATION**

**State Form 52352 (8-05)**

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT**

**Instructions:**
- This is a required form for each air emission statement as well as any modifications.
- The certification supplied with a source's permit may be used in lieu of this form.
- "Responsible Official" has the same meaning as defined in 326 IAC (34), and is usually designated in the General Information section of the permit.

### Part A: Contact Information

1. **Company Name:** Tate & Lyle Ingredients Americas LLC So  
2. **Source ID:** 1815700033
3. **Mailing Address:**
   - City: 
   - State: 
   - ZIP Code: 
4. **Name of Emission Statement Preparer:** Brant Hamby
5. **Title of Emission Statement Preparer (optional):** Environmental Mgr.
6. **Telephone Number:** (765)-477-5319
7. **Facsimile Number (optional):**
8. **Electronic Mail Address (optional):** brant.hamby@tateandlyle.com

### Part B: Emissions Summary

**Emissions Statement Pollutants (Plant Wide)**

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Tons Emitted</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ammonia (NH3)</td>
<td>2.9270</td>
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<tr>
<td>Carbon Monoxide (CO)</td>
<td>266.0850</td>
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<tr>
<td>Lead (PB)</td>
<td>0.0205</td>
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<tr>
<td>Nitrogen Dioxide (NO2)</td>
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<tr>
<td>Particulate Matter &lt;10 Microns (PM10)</td>
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<td>Particulate Matter 2.5/PM25-PRI</td>
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<td>Sulfur Dioxide (SO2)</td>
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<td>Volatile Organic Compounds (VOC)</td>
<td>763.4600</td>
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**Part 70 Permit Billable Hazardous Air Pollutants (Plant Wide)**

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Tons Emitted</th>
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<tbody>
<tr>
<td>Hydrochloric Acid (CAS# 7647010)</td>
<td>1.6900</td>
</tr>
<tr>
<td>Hydrofluoric Acid (CAS# 7664303)</td>
<td>3.6000</td>
</tr>
<tr>
<td>Mercury and Mercury Compounds (CAS#7439976 and TRI ID N458)</td>
<td>0.0022</td>
</tr>
</tbody>
</table>

### Part C: Signature of Responsible Official

I hereby certify that the information in this emission statement is accurate based on reasonable estimates using data available to the preparers and on a reasonable inquiry into records and persons responsible for the operation of the source, and is true, accurate, and complete.

**Daniel M. Kirk**  
Name of Responsible Official (typed or printed)  
Signature of Responsible Official

**Plant Manager**  
Title of Responsible Official  
Date (month, day, year)

Report for 2013
AEC-01
AIR EMISSION STATEMENT CERTIFICATION

Instructions:
This is a required form for each air emission statement as well as any modifications.
The certification supplied with a source's permit may be used in lieu of this form.
"Responsible Official" has the same meaning as defined in 926 IAC (34), and is usually designated in the General Information section of the permit.

Part A: Contact Information
1. Company Name: FSSROC Cement Corp
2. Source ID: 10017000005
3. Mailing Address:
4. Name of Emission Statement Preparer: Kimberly Colltell
5. Title of Emission Statement Preparer (optional):
   Senior Consultant
6. Telephone Number: (317)-461-8100
7. Facsimile Number (optional):
8. Electronic Mail Address (optional): kcolltell@kfhyconsultants.com

Part B: Emissions Summary

<table>
<thead>
<tr>
<th>Emissions Statement Pollutants (Plant Wide)</th>
<th>Tons Emitted</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carbon Monoxide (CO)</td>
<td>114.7780</td>
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<tr>
<td>Lead (Pb)</td>
<td>0.0081</td>
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<td>Nitrogen Dioxide (NO2)</td>
<td>637.0000</td>
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<td>Primary PM Condensible Only (All Less Than 1 Micron) (PM-CON)</td>
<td>247.8451</td>
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<td>Primary PM10, Filterable Portion Only (PM10-FIL)</td>
<td>169.2534</td>
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<td>Primary PM2.5, Filterable Portion Only (PM2.5-FIL)</td>
<td>157.6313</td>
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<tr>
<td>Sulfur Dioxide (SO2)</td>
<td>269.8900</td>
</tr>
<tr>
<td>Volatile Organic Compounds (VOC)</td>
<td>20.8160</td>
</tr>
</tbody>
</table>

Part C: Signature of Responsible Official

I hereby certify that the information in this emission statement is accurate based on reasonable estimates using data available to the preparer and on a reasonable inquiry into records and persons responsible for the operation of the source, and is true, accurate, and complete.

Tracy Crowther
Name of Responsible Official (typed or printed)

Tracy Crowther
Signature of Responsible Official

Plant Director
Title of Responsible Official

11/20/2015
Date (month, day, year)