



STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION
17 STATE HOUSE STATION AUGUSTA, MAINE 04333-0017

DEPARTMENT ORDER

**Tate & Lyle Solutions USA LLC
Aroostook County
Houlton, Maine
A-64-71-Q-M**

**Departmental
Findings of Fact and Order
Air Emission License
Amendment #2**

FINDINGS OF FACT

After review of the air emission license amendment application, staff investigation reports, and other documents in the applicant's file in the Bureau of Air Quality, pursuant to 38 Maine Revised Statutes (M.R.S.) § 344 and § 590, the Maine Department of Environmental Protection (Department) finds the following facts:

I. REGISTRATION

A. Introduction

Tate & Lyle Ingredients Americas LLC was issued Air Emission License A-64-71-N-R/M on February 17, 2017, for the operation of emission sources associated with their starch manufacturing facility. The license was subsequently amended on July 16, 2021 (A-64-71-O-M) to address regular maintenance activities for the Propylene Oxide Tank. The license was transferred to Tate & Lyle Solutions USA LLC (Tate & Lyle) on February 25, 2022 (A-64-71-P-T).

The equipment addressed in this license amendment is located at 48 Morningstar Road in Houlton, Maine.

Tate & Lyle has requested a minor revision to their license to replace an existing baghouse in the plant's Dextrin Starch Conveying System.

In addition, the Department is taking this opportunity to update visible emission standards as necessary due to recent changes to 06-096 Code of Maine Rules (C.M.R.) ch. 101, *Visible Emissions Regulation*.

B. Emission Equipment

The following equipment is addressed in this air emission license amendment:

Process Equipment

Unit	Equipment	Production Rate	Date of Installation	Pollution Control Equipment
23	Dextrin Starch Conveying System	2,000 lb/hr starch-dextrin	2024	Baghouse*

* Unit being replaced

C. Revision Description

The Dextrin Starch Conveying System is currently controlled by a KICE DX101 baghouse. Tate & Lyle proposes to replace this control equipment with a new Sidewinder Filter baghouse. The new baghouse will be designed to achieve the same 99.9% control efficiency. However, changes to the exhaust stream will cause the flow rate to increase from 1,000 acfm to 1,214 acfm, resulting in an increase in potential emissions of particulate matter of less than 0.1 ton per year. The Department finds the new baghouse will achieve Best Practical Treatment (BPT) for emissions of particulate matter from the Dextrin Starch Conveying System.

D. Application Classification

All rules, regulations, or statutes referenced in this air emission license refer to the amended version in effect as of the date this license was issued.

Pursuant to § 2(R) of *Major and Minor Source Air Emission License Regulations*, 06-096 Code of Maine Rules (C.M.R.) ch. 115, replacement of an existing air pollution control system may be considered a minor revision provided the new equipment achieves BPT. As discussed previously, the new baghouse will achieve BPT. Therefore, this application has been processed as a minor revision in accordance with 06-096 C.M.R. ch. 115.

E. Facility Classification

With the annual heat content limit on the boilers, the VOC limit associated with the process equipment, and the facility-wide SO₂ emissions cap, Tate & Lyle is licensed as follows:

- As a synthetic minor source of air emissions for criteria pollutants, because Tate & Lyle is subject to license restrictions that keep facility emissions below major source thresholds for SO₂ and VOC; and
- As an area source of hazardous air pollutants (HAP), because the licensed emissions are below the major source thresholds for HAP.

Emissions of SO₂ are licensed above 80% of the major source threshold. Therefore, this facility is classified as an “80% Synthetic Minor” for the purpose of determining the minimum required compliance inspection frequency in accordance with Maine’s Compliance Monitoring Strategy.

F. Visible Emissions

In 2023, the Department completed rulemaking on revisions to *Visible Emissions Regulation*, 06-096 Code of Maine Rules (C.M.R.) ch. 101. The revised rule went into

effect on January 1, 2024. The following section identifies applicable visible emissions requirements and addresses necessary revisions to applicable requirements due to this rulemaking.

1. Boilers #2 and #3

Boilers #2 and #3 exhaust to a common stack, Stack #1. As of January 1, 2024, the applicable visible emissions standards for Stack #1 contained in 06-096 C.M.R. ch. 101 are the following:

Visible emissions from Stack #1 shall not exceed 20% opacity on a six-minute block average basis. [06-096 C.M.R. ch. 101, §§ 4(A)(1)(a)(i), 4(A)(2), and 4(D)]

Visible emissions from Stack #1 shall not exceed 10% opacity on a six-minute block average basis. [06-096 C.M.R. ch. 101, §§ 4(A)(3) and 4(D)]

2. Emergency Generator

As of January 1, 2024, the applicable visible emissions standards for the Emergency Generator contained in 06-096 C.M.R. ch. 101 are the following:

Visible emissions from the Emergency Generator shall not exceed an opacity of 20% on a six-minute block average basis, except during periods of startup. During periods of startup, the engine must meet the normal operating visible emissions standard or the following work practice standards and alternative visible emissions standard. Use of the following work practice standards and alternative visible emissions standard in lieu of the normal operating visible emissions standard is limited to no more than once per day per engine.

- a. The duration of the startup shall not exceed 30 minutes per event;
- b. Visible emissions shall not exceed 50% opacity on a six-minute block average basis; and
- c. Tate & Lyle shall keep records as of the date, time, and duration of each startup event.

Use of the work practice standards and alternative visible emissions standard in lieu of the normal operating standard is limited to no more than once per day.

[06-096 C.M.R. ch. 101, § 4(A)(4)]

Note: This does not limit the engine to one startup per day. It only limits the use of the alternative emission standard to once per day.

3. Process Equipment

As of January 1, 2024, the applicable visible emissions standards for the facility's baghouses contained in 06-096 C.M.R. ch. 101 are the following:

Visible emissions from each baghouse shall not exceed 10% opacity on a six-minute block average basis. [06-096 C.M.R. ch. 101, § 4(B)(3)]

As of January 1, 2024, the applicable visible emissions standards for the facility's cyclones and wet scrubbers contained in 06-096 C.M.R. ch. 101 are the following:

Visible emissions from each cyclone and wet scrubber shall not exceed 20% opacity on a six-minute block average basis. [06-096 C.M.R. ch. 101, § 4(B)(4)]

4. Fugitive Emissions

As of January 1, 2024, the applicable visible emissions standard for fugitive emissions contained in 06-096 C.M.R. ch. 101 are the following:

Tate & Lyle shall not cause emissions of any fugitive dust during any period of construction, reconstruction, or operation without taking reasonable precautions. Such reasonable precautions shall be included in the facility's continuing program of best management practices for suppression of fugitive particulate matter. See 06-096 C.M.R. ch. 101, § 4(C) for a list of potential reasonable precautions.

Tate & Lyle shall not cause or allow visible emissions within 20 feet of ground level, measured as any level of opacity and not including water vapor, beyond the legal boundary of the property on which such emissions occur. Compliance with this standard shall be determined pursuant to 40 C.F.R. Part 60, Appendix A, Method 22.

[06-096 C.M.R. ch. 101, § 4(C)]

5. General Process Sources

As of January 1, 2024, the applicable visible emissions standard for general process sources contained in 06-096 C.M.R. ch. 101 are the following:

Visible emissions from any general process source shall not exceed 20% opacity on a six-minute block average basis. [06-096 C.M.R. ch. 101, § 4(B)(4)]

G. Annual Emissions

This license amendment will not change the facility's licensed annual emissions.

ORDER

Based on the above Findings and subject to conditions listed below, the Department concludes that the emissions from this source:

- will receive Best Practical Treatment,
- will not violate applicable emission standards, and
- will not violate applicable ambient air quality standards in conjunction with emissions from other sources.

The Department hereby grants Air Emission License Amendment A-64-71-Q-M subject to the conditions found in Air Emission License A-64-71-N-R/M, amendment A-64-71-O-M, transfer A-64-71-P-T, and the following conditions. This license amendment authorizes the replacement of the Dextrin Starch Conveying System baghouse with a new baghouse designed to achieve the same level of control efficiency as the existing baghouse, 99.9%.

Severability. The invalidity or unenforceability of any provision of this License Amendment or part thereof shall not affect the remainder of the provision or any other provisions. This License Amendment shall be construed and enforced in all respects as if such invalid or unenforceable provision or part thereof had been omitted.

SPECIFIC CONDITIONS

The following shall replace Condition (16)(E) of Air Emission License A-64-71-N-R/M:

(16) Boilers #2 & #3

E. Visible Emissions

1. When firing #6 fuel oil, waste oil, or distillate fuel in either boiler, visible emissions from Stack #1 shall not exceed 20% opacity on a six-minute block average basis.
[06-096 C.M.R. ch. 101, §§ 4(A)(1)(a)(i), 4(A)(2), and 4(D)]
2. When only propane or natural gas is being fired in the boilers, visible emissions from Stack #1 shall not exceed 10% opacity on a six-minute block average basis.
[06-096 C.M.R. ch. 101, §§ 4(A)(3) and 4(D)]

The following shall replace Condition (17)(D) of Air Emission License A-64-71-N-R/M:

(17) Emergency Generator

- D. Visible Emissions from the Emergency Generator shall not exceed an opacity of 20% on a six-minute block average basis, except during periods of startup. During periods of startup, the engine must meet the normal operating visible emissions standard or the following work practice standards and alternative visible emissions standard. Use of the following work practice standards and alternative visible emissions standard in lieu

of the normal operating visible emissions standard is limited to no more than once per day per engine.

1. The duration of the startup shall not exceed 30 minutes per event;
2. Visible emissions shall not exceed 50% opacity on a six-minute block average basis; and
3. Tate & Lyle shall keep records as of the date, time, and duration of each startup event.

Use of the work practice standards and alternative visible emissions standard in lieu of the normal operating standard is limited to no more than once per day.

Note: This does not limit the engine to one startup per day. It only limits the use of the alternative emission standard to once per day.

[06-096 C.M.R. ch. 101, § 4(A)(4)]

The following shall replace Condition (19)(B) of Air Emission License A-64-71-N-R/M:

(19) Process Equipment

B. Pneumatic Conveying of Materials

1. PM emissions from each identified process source shall be controlled as identified in the following table [06-096 C.M.R. ch. 115, BPT]:

Unit #	Equipment	BPT Control Equipment
3	Pneumatic Conveying (#1, #2, #3, and #4 Starch Drum Dryers)	Baghouse
4	Pneumatic Conveying (2 nd Drums and Drum Grinder)	Baghouse
5	Pneumatic Conveying (Drum Grinder)	Baghouse
6	Pneumatic Conveying (Drum Grinder)	Baghouse
7	Pneumatic Conveying (Flash Packer)	Baghouse
8	Flash Dryer Air Transport	Cyclone
10	Starch Bag Dump/ Railcar Unloading Dust Removal	Cyclone/ wet scrubber
11	Starch Bag Dump/ Railcar Unloading Dust Removal	Cyclone/ wet scrubber
12	Pneumatic Conveying (Dextrin Packer)	Baghouse
13	Dextrin Fluidizing Air Separation	Baghouse
22	Tapioca Storage Bin Silo	Baghouse
23	Dextrin Starch Conveying System	Baghouse

2. Visible emissions from each baghouse shall not exceed 10% opacity on a six-minute block average basis. [06-096 C.M.R. ch. 101, § 4(B)(3)]
3. Visible emissions from each cyclone and wet scrubber shall not exceed 20% opacity on a six-minute block average basis. [06-096 C.M.R. ch. 101, § 4(B)(4)]
4. Tate & Lyle shall maintain records of all routine and non-routine maintenance on each wet scrubber, cyclone, fabric filter, and baghouse. Such records shall contain the location, date, nature of maintenance or failure, and maintenance action taken or action taken to correct the failure. [06-096 C.M.R. ch. 115, BACT/BPT]

The following shall replace Condition (22) of Air Emission License A-64-71-N-R/M:

(22) Fugitive Emissions

- A. Tate & Lyle shall not cause emissions of any fugitive dust during any period of construction, reconstruction, or operation without taking reasonable precautions. Such reasonable precautions shall be included in the facility's continuing program of best management practices for suppression of fugitive particulate matter. See 06-096 C.M.R. ch. 101, § 4(C) for a list of potential reasonable precautions.
- B. Tate & Lyle shall not cause or allow visible emissions within 20 feet of ground level, measured as any level of opacity and not including water vapor, beyond the legal boundary of the property on which such emissions occur. Compliance with this standard shall be determined pursuant to 40 C.F.R. Part 60, Appendix A, Method 22.

[06-096 C.M.R. ch. 101, § 4(C)]

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The following shall replace Condition (23) of Air Emission License A-64-71-N-R/M:

(23) General Process Sources

Visible emissions from any general process source shall not exceed 20% opacity on a six-minute block average basis. [06-096 C.M.R. ch. 101, § 4(B)(4)]

DONE AND DATED IN AUGUSTA, MAINE THIS 15th DAY OF JANUARY, 2025.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY:  for
MELANIE LOYZIM, COMMISSIONER

The term of this license amendment shall be ten (10) years from the issuance of Air Emission License A-64-71-N-R/M (issued 2/17/2017).

[Note: If a renewal application, determined as complete by the Department, is submitted prior to expiration of this license, then pursuant to Title 5 M.R.S. § 10002, all terms and conditions of the license shall remain in effect until the Department takes final action on the license renewal application.]

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: 11/7/2024

Date of application acceptance: 11/8/2024

This Order prepared by Lynn Muzzey, Bureau of Air Quality.