



DEPARTMENT ORDER

**Down East Emulsions,
 Limited Liability Company
 Penobscot County
 Bangor, Maine
 A-1140-71-A-N**

**Departmental
 Findings of Fact and Order
 Air Emission License
 Initial License**

FINDINGS OF FACT

After review of the air emission license 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

Down East Emulsions, Limited Liability Company (Down East Emulsions) has applied for an Air Emission License for the operation of emission sources associated with their existing liquid asphalt emulsion and storage facility. The facility has been in operation since 1963, and is applying for their first air emission license, after-the fact.

The equipment addressed in this license is located at 58 Bennett Street, Bangor, Maine.

B. Emission Equipment

The following equipment is addressed in this air emission license:

Process Heaters

<u>Equipment</u>	<u>Max. Capacity (MMBtu/hr)</u>	<u>Max. Firing Rate (scf/hr)</u>	<u>Fuel Type</u>	<u>Date of Manuf.</u>	<u>Date of Install.</u>	<u>Stack #</u>
Hot Oil Heater #1	8.64	8,388	Natural gas	2008	2008	1
Hot Oil Heater #2	10.5	10,194		2011	2011	2

Liquid Organic Storage Tanks

<u>Tank Number</u>	<u>Capacity (Gallons)</u>	<u>Material Stored</u>	<u>Tank Type</u>
1	30,000	Asphalt Emulsion	Steel Fixed Roof
2	30,000	Asphalt Emulsion	Steel Fixed Roof
3	30,000	Asphalt Emulsion	Steel Fixed Roof
4	30,000	Asphalt Emulsion	Steel Fixed Roof

<u>Tank Number</u>	<u>Capacity (Gallons)</u>	<u>Material Stored</u>	<u>Tank Type</u>
5	30,000	Asphalt Emulsion	Steel Fixed Roof
6	30,000	Asphalt Emulsion	Steel Fixed Roof
7	30,000	Asphalt Emulsion	Steel Fixed Roof
8	30,000	Asphalt Emulsion	Steel Fixed Roof
9	4,000	Sodium Hydroxide	Steel Fixed Roof
10	20,000	Asphalt Additive	Steel Fixed Roof
11	20,000	Lignite-Surfactant Blend	Steel Fixed Roof
12	12,000	Distillate fuel	Steel Fixed Roof
13	15,000	Asphalt Grade Tall Oil	Steel Fixed Roof
14	12,500	Asphalt Cement	Steel Fixed Roof
15	12,500	Aromatic Oil	Steel Fixed Roof
16	3,800	Soap	Steel Fixed Roof
17	3,800	Soap	Steel Fixed Roof
18	3,800	Soap	Steel Fixed Roof
19	3,800	Soap	Steel Fixed Roof
20	4,000	N/A – currently empty	Steel Fixed Roof
21	1,000	N/A – Boil-Down Tank	Steel Fixed Roof
23	20,000	N/A – currently empty	Steel Fixed Roof
24	10,000	N/A – currently empty	Steel Fixed Roof
25	5,000	Soap Solution	Plastic
26	20,000	Asphalt Emulsion	Steel Fixed Roof
27	20,000	Asphalt Emulsion	Steel Fixed Roof
28	1,200,000	Asphalt	Steel Fixed Roof
29	1,200,000	Asphalt	Steel Fixed Roof
30	500,000	Asphalt	Steel Fixed Roof
31	500,000	Asphalt	Steel Fixed Roof
32	6,000	Polyphosphoric Acid	Steel Fixed Roof

C. Definitions

Asphalt means a dark-brown to black solid, liquid, or semisolid cementitious material composed primarily of bitumens that occur naturally or are obtained as a residue of petroleum refining. [06-096 C.M.R. ch. 131, § 2.A.]

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.

Emulsified Asphalt means an emulsion of asphalt and water that contains a small amount of an emulsifying agent; it is a heterogenous system containing two normally immiscible phases (asphalt and water) in which the water forms the continuous phase of the emulsion, and minute globules of asphalt form the discontinuous phase. [06-096 C.M.R. ch. 131, § 2.C.]

D. Application Classification

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

A new source is considered a major source based on whether or not total licensed annual emissions exceed the “Significant Emission” levels as defined in the Department’s *Definitions Regulation*, 06-096 Code of Maine Rules (C.M.R.) ch. 100.

Pollutant	Total Licensed Annual Emissions (TPY)	Significant Emission Levels
PM	3.1	100
PM ₁₀	3.1	100
SO ₂	0.2	100
NO _x	6.0	100
CO	5.0	100
VOC	0.3	50

The Department has determined the facility is a minor source, and the application has been processed through *Major and Minor Source Air Emission License Regulations*, 06-096 C.M.R. ch. 115.

E. Facility Classification

The facility is licensed as follows:

- As a natural minor source of air emissions, because facility emissions cannot exceed 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 new sources and modifications requires a demonstration that emissions are receiving Best Available Control Technology (BACT), as defined in *Definitions Regulation*, 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. Process Description

Down East Emulsions initially receives liquid asphalt from railroad tank cars into four heated liquid asphalt tanks. The liquid asphalt is then used to produce asphalt emulsions by adding chemical emulsifiers in a water tank (soap solution) and then blending the resulting solution with asphalt cement through a high-speed colloid mill. The resultant asphalt emulsion is then pumped to asphalt emulsion storage tanks until it is distributed by tank truck.

C. Hot Oil Heaters #1 and #2

Down East Emulsions operates Hot Oil Heaters #1 and #2 to heat a heat transfer fluid used to both heat some of the facility's liquid organic storage tanks as well as to produce steam in a steam generator, which is then used to heat asphalt in rail cars so that the asphalt can be pumped into the facility's heated asphalt storage tanks. Hot Oil Heaters #1 and #2 have maximum potential heat input capacities of 8.64 MMBtu/hr and 10.5 MMBtu/hr, respectively, and fire natural gas. Hot Oil Heaters #1 and #2 were manufactured and installed in 2008 and 2011, respectively, and exhaust through their own 2.5-foot diameter stacks, Stacks #1 and #2.

1. BACT Findings

a. Particulate Matter (PM & PM₁₀)

Particulate matter emissions from fuel combustion are formed from incomplete combustion of fuel and the presence of non-combustible material in the fuel. PM emissions from newer natural gas-fired process heaters are generally very low. Potential control technologies for PM emissions include add-on pollution control equipment such as fabric filters (baghouses), electrostatic precipitators (ESP), wet

scrubbers, cyclones/multi-clones, combustion of clean fuels such as natural gas, and good combustion practices.

Given the size of the units (8.64 and 10.5 MMBtu/hr, respectively) and the minimal PM emissions resulting from the burning of natural gas, add-on emission control equipment for the control of PM emissions from Hot Oil Heaters #1 and #2 are not considered economically feasible.

Good combustion practices include operating the system based on the design and recommendations provided by the manufacturer and by maintaining proper air-to-fuel ratios with periodic maintenance checks. Good combustion practices are both technically and economically feasible and are considered standard operating practice for minimizing PM emissions.

The Department finds the firing of natural gas, use of good combustion practices, and the following emission limits to constitute BACT for PM and PM₁₀ emissions from Hot Oil Heaters #1 and #2:

Pollutant	Unit	Emission Limit(s)
PM	Hot Oil Heater #1	0.05 lb/MMBtu
		0.43 lb/hr
	Hot Oil Heater #2	0.05 lb/MMBtu
		0.53 lb/hr
PM ₁₀	Hot Oil Heater #1	0.43 lb/hr
	Hot Oil Heater #2	0.53 lb/hr

b. Sulfur Dioxide (SO₂)

Sulfur dioxide is formed from the combustion of sulfur present in the fuel. Potential control options for sulfur dioxide emissions include the use of fuel with a low sulfur content, sorbent injection, and SO₂ scrubbing technologies such as flue gas desulfurization and packed-bed scrubbers. Emissions of sulfur dioxide from newer natural gas-fired process heaters are very low due to the low sulfur content of natural gas. Given the low level of sulfur dioxide emissions from the firing of natural gas, use of add-on emission control equipment for control of sulfur dioxide from Hot Oil Heaters #1 and #2 is not economically feasible.

The Department finds the firing of natural gas and emission limits of 0.01 lb/hr each for Hot Oil Heaters #1 and #2 to constitute BACT for SO₂ emissions from Hot Oil Heaters #1 and #2.

c. Nitrogen Oxides (NO_x)

Nitrogen oxides mainly consist of nitric oxide (NO) and nitrogen dioxide (NO₂). NO_x from fuel combustion are generated through one of three mechanisms: fuel NO_x, thermal NO_x, and prompt NO_x. Fuel NO_x is produced by the oxidation of nitrogen present in the fuel source, with low nitrogen content fuels such as natural gas producing less NO_x than fuels with higher levels of fuel-bound nitrogen. Thermal NO_x forms in the high temperature area of the combustor and increases exponentially with increases in flame temperature and linearly with increases in residence time. Prompt NO_x forms from the oxidation of hydrocarbon radicals near the combustion flame; this produces an insignificant amount of NO_x.

Control of NO_x emissions can be accomplished using one of three methods: the use of add-on controls such as selective catalytic reductions (SCR) and selective non-catalytic reduction (SNCR); the use of combustion control techniques such as low-NO_x burners, flue gas recirculation (FGR), and good combustion practices; and the combustion of clean fuels, such as natural gas.

Given the size of the units (8.64 and 10.5 MMBtu/hr, respectively) and the low potential annual NO_x emissions from the units, the use of add-on controls such as SCR and SNCR are not economically feasible for control of NO_x emissions from Hot Oil Heaters #1 and #2.

Combustion control methods available to control NO_x from small industrial process heaters include low-NO_x burners, FGR, and good combustion practices. Low-NO_x burners refers to burner components (burner register, atomizing nozzle, diffuser) that are designed to achieve lower NO_x emissions by mixing the fuel and combustion air in a way that limits NO_x formation. This is generally done by mixing the combustion air and fuel in multiple stages and by utilizing a specially designed nozzle and/or diffuser to achieve a particular flame pattern. Given the size of these existing units and the minimal NO_x emissions resulting from the firing of natural gas, low-NO_x burners are considered economically infeasible for control of NO_x emissions from Hot Oil Heaters #1 and #2.

In FGR systems, a portion of the combustion gases are recirculated back into the combustion zone. This process lowers peak flame temperature, and therefore thermal NO_x formation, by allowing the relatively cool flue gas to absorb heat released by the burner flame. Although considered technically feasible, the use of FGR is not economically feasible for small process heaters such as Hot Oil Heaters #1 and #2 due to the moderately high capital costs associated with the ductwork needed to span from the burner outlet to the combustion air duct, the operating costs associated with the energy requirements of recirculation fans, and the marginal emissions reduction benefit.

Good combustion practices include operating the system based on the design and recommendations provided by the manufacturer and by maintaining proper air-to-fuel ratios with periodic maintenance checks. Good combustion practices are both technically and economically feasible and are considered standard operating practice for minimizing NO_x emissions.

The Department finds the use of natural gas, use of good combustion practices, and emission limits of 0.84 lb/hr and 1.02 lb/hr for Hot Oil Heaters #1 and #2, respectively, to constitute BACT for NO_x emissions from the units.

d. Carbon Monoxide (CO) and Volatile Organic Compounds (VOC)

Emissions of carbon monoxide and volatile organic compounds are a result of incomplete combustion, caused by conditions such as insufficient residence time or limited oxygen availability. Potential control options for CO and VOC emissions include the use of a catalyst system and good combustion practices.

Emissions of CO and VOC from natural gas-fired process heaters are generally low. Given the size of the units and the low potential CO and VOC emissions, the use of add-on control equipment such as a catalyst for control of CO and VOC emissions from Hot Oil Heaters #1 and #2 are considered economically infeasible.

Good combustion practices include operating the system based on the design and recommendations provided by the manufacturer and by maintaining proper air-to-fuel ratios with periodic maintenance checks. Good combustion practices are both technically and economically feasible and are considered standard operating practice for minimizing CO and VOC emissions.

The Department finds the use of natural gas, the use of good combustion practices, and the following emission limits to constitute BACT for CO and VOC emissions from Hot Oil Heaters #1 and #2:

Pollutant	Unit	lb/hr
CO	Hot Oil Heater #1	0.70
	Hot Oil Heater #2	0.86
VOC	Hot Oil Heater #1	0.05
	Hot Oil Heater #2	0.06

e. Visible Emissions

Visible emissions from Hot Oil Heaters #1 and #2 shall each not exceed 10% opacity on a six-minute block average basis.

2. Emission Limits

The BACT emission limits for Hot Oil Heaters #1 and #2 were based on the following:

- PM/PM₁₀ – 0.05 lb/MMBtu based on 06-096 C.M.R. ch. 115, BACT
- SO₂ – 0.6 lb/MMscf based on AP-42, Table 1.4-2, dated 7/98
- NO_x – 100 lb/MMscf based on AP-42, Table 1.4-1, dated 7/98
- CO – 84 lb/MMscf based on AP-42, Table 1.4-1, dated 7/98
- VOC – 5.5 lb/MMscf based on AP-42, Table 1.4-2, dated 7/98
- Visible Emissions – 06-096 C.M.R. ch. 115, BACT

The BACT emission limits for Hot Oil Heaters #1 and #2 are the following:

Unit	Pollutant	lb/MMBtu
Hot Oil Heaters #1 and #2 [each]	PM	0.05

Unit	PM (lb/hr)	PM₁₀ (lb/hr)	SO₂ (lb/hr)	NO_x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Hot Oil Heater #1	0.43	0.43	0.01	0.84	0.70	0.05
Hot Oil Heater #2	0.53	0.53	0.01	1.02	0.86	0.06

Visible emissions from Hot Oil Heaters #1 and #2 shall each not exceed 10% opacity on a six-minute block average basis.

The Department has determined that the proposed BACT visible emission limit is more stringent than the applicable limit in 06-096 C.M.R. ch. 101. Therefore, the visible emission limit for each unit has been streamlined to the more stringent BACT limit, and only this more stringent limit shall be included in the air emission license.

3. New Source Performance Standards (NSPS): 40 C.F.R. Part 60, Subpart Dc

Due to its maximum heat input capacities, Hot Oil Heater #1 is not subject to *Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units* 40 C.F.R. Part 60, Subpart Dc for units greater than 10 MMBtu/hr manufactured after June 9, 1989. [40 C.F.R. § 60.40c]

Hot Oil Heater #2 is subject to *Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units*, 40 C.F.R. Part 60, Subpart Dc for units greater than 10 MMBtu/hr manufactured after June 9, 1989. [40 C.F.R. § 60.40c]

The requirements of 40 C.F.R. Part 60, Subpart Dc applicable to Hot Oil Heater #2 are the following:

a. Notifications

Down East Emulsions shall submit notification of the date of construction and actual startup to EPA and the Department. This notification shall include the design heat input capacity of the affected facility and identification of fuels to be combusted in the affected facility. [40 C.F.R. § 60.48c(a)]

b. Recordkeeping

Down East Emulsions shall record and maintain records of the total amount of natural gas delivered to the facility during each calendar month. [40 C.F.R. § 60.48c(g)(3)]

4. National Emission Standards for Hazardous Air Pollutants (NESHAP):
40 C.F.R. Part 63, Subpart JJJJJ

Hot Oil Heaters #1 and #2 are not subject to the *National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources*, 40 C.F.R. Part 63, Subpart JJJJJ. According to the definition of “process heater” in 40 C.F.R. § 63.11237, the units are considered process heaters because they heat a heat transfer medium such as oil and are not utilized for heating water or producing steam. As process heaters, the units are explicitly excluded from the definition of “boiler” in 40 C.F.R. § 63.11237, and are thus not subject to the rule per the applicability requirements of 40 C.F.R. § 63.11193. [40 C.F.R. §§ 63.11193 and 63.11237]

D. Liquid Organic Storage Tanks

Down East Emulsions currently operates 30 Liquid Organic Storage Tanks used to store liquids necessary to prepare liquid asphalt emulsions, including emulsions, surfactants/soaps, asphalt cement, and liquid asphalt. The tanks vary in capacity and throughput depending on the demand for specific asphalt emulsion products. The tanks were constructed between 1988 and 2015 and are all above ground, fixed roof, steel tanks. Tanks #1-11, #13-19, and #26-31 are all heated by Hot Oil Heaters #1 and #2. Tank #32 is heated by an electric heater. In a submittal to the Department received August 9, 2019, Down East Emulsions provided documentation demonstrating that VOC emissions from the facility’s heated tanks and the loading rack (combined) are less than the de minimis threshold of 1.0 tons per year based on conservatively high throughput estimates; therefore, VOC emissions from the Liquid Organic Storage Tanks and loading rack will not be addressed further in this license.

1. *Petroleum Liquid Storage Vapor Control*, 06-096 C.M.R. ch. 111

The Liquid Organic Storage Tanks at Down East Emulsions are not subject to *Petroleum Liquid Storage Vapor Control*, 06-096 C.M.R. ch. 111. Tanks #1-21 and #23-27 are considered fixed roof tanks less than 39,000 gallons in capacity and are therefore not subject to the rule. Although Tanks #28-31 are each considered fixed roof tanks with capacities that exceed 39,000 gallons, they do not contain volatile petroleum liquids whose true vapor pressure is greater than 1.0 psia or whose Reid vapor pressure is greater than 4 psi. Therefore, these tanks are not subject to the recordkeeping requirements in 06-096 C.M.R. ch. 111, § 5.B.. [06-096 C.M.R. ch. 111, § 1.B. and 1.C.]

2. NSPS: 40 C.F.R. Part 60, Subparts K, Ka, and Kb

The Liquid Organic Storage Tanks at Down East Emulsions are not subject to *Standards of Performance for Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After June 11, 1973, and Prior to May 19, 1978*, 40 C.F.R. Part 60, Subpart K or *Standards of Performance for Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After May 18, 1978, and Prior to July 23, 1984*, 40 C.F.R. Part 60, Subpart Ka. The Liquid Organic Storage Tanks were all constructed after July 23, 1984, and are therefore not subject to either rule. Additionally, Tanks #1-21 and #23-27 have capacities less than 40,000 gallons. [40 C.F.R. §§ 63.110(a) and 63.110a(a)]

The Liquid Organic Storage Tanks at Down East Emulsions are not subject to *Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984*, 40 C.F.R. Part 60, Subpart Kb. None of the products stored at Down East Emulsions are considered volatile organic liquids. [40 C.F.R. § 60.110b(a)]

3. BPT Findings

BPT for the Liquid Organic Storage Tanks shall include the following:

- a. Down East Emulsions shall conduct routine inspections of the perimeter and roof of all Liquid Organic Storage Tanks at a minimum of once every month there is product in the tank. Down East Emulsions shall maintain an inspection log documenting any detected leaks, holes, tears, or other openings found, the corrective action(s) taken, the date of the inspection, and the initials of person conducting the inspection. [06-096 C.M.R. ch. 115, BPT]

b. The following records shall be maintained at the source and available for inspection by the Department [06-096 C.M.R. ch. 115, BPT]:

- (1) Records documenting any detected leaks, holes, tears, or other opening and the corrective action taken; and
- (2) Monthly throughput records specifying quantity and types of liquids stored in each tank and the period of storage.

E. *Cutback Asphalt and Emulsified Asphalt*, 06-096 C.M.R. ch. 131

The state regulation *Cutback Asphalt and Emulsified Asphalt*, 06-096 C.M.R. ch. 131 is applicable to Down East Emulsions. Down East Emulsions is a manufacturer, mixing, and storage facility for emulsified asphalt products. The requirements of 06-096 C.M.R. ch. 131 applicable to Down East Emulsions are the following:

1. Standards

Between May 1 and September 15, all emulsified asphalt products produced at Down East Emulsions shall meet one of the following two standards [06-096 C.M.R. ch. 131, § 3.A.]:

- a. The emulsified asphalt contains no greater than 0.1 percent VOC by weight; or
- b. The emulsified asphalt produces no greater than 6.0 milliliters of oil distillate, in accordance with the tests methods and practices listed in 06-096 C.M.R. ch. 131, § 3.A.(b).

2. Recordkeeping

Down East Emulsions shall maintain records of the manufacture, mixing, and storage of any asphalt containing VOC compounds during the period May 1 to September 15. These records shall include all data and test results necessary to demonstrate compliance with the standards included in 06-096 C.M.R. ch. 131, § 3.A. and shall be maintained according to the following requirements [06-096 C.M.R. ch. 131, § 4.]:

- a. The records shall be available for inspection during normal business hours, and copies shall be provided to the Department and/or EPA upon request; and
- b. The records shall be maintained for a period of six years.

F. Parts Washer

Down East Emulsions operates one parts washer. The parts washer is subject to *Solvent Cleaners*, 06-096 C.M.R. ch. 130 and records shall be kept documenting compliance.

This equipment is exempt from *Industrial Cleaning Solvents*, 06-096 C.M.R. ch. 166 per Section (3)(B).

G. Fugitive Emissions

Visible emissions from a fugitive emission source (including stockpiles and roadways) shall not exceed 20% opacity on a five-minute block average basis.

H. General Process Emissions

Visible emissions from any general process source shall not exceed 20% opacity on a six-minute block average basis.

I. Annual Emissions

Down East Emulsions shall be restricted to the following annual emissions, based on a calendar year total. These emissions represent only quantified emissions from licensed emission units at the facility and therefore do not include emissions from insignificant activities or from units or processes for which emissions are not quantified in this license. The tons per year limits were calculated based on 8,760 hours of operation per year (each) for Hot Oil Heaters #1 and #2:

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

	PM	PM₁₀	SO₂	NO_x	CO	VOC
Hot Oil Heater #1	1.9	1.9	0.1	3.7	3.1	0.2
Hot Oil Heater #2	2.3	2.3	0.1	4.5	3.8	0.3
Total TPY	4.2	4.2	0.2	8.2	6.9	0.5

Pollutant	Tons/year
Single HAP	9.9
Total HAP	24.9

III. AMBIENT AIR QUALITY ANALYSIS

The level of ambient air quality impact modeling required for a minor source 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
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.

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 A-1140-71-A-N subject to the following conditions.

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

STANDARD CONDITIONS

- (1) Employees and authorized representatives of the Department shall be allowed access to the licensee's premises during business hours, or any time during which any emissions units are in operation, and at such other times as the Department deems necessary for the purpose of performing tests, collecting samples, conducting inspections, or examining and copying records relating to emissions (38 M.R.S. § 347-C).
- (2) The licensee shall acquire a new or amended air emission license prior to commencing construction of a modification, unless specifically provided for in Chapter 115. [06-096 C.M.R. ch. 115]
- (3) Approval to construct shall become invalid if the source has not commenced construction within eighteen (18) months after receipt of such approval or if construction is discontinued for a period of eighteen (18) months or more. The Department may extend this time period upon a satisfactory showing that an extension is justified, but may condition such extension upon a review of either the control technology analysis or the ambient air quality standards analysis, or both. [06-096 C.M.R. ch. 115]
- (4) The licensee shall establish and maintain a continuing program of best management practices for suppression of fugitive particulate matter during any period of construction, reconstruction, or operation which may result in fugitive dust, and shall submit a description of the program to the Department upon request. [06-096 C.M.R. ch. 115]
- (5) The licensee shall pay the annual air emission license fee to the Department, calculated pursuant to Title 38 M.R.S. § 353-A. [06-096 C.M.R. ch. 115]
- (6) The license does not convey any property rights of any sort, or any exclusive privilege. [06-096 C.M.R. ch. 115]
- (7) The licensee shall maintain and operate all emission units and air pollution systems required by the air emission license in a manner consistent with good air pollution control practice for minimizing emissions. [06-096 C.M.R. ch. 115]
- (8) The licensee shall maintain sufficient records to accurately document compliance with emission standards and license conditions and shall maintain such records for a minimum of six (6) years. The records shall be submitted to the Department upon written request. [06-096 C.M.R. ch. 115]
- (9) The licensee shall comply with all terms and conditions of the air emission license. The filing of an appeal by the licensee, the notification of planned changes or anticipated noncompliance by the licensee, or the filing of an application by the licensee for a renewal of a license or amendment shall not stay any condition of the license. [06-096 C.M.R. ch. 115]

- (10) The licensee may not use as a defense in an enforcement action that the disruption, cessation, or reduction of licensed operations would have been necessary in order to maintain compliance with the conditions of the air emission license. [06-096 C.M.R. ch. 115]
- (11) In accordance with the Department's air emission compliance test protocol and 40 C.F.R. Part 60 or other method approved or required by the Department, the licensee shall:
- A. Perform stack testing to demonstrate compliance with the applicable emission standards under circumstances representative of the facility's normal process and operating conditions:
 - 1. Within sixty (60) calendar days of receipt of a notification to test from the Department or EPA, if visible emissions, equipment operating parameters, staff inspection, air monitoring or other cause indicate to the Department that equipment may be operating out of compliance with emission standards or license conditions; or
 - 2. Pursuant to any other requirement of this license to perform stack testing.
 - B. Install or make provisions to install test ports that meet the criteria of 40 C.F.R. Part 60, Appendix A, and test platforms, if necessary, and other accommodations necessary to allow emission testing; and
 - C. Submit a written report to the Department within thirty (30) days from date of test completion.
[06-096 C.M.R. ch. 115]
- (12) If the results of a stack test performed under circumstances representative of the facility's normal process and operating conditions indicate emissions in excess of the applicable standards, then:
- A. Within thirty (30) days following receipt of such test results, the licensee shall re-test the non-complying emission source under circumstances representative of the facility's normal process and operating conditions and in accordance with the Department's air emission compliance test protocol and 40 C.F.R. Part 60 or other method approved or required by the Department; and
 - B. The days of violation shall be presumed to include the date of stack test and each and every day of operation thereafter until compliance is demonstrated under normal and representative process and operating conditions, except to the extent that the facility can prove to the satisfaction of the Department that there were intervening days during which no violation occurred or that the violation was not continuing in nature; and

C. The licensee may, upon the approval of the Department following the successful demonstration of compliance at alternative load conditions, operate under such alternative load conditions on an interim basis prior to a demonstration of compliance under normal and representative process and operating conditions.

[06-096 C.M.R. ch. 115]

- (13) Notwithstanding any other provisions in the State Implementation Plan approved by the EPA or Section 114(a) of the CAA, any credible evidence may be used for the purpose of establishing whether a person has violated or is in violation of any statute, regulation, or Part 70 license requirement. [06-096 C.M.R. ch. 115]
- (14) The licensee shall maintain records of malfunctions, failures, downtime, and any other similar change in operation of air pollution control systems or the emissions unit itself that would affect emissions and that is not consistent with the terms and conditions of the air emission license. The licensee shall notify the Department within two (2) days or the next state working day, whichever is later, of such occasions where such changes result in an increase of emissions. The licensee shall report all excess emissions in the units of the applicable emission limitation. [06-096 C.M.R. ch. 115]
- (15) Upon written request from the Department, the licensee shall establish and maintain such records, make such reports, install, use and maintain such monitoring equipment, sample such emissions (in accordance with such methods, at such locations, at such intervals, and in such a manner as the Department shall prescribe), and provide other information as the Department may reasonably require to determine the licensee's compliance status. [06-096 C.M.R. ch. 115]

SPECIFIC CONDITIONS

(16) Hot Oil Heaters #1 and #2

A. Hot Oil Heaters #1 and #2 are licensed to fire natural gas. [06-096 C.M.R. ch. 115, BACT]

B. Emissions shall not exceed the following:

Unit	Pollutant	lb/MMBtu	Origin and Authority
Hot Oil Heaters #1 and #2 [each]	PM	0.05	06-096 C.M.R. ch. 115, BACT

C. Emissions shall not exceed the following [06-096 C.M.R. ch. 115, BACT]:

Unit	PM (lb/hr)	PM₁₀ (lb/hr)	SO₂ (lb/hr)	NO_x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Hot Oil Heater #1 8.64 MMBtu/hr	0.43	0.43	0.01	0.84	0.70	0.05
Hot Oil Heater #2 10.5 MMBtu/hr	0.53	0.53	0.01	1.02	0.86	0.06

D. Visible emissions from the boiler shall not exceed 10% opacity on a six-minute block average basis. [06-096 C.M.R. ch. 115, BACT]

E. 40 C.F.R. Part 60, Subpart Dc

Down East Emulsions shall meet all requirements in 40 C.F.R. Part 60, Subpart Dc applicable to Hot Oil Heater #2 including, but not necessarily limited to, the following:

1. Notifications

Down East Emulsions shall submit notification of the date of construction and actual startup to EPA and the Department. This notification shall include the design heat input capacity of the affected facility and identification of fuels to be combusted in the affected facility. [40 C.F.R. § 60.48c(a)]

2. Recordkeeping

Down East Emulsions shall record and maintain records of the total amount of natural gas delivered to the facility during each calendar month. [40 C.F.R. § 60.48c(g)(3)]

(17) Liquid Organic Storage Tanks

A. Down East Emulsions shall conduct routine inspections of the perimeter and roof of all Liquid Organic Storage Tanks at a minimum of once every month there is product in the tank. Down East Emulsions shall maintain an inspection log documenting any detected leaks, holes, tears, or other openings found, the corrective action(s) taken, the date of the inspection, and the initials of person conducting the inspection. [06-096 C.M.R. ch. 115, BPT]

B. The following records shall be maintained at the source and available for inspection by the Department [06-096 C.M.R. ch. 115, BPT]:

1. Records documenting any detected leaks, holes, tears, or other opening and corrective action taken; and
2. Monthly throughput records specifying quantity and types of liquids in each tank and the period of storage.

(18) *Cutback Asphalt and Emulsified Asphalt*, 06-096 C.M.R. ch. 131

Down East Emulsions shall meet the following applicable requirements from 06-096 C.M.R. ch. 131:

A. Standards

Between May 1 and September 15, all emulsified asphalt produced at Down East Emulsions shall meet one of the following two standards [06-096 C.M.R. ch. 131, § 3.A.]:

1. The emulsified asphalt contains no greater than 0.1 percent VOC by weight; or
2. The emulsified asphalt produces no greater than 6.0 milliliters of oil distillate, in accordance with the tests methods and practices listed in 06-096 C.M.R. ch. 131, § 3.A.(b).

B. Recordkeeping

Down East Emulsions shall maintain records of the manufacture, mixing, and storage of any asphalt containing VOC compounds during the period May 1 to September 15. These records shall include all data and test results necessary to demonstrate compliance with the standards included in 06-096 C.M.R. ch. 131, § 3.A. and shall be maintained according to the following requirements [06-096 C.M.R. ch. 131, § 4.]:

1. The records shall be available for inspection during normal business hours, and copies shall be provided to the Department and/or EPA upon request; and
2. The records shall be maintained for a period of six years.

(19) *Parts Washer*

The parts washer at Down East Emulsions is subject to *Solvent Cleaners*, 06-096 C.M.R. ch. 130.

A. Down East Emulsions shall keep records of the amount of solvent added to the parts washer. [06-096 C.M.R. ch. 115, BPT]

B. The following are exempt from the requirements of 06-096 C.M.R. ch. 130 [06-096 C.M.R. ch. 130]:

1. Solvent cleaners using less than two liters (68 oz.) of cleaning solvent with a vapor pressure of 1.00 mmHg, or less, at 20° C (68° F);
2. Wipe cleaning; and,
3. Cold cleaning machines using solvents containing less than or equal to 5% VOC by weight.

C. The following standards apply to cold cleaning machines that are applicable sources under 06-096 C.M.R. ch. 130.

1. Down East Emulsions shall attach a permanent conspicuous label to each unit summarizing the following operational standards:
 - a. Waste solvent shall be collected and stored in closed containers.
 - b. Cleaned parts shall be drained of solvent directly back to the cold cleaning machine by tipping or rotating the part for at least 15 seconds or until dripping ceases, whichever is longer.
 - c. Flushing of parts shall be performed with a solid solvent spray that is a solid fluid stream (not a fine, atomized or shower type spray) at a pressure that does not exceed 10 psig. Flushing shall be performed only within the freeboard area of the cold cleaning machine.
 - d. The cold cleaning machine shall not be exposed to drafts greater than 40 meters per minute when the cover is open.
 - e. Sponges, fabric, wood, leather, paper products and other absorbent materials shall not be cleaned in the parts washer.
 - f. When a pump-agitated solvent bath is used, the agitator shall be operated to produce no observable splashing of the solvent against the tank walls or the parts being cleaned. Air agitated solvent baths may not be used.
 - g. Spills during solvent transfer shall be cleaned immediately. Sorbent material used to clean spills shall then be immediately stored in covered containers.
 - h. Work area fans shall not blow across the opening of the parts washer unit.
 - i. The solvent level shall not exceed the fill line.
2. The remote reservoir cold cleaning machine shall be equipped with a perforated drain with a diameter of not more than six inches.
3. The parts washer shall be equipped with a cover that shall be closed at all times except during cleaning of parts or the addition or removal of solvent.

[06-096 C.M.R. ch. 130]

Down East Emulsions,
Limited Liability Company
Penobscot County
Bangor, Maine
A-1140-71-A-N

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Departmental
Findings of Fact and Order
Air Emission License
Initial License

(20) **Fugitive Emissions**

Visible emissions from a fugitive emission source (including stockpiles and roadways) shall not exceed 20% opacity on a five-minute block average basis. [06-096 C.M.R. ch. 115, BACT/BPT]

(21) **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. 115, BACT/BPT]

(22) Down East Emulsions shall notify the Department within 48 hours and submit a report to the Department on a quarterly basis if a malfunction or breakdown in any component causes a violation of any emission standard (38 M.R.S. § 605).

DONE AND DATED IN AUGUSTA, MAINE THIS 29th DAY OF August, 2019.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY:


GERALD D. REID, COMMISSIONER

The term of this license shall be ten (10) years from the signature date above.

[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: January 22, 2019

Date of application acceptance: January 23, 2019

Date filed with the Board of Environmental Protection:

This Order prepared by Jonathan E. Rice, Bureau of Air Quality.

