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

DEPARTMENT ORDER

Soderberg Company, Inc. **Aroostook County** **Caribou, Maine** **A-972-71-E-A**	**Departmental** **Findings of Fact and Order** **Air Emission License** **After-the-Fact 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 (the Department) finds the following facts:

I. REGISTRATION

A. Introduction

Soderberg Company, Inc. (Soderberg) was issued Air Emission License A-972-71-D-R on June 9, 2023, for the operation of emission sources associated with their asphalt plant facility. Soderberg has requested an amendment after-the-fact to their license in order to add a new asphalt plant.

The equipment addressed in this license amendment is located at 356 Van Buren Rd, Caribou, Maine.

B. Emission Equipment

The following equipment is addressed in this Air Emission License Amendment:

Asphalt Plants

Equipment	Process Rate (tons/hour)	Design Capacity (MMBtu/hr)	Fuel Type	Control Device(s)	Stack ID	Date of Manuf.
Asphalt Drum Plant #1*	100	43.5	Distillate fuel Spec. Waste Oil	Baghouse	1	1988
Asphalt Drum Plant #2**	400	120	Distillate fuel	Baghouse	2	1999

* Previously named Asphalt Drum Plant
** new to the license

C. Definitions

Distillate Fuel means the following:

- Fuel oil that complies with the specifications for fuel oil numbers 1 or 2, as defined by the American Society for Testing and Materials (ASTM) in ASTM D396;
- Diesel fuel oil numbers 1 or 2, as defined in ASTM D975;
- Kerosene, as defined in ASTM D3699;
- Biodiesel, as defined in ASTM D6751; or
- Biodiesel blends, as defined in ASTM D7467.

Records or *Logs* mean either hardcopy or electronic records.

Specification Waste Oil means a petroleum-based oil which, through use or handling, has become unsuitable for its original purpose due to the presence of impurities or loss of original properties, and meets all of the following requirements:

- It has sufficient liquid content to be free flowing;
- It meets all of the constituent and property standards as specified in *Waste Oil Management Rules*, 06-096 C.M.R. ch. 860;
- It does not otherwise exhibit hazardous waste characteristics; and
- It has not been mixed with a hazardous waste.

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.

The modification of a minor source is considered a major or minor modification based on whether or not expected emission increases exceed the "Significant Emissions" levels as defined in the Department's *Definitions Regulation*, 06-096 Code of Maine Rules (C.M.R.) ch. 100. The emission increases are determined by subtracting the current licensed annual emissions preceding the modification from the maximum future licensed annual emissions, as follows:

Pollutant	Current License (tpy)	Future License (tpy)	Net Change (tpy)	Significant Emission Levels
PM	2.2	4.2	2.0	100
PM_{10}	2.2	4.2	2.0	100
$PM_{2.5}$	2.2	4.2	2.0	100
SO_2	0.6	5.8	5.2	100
NO_x	4.1	6.8	2.7	100
CO	6.8	13.3	6.5	100
VOC	1.6	3.2	1.6	100

This modification is determined to be a minor modification and has been processed as such.

E. Facility Classification

With the annual tonnage limit on the asphalt plants, the facility is licensed as follows:

- As a synthetic minor source of air emissions for criteria pollutants, because Soderberg is subject to license restrictions that keep facility emissions below major source thresholds for SO_2, NO_x, and CO; 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

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 new sources and modifications requires a demonstration that emissions are receiving Best Available Control Technology (BACT), as defined in 06-096 C.M.R. ch. 100. BACT is a top-down approach to selecting air emission controls considering economic, environmental, and energy impacts.

B. Asphalt Drum Plant #1

Soderberg operates a portable asphalt drum mix plant, Asphalt Drum Plant #1, with a maximum hourly throughput of 100 ton/hr of asphalt and a 43.5 MMBtu/hr burner firing distillate fuel and specification waste oil. No changes are being made to this plant in this amendment. However, the tonnage limit for asphalt produced in Asphalt Drum Plant #1 will be amended, as specified Section II(C) below.

C. Asphalt Drum Plant #2

Soderberg proposes to install a stationary asphalt drum mix plant, Asphalt Drum Plant #2, with a maximum hourly throughput of 400 ton/hr of asphalt and a 120 MMBtu/hr burner which fires distillate fuel. Asphalt Drum Plant #2 was manufactured in 1999 and uses a baghouse to control emissions.

With limited exceptions, no person shall import, distribute, or offer for sale any distillate fuel with a sulfur content greater than 0.0015% by weight (15 ppm) pursuant to 38 M.R.S. § 603-A(2)(A)(3). Therefore, the distillate fuel purchased or otherwise obtained for use in Asphalt Drum Plant #2 shall not exceed 0.0015% by weight (15 ppm).

Emission factors for asphalt plants are available based on tons of asphalt produced, and there is no linear relationship between plant output and burner firing rate. Therefore, to ensure annual emissions are limited to less than major source thresholds, asphalt throughput is limited instead of fuel consumption. Accordingly, the total combined annual throughput of Asphalt Drum Plants #1 and #2 shall not exceed 200,000 tons of asphalt per year on a 12-month rolling total basis.

1. BACT Findings

Soderberg has proposed to burn only low-ash content fuel (distillate fuel) in Asphalt Drum Plant #1 and to install a baghouse. A baghouse, also known as a fabric filter, is a pollution control device that captures and removes $PM/PM_{10}/PM_{2.5}$ emissions from the gas stream by depositing the $PM/PM_{10}/PM_{2.5}$ emissions on fabric material bags. The collected particulate matter is shaken from the bags and removed for disposal.

BACT for Asphalt Drum Plant #1 is the firing of distillate fuel, the use of a baghouse, and the emission limits listed in the tables below.

Emission Limits

The BACT emission limits for Asphalt Drum Plant #2 were based on the following:

$PM/PM_{10}/PM_{2.5}$	–	0.03 gr/dscf and the use of a baghouse pursuant to 06-096 C.M.R. ch. 115, BACT
SO_2	–	1.1×10^{-2} lb/ton based on AP-42 Table 11.1-7 dated 3/04
NO_x	–	5.5×10^{-2} lb/ton based on AP-42 Table 11.1-7 dated 3/04
CO	–	0.13 lb/ton based on AP-42 Table 11.1-7 dated 3/04
VOC	–	3.2×10^{-2} lb/ton based on AP-42 Table 11.1-8 dated 3/04
Visible Emissions	–	06-096 C.M.R. ch. 101 and 40 C.F.R. Part 60, Subpart I

The BACT emission limits for Asphalt Drum Plant #2 are the following:

Unit	PM (lb/hr)	PM_{10} (lb/hr)	$PM_{2.5}$ (lb/hr)	SO_2 (lb/hr)	NO_x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Asphalt Drum Plant #2	11.52	11.52	11.52	4.40	22.00	52.00	12.80

2. Visible Emissions

Visible emissions from Asphalt Drum Plant #2 baghouse shall not exceed 20% opacity on a six-minute block average basis. This is consistent with the PM limit contained in *Standards of Performance for Hot Mix Asphalt Facilities,* 40 C.F.R. Part 60, Subpart I of 20% opacity.

General process emissions from Asphalt Drum Plant #2 shall be controlled so as to prevent visible emissions in excess of 20% opacity on a six-minute block average basis.

3. New Source Performance Standards

Asphalt Drum Plant #2 was manufactured in 1999 and is therefore subject to the federal Environmental Protection Agency's (EPA) New Source Performance Standards (NSPS) *Standards of Performance for Hot Mix Asphalt Facilities,* 40 Code of Federal Regulation (C.F.R.) Part 60, Subpart I for facilities constructed or modified after June 11, 1973.

a. Notification

Soderberg shall submit notification to EPA and the Department of the date of initial startup. [40 C.F.R. § 60.7(a)(3)]

b. Standards

(1) Particulate Matter (PM)
Asphalt Drum Plant #2 shall not exceed an emission limit of 0.04 gr/dscf. [40 C.F.R. § 60.92(a)(1)]

The Department has determined that the proposed BACT particulate matter emission limit is more stringent than the applicable limit in 40 C.F.R. Part 60, Subpart I. Therefore, the particulate matter limit for Asphalt Drum Plant #2 has been streamlined to the more stringent BACT limit, and only this more stringent limit shall be included in the Order of this air emission license.

(2) Opacity
Visible emissions from Asphalt Drum Plant #2 shall not exceed 20% opacity on a 6-minute block average basis. [40 C.F.R. §§ 60.92(a)(2) and 60.93(b)(2)] This standard applies at all times. [06-096 C.M.R. ch.115, BACT]

c. Initial Compliance Requirements

Soderberg shall perform the following within 60 days after achieving the maximum production rate at which Asphalt Drum Plant #2 will be operated but not later than 180 days after the initial startup:

(1) Soderberg shall conduct an initial performance test for PM using 40 C.F.R. Part 60, Appendix A, Method 5. [40 C.F.R. § 60.93(b)(1)]

(2) Soderberg shall conduct an initial performance test for opacity using 40 C.F.R. Part 60, Appendix A, Method 9. [40 C.F.R. § 60.93(b)(2)]

Soderberg shall submit to the Department for approval a performance test protocol, as outlined in the Department's Performance Testing Guidance, at least 30 days prior to the scheduled date of the performance test. [06-096 C.M.R. ch. 115, BACT]

Note: Although some federal standards, such as 40 C.F.R. Part 60, Subpart OOO, allow for a shorter pretest notification period, the Department requires pretest notification a minimum of 30 days prior to the scheduled date of the performance test unless a variance of this requirement is preapproved by the Department.

The Department's Performance Testing Guidance is available online at: https://www.maine.gov/dep/air/emissions/testing.html

4. Control Equipment

Emissions from Asphalt Drum Plant #2 shall be controlled by a baghouse.

5. Periodic Monitoring

The performance of the baghouse shall be monitored by either one of the following at all times Asphalt Drum Plant #2 is operating:

a. Continuous PM detector: When the detector signals excessive PM concentrations in the exhaust stream, Soderberg shall take corrective action within 24 hours, or immediately if visible emissions exceed 20% opacity.
b. Personnel available on-site with a current EPA 40 C.F.R. Part 60, Appendix A, Method 9 visible emissions certification: When visible emissions exceed 20% opacity, the hot mix asphalt plant is operating with insufficient control, and corrective action shall be taken immediately.

Soderberg shall keep records of baghouse failures, baghouse maintenance, and baghouse inspections.

To document maintenance of the baghouse, Soderberg shall keep records of the date and location of all bag failures, the date and a description of all routine maintenance, and the date and results of all inspections. These records shall be kept on-site at Asphalt Drum Plant #2's location.

6. Contaminated Soils

a. Soils Contaminated with Gasoline and Distillate Fuel

Soderberg may process up to 10,000 cubic yards per calendar year of soil contaminated by gasoline or distillate fuel without prior approval from the Department's Bureau of Air Quality.

This limit may be exceeded with prior written authorization from the Department's Bureau of Air Quality. Requests will be evaluated on a case-by-case basis taking into account the nature and amount of the contaminated soil to be processed, the location where the processing will occur, and the potential for fugitive emissions.

b. General Requirements for Processing of Contaminated Soils

Soderberg shall not process soils which are classified as hazardous waste or which have unknown contaminants.

Soderberg shall notify the Department (regional air compliance inspector) at least 24 hours prior to processing the contaminated soil and specify the contaminating material and quantity, origin of the soil and contaminating material, and the disposition of the contaminated soil. This authorization to process contaminated soil does not absolve the facility of responsibility to comply with all other air emission license conditions and any other applicable state rules or statutes.

When processing contaminated soils, Soderberg shall maintain records which specify the quantity and type of contaminant in the soil as well as the origin and characterization of the contaminated soil. In addition, when processing contaminated soil, Soderberg shall maintain records on an hourly basis of processing temperature, asphalt feed rates, and dryer throughput.

Any approval from the Department's Bureau of Air Quality to process contaminated soil does not supersede requirements from other Department bureaus. Similarly, approvals to process contaminated soil granted by another Department bureau does not supersede the limits imposed by this air emission license.

Processing of contaminated soils may also require a solid waste processing facility license under *Maine Solid Waste Management Rules*, 06-096 C.M.R. ch. 409, before processing of contaminated soils may occur. The material shall be handled in accordance with the requirements of the Department's Bureau of Remediation and Waste Management.

D. Annual Emissions

The table below provides an estimate of facility-wide annual emissions for the purposes of calculating the facility's annual air license fee and establishing the facility's potential to emit (PTE). Only licensed equipment is included, i.e., emissions from insignificant activities are excluded. Similarly, unquantifiable fugitive particulate matter emissions are

not included except when required by state or federal regulations. Maximum potential emissions were calculated based on the following assumptions:

- Processing a maximum of 200,000 ton/year of asphalt in Asphalt Drum Plants #1 and #2 combined; and
- Operating the Hot Oil Heater for 8,760 hr/yr.

This information does not represent a comprehensive list of license restrictions or permissions. That information is provided in the Order section of this license.

Total Licensed Annual Emissions for the Facility
Tons/year
(used to calculate the annual license fee)

	PM	PM_{10}	$PM_{2.5}$	SO_2	NO_x	CO	VOC
Asphalt Drum Plants	3.5	3.5	3.5	5.8	5.5	13.0	3.2
Oil Heater	0.7	0.7	0.7	--	1.3	0.3	--
Total TPY	**4.2**	**4.2**	**4.2**	**5.8**	**6.8**	**13.3**	**3.2**

Pollutant	Tons/year
Single HAP	7.9
Total HAP	19.9

III. AMBIENT AIR QUALITY ANALYSIS

The level of ambient air quality impact modeling required for a minor source to demonstrate that Ambient Air Quality Standards (AAQS) will not be exceeded is determined by the Department on a case-by case basis. In accordance with 06-096 C.M.R. ch. 115, an ambient air quality impact analysis is not required for a minor source if the total licensed annual emissions of any pollutant released do not exceed the following levels and there are no extenuating circumstances:

Pollutant	Tons/Year
PM_{10}	25
$PM_{2.5}$	15
SO_2	50
NO_x	50
CO	250

The total licensed annual emissions for the facility are below the emission levels contained in the table above and there are no extenuating circumstances; therefore, an ambient air quality impact analysis is not required as part of this license amendment.

This determination is based on information provided by the applicant regarding the expected construction and operation of the proposed and licensed emission units. If the Department determines that any parameter (e.g., stack size, configuration, flow rate, emission rates, nearby structures, etc.) deviates from what was included in the application, the Department may require Soderberg to submit additional information and may require an ambient air quality impact analysis at that time.

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,
- will not violate applicable ambient air quality standards in conjunction with emissions from other sources.

The Department hereby grants Air Emission License Amendment A-972-71-E-A, subject to the conditions found in Air Emission A-972-71-D-R 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 shall replace Condition (17) of Air Emission License A-972-71-D-R:

(17) Asphalt Drum Plants #1 and #2

A. Fuel Use

1. Asphalt Drum Plants and #1 and #2 are licensed to fire distillate fuel. Asphalt Drum Plant #1 is licensed to fire specification waste oil. [06-096 C.M.R. ch. 115, BPT and BACT]
2. The facility shall not purchase or otherwise obtain distillate fuel with a maximum sulfur content that exceeds 0.0015% by weight (15 ppm). [06-096 C.M.R. ch. 115, BPT and BACT]
3. The sulfur content of the specification waste oil fired in Asphalt Drum Plant #1 shall not exceed 0.7% sulfur by weight. Records shall be maintained of the quantity and analyzed test results of all specification waste oil fired in the Asphalt Drum Plant #1.

B. The total combined annual throughput of Asphalt Drum Plants #1 and #2 shall not exceed 200,000 tons of asphalt per year on a 12-month rolling total basis. Records of asphalt productions shall be kept on a monthly and 12-month rolling total basis. [06-096 C.M.R. ch. 115, BPT and BACT]

C. Emissions from Asphalt Drum Plants #1 and #2 shall each vent to its own baghouse, and all components of the asphalt drum plants shall be maintained so as to prevent PM leaks. [06-096 C.M.R. ch. 115, BPT and BACT]

D. The performance of the baghouses shall be monitored by either one of the following at all times either hot mix asphalt plant is operating:
[06-096 C.M.R. ch. 115, BPT and BACT]

1. Continuous PM detector: When the detector signals excessive PM concentrations in the exhaust stream, Soderberg shall take corrective action within 24 hours, or immediately if opacity exceeds 20%.
2. Personnel available on-site with a current EPA Method 9 visible emissions certification: When visible emissions exceed 20% opacity, the Asphalt Drum Plants #1 and #2 is operating with insufficient control, and corrective action shall be taken immediately.

E. To document maintenance of the baghouses, Soderberg shall keep records of the date and location of all bag failures, the date and a description of all routine maintenance, and the date and results of all inspections. These records shall be kept on-site at Asphalt Drum Plants #1 and #2's respective locations. [06-096 C.M.R. ch. 115, BPT and BACT]

F. Emissions from the baghouses for Asphalt Drum Plants #1 and #2 shall not exceed the following [06-096 C.M.R. ch. 115, BPT and BACT]:

	Asphalt Drum Plant #1		Asphalt Drum Plant #2	
Pollutant	**grs/dscf**	**lb/hr**	**grs/dscf**	**lb/hr**
PM	0.03	3.05	0.03	11.52
PM_{10}	–	3.05	–	11.52
$PM_{2.5}$	–	3.05	–	11.52
SO_2	–	1.10	–	4.40
NO_x	–	5.50	–	22.00
CO	–	13.00	–	52.00
VOC	–	3.20	–	12.80

G. General process emissions from Asphalt Drum Plants #1 and #2 shall be controlled so as to prevent visible emissions in excess of 20% opacity on a six-minute block average basis. [06-096 C.M.R. ch. 101, § 4(B)(4)]

H. Soderberg shall comply with all requirements of 40 C.F.R. Part 60, Subpart I applicable to Asphalt Drum Plants #1 and #2 including, but not limited to, the following:

1. Notification
   Soderberg shall submit notification to EPA and the Department of the date of initial startup of Asphalt Drum Plant #2. [40 C.F.R. § 60.7(a)(3)]

2. Visible emissions from Asphalt Drum Plants #1 and #2 shall not exceed 20% opacity on a 6-minute block average basis. [40 C.F.R. §§ 60.92(a)(2) and 60.93(b)(2)] This standard applies at all times. [06-096 C.M.R. ch. 101, § 4(B)(1)]

3. Initial Compliance Requirements
   Soderberg shall perform the following within 60 days after achieving the maximum production rate at which Asphalt Drum Plant #2 will be operated but not later than 180 days after the initial startup:

   a. Soderberg shall conduct an initial performance test for PM using 40 C.F.R. Part 60, Appendix A, Method 5. [40 C.F.R. § 60.93(b)(1)]

   b. Soderberg shall conduct an initial performance test for opacity using 40 C.F.R. Part 60, Appendix A, Method 9. [40 C.F.R. § 60.93(b)(2)]

   Soderberg shall submit to the Department for approval a performance test protocol, as outlined in the Department's Performance Testing Guidance, at least 30 days prior to the scheduled date of the performance test. [06-096 C.M.R. ch. 115, BPT]

   Note: Although some federal standards, such as 40 C.F.R. Part 60, Subpart OOO, allow for a shorter pretest notification period, the Department requires pretest notification a minimum of 30 days prior to the scheduled date of the performance test unless a variance of this requirement is preapproved by the Department.

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I. Contaminated Soils

1. Soils Contaminated with Gasoline and Distillate Fuel

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into account the nature and amount of the contaminated soil to be processed, the location where the processing will occur, and the potential for fugitive emissions.

2. General Requirements for Contaminated Soils

   a. Soderberg shall not process soils which are classified as hazardous waste or which have unknown contaminants.

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   c. When processing contaminated soils, Soderberg shall maintain records which specify the quantity and type of contaminant in the soil as well as the origin and characterization of the contaminated soil. In addition, when processing contaminated soil, Soderberg shall maintain records on an hourly basis of processing temperature, asphalt feed rates, and dryer throughput.

[06-096 C.M.R. ch. 115, BPT and BACT]

DONE AND DATED IN AUGUSTA, MAINE THIS 1st DAY OF NOVEMBER, 2024.

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-972-71-D-R (issued 6/9/2023).

[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: September 27, 2024
Date of application acceptance: October 3, 2024

Date filed with the Board of Environmental Protection:

FILED

NOV 01, 2024

State of Maine
Board of Environmental Protection

This Order prepared by Kendra Nash, Bureau of Air Quality.