



DEPARTMENT ORDER

**Tate & Lyle Ingredients Americas LLC
Aroostook County
Houlton, Maine
A-64-71-O-M**

**Departmental
Findings of Fact and Order
Air Emission License
Amendment #1**

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 (Tate & Lyle) was issued Air Emission License A-64-71-N-R/M on February 17, 2017, for the operation of emission sources associated with their modified starch manufacturing facility.

Tate & Lyle has requested a minor revision to their license in order to address operations associated with regular maintenance activities for the Propylene Oxide Tank.

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

B. Emission Equipment

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

Storage Tanks

Tank ID / Material Stored	Capacity (gallons)	Vapor Pressure (psia @ 68 °F)	Tank Type	Year of Installation
Propylene Oxide	20,725	8.55	Horizontal, Pressurized	1993

C. 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.

This amendment will not increase licensed emissions of any pollutant. Therefore, this amendment is determined to be a minor revision and has been processed as such.

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

II. **BEST PRACTICAL TREATMENT (BPT)**

A. Introduction

In order to receive a license, the applicant must control emissions from each unit to a level considered by the Department to represent Best Practical Treatment (BPT), as defined in *Definitions Regulation*, 06-096 C.M.R. ch. 100. Separate control requirement categories exist for new and existing equipment.

BPT for existing emissions equipment means that method which controls or reduces emissions to the lowest possible level considering:

- the existing state of technology;
- the effectiveness of available alternatives for reducing emissions from the source being considered; and
- the economic feasibility for the type of establishment involved.

B. Revision Description

Tate & Lyle uses propylene oxide (PO) in its manufacturing process which is stored in a pressurized aboveground tank. PO is both a VOC and a HAP.

The Propylene Oxide Tank is emptied and degassed for inspection and maintenance purposes per applicable code. After the tank is drained, water is pumped into the tank to react with the remaining heel. This material is disposed of off-site by shipping to Clean Harbors to a or similar disposal company. The tank vapor space is then purged with

nitrogen and exhausted to one of the facility's 19,000-gallon reactors which contains approximately 10,000 gallons of acidified agitated water. The vapor is injected below the surface of the liquid. The reactor acts as an acid wet scrubber neutralizing in excess of 99.9% of the PO in the vapor stream.

The process above represents BPT for control of PO from the emptying and degassing of the Propylene Oxide Tank.

In the event that the Propylene Oxide Tank is not able to be put back into service immediately after inspection, Tate & Lyle has requested the flexibility to draw PO directly from a railcar until the Propylene Oxide Tank can be safely put back into service. The Department approves of this alternate operating scenario.

C. 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-O-M subject to the conditions found in Air Emission License A-64-71-N-R/M and the following conditions.

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 are New Conditions:

(26) Propylene Oxide Tank Maintenance

- A. Whenever the Propylene Oxide Tank is emptied and degassed, Tate & Lyle shall purge the tank with nitrogen and control emissions by injecting them into a reactor containing acidified water. Tate & Lyle shall keep records of the date of each degassing event. [06-096 C.M.R. ch. 115 (BPT)]
- B. Tate & Lyle is licensed to draw propylene oxide directly from a railcar in the event that the Propylene Oxide Tank is out of service for maintenance or repairs. [06-096 C.M.R. ch. 115, BPT]

DONE AND DATED IN AUGUSTA, MAINE THIS 16th DAY OF JULY, 2021.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY:  for
MELANIE LOYZIM, COMMISSIONER

The term of this amendment shall be concurrent with the term of Air Emission License A-64-71-N-R/M.

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: 7/8/2021

Date of application acceptance: 7/8/2021

Date filed with the Board of Environmental Protection:

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

FILED
JUL 16, 2021
State of Maine
Board of Environmental Protection