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

DEPARTMENT ORDER

Northeast Packaging Co. **Aroostook County** **Presque Isle, Maine** **A-894-71-F-R/M**	**Departmental** **Findings of Fact and Order** **Air Emission License** **Renewal and Minor Revision**

FINDINGS OF FACT

After review of the air emission license renewal and 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

Northeast Packaging Co. (NEPCO) has applied to renew their Air Emission License for the operation of emission sources associated with their printing facility.

The equipment addressed in this license is located at 875 Skyway St., Presque Isle, Maine.

NEPCO has additionally requested an amendment to their license in order to make the following changes:

1. Remove Boiler #3 and replace it with a new unit designated Propane #1; and
2. Remove Printing Press #1 and its associated dryer.

B. Emission Equipment

The following equipment is addressed in this air emission license:

Fuel Burning Equipment

Equipment	Max. Capacity (MMBtu/hr)	Maximum Firing Rate (gal/hr)	Fuel Type	Date of Manuf.	Date of Install.
Dryer #4	1.0	8.5	Propane	2018	2018
Regenerative Thermal Oxidizer (RTO)	2.3	18.0	Propane	Prior to 2008	2008
Propane #1 *	0.2	2.3	Propane	2022	2023
Dryer #2 *	0.8	8.5	Propane	2000	2000
Dryer #3 *	0.8	8.5	Propane	2006	2006
Boiler #3 **	*0.8*	*5.5*	*Distillate fuel*	*2017*	*2018*

Equipment	Max. Capacity (MMBtu/hr)	Maximum Firing Rate (gal/hr)	Fuel Type	Date of Manuf.	Date of Install.
*Dryer #1 ** *	*0.8*	*8.5*	*Propane*	*1995*	*1995*

* This equipment is below licensing thresholds and is listed for completeness purposes only.

** This equipment has been removed.

Process Equipment

Equipment	Production Rate	Pollution Control Equipment	Date of Install
Press #2	17,000 ft/hr	RTO	2000
Press #3	17,000 ft/hr	RTO	2006
Press #4	17,000 ft/hr	RTO	1995
Bag Machines #1 -#5	10,600 lb/day	Electrostatic Filter	1995
Bag Machines #6 and #7	275 bags/min	Electrostatic Filter	2020
*Press #1 **	*17,000 ft/hr*	*RTO*	*1995*

* This equipment has been removed.

C. Definitions

Flexographic printing press means a printing press that uses a roll printing technique in which the pattern to be applied is raised above the printing roll and the image carrier is made of rubber or other elastomeric materials.

Flexible package means any package or part of a package the shape of which may be readily changed. A "flexible package" may be in the form of a bag, pouch, liner, or wrap made of paper, plastic, film, aluminum foil, or metalized or coated film or paper, alone or in combination. None of the following are considered a *flexible package*: a folding carton, self-adhesive labels, gift wrap, wall covering, vinyl products, decorative laminates, floor coverings, or tissue products.

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

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 application for NEPCO does not include the licensing of increased emissions or the installation of new or modified equipment at or above licensing thresholds. Therefore, the license is considered to be a renewal with a minor revision of currently licensed emission

units only and has been processed through *Major and Minor Source Air Emission License Regulations*, 06-096 Code of Maine Rules (C.M.R.) ch. 115.

E. Facility Classification

With the annual facility-wide VOC and HAP limits, the facility is licensed as follows:

- As a synthetic minor source of air emissions for criteria pollutants, because NEPCO is subject to license restrictions that keep facility emissions below major source thresholds for VOC; 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. Process Description

NEPCO prints and manufacturers multiwall paper bags and printed polyethylene film bags using both water-based and solvent-based inks for printing purposes. NEPCO uses a Regenerative Thermal Oxidizer (RTO) with a 2.3 MMBtu/hr propane fired burner for control of VOC emissions in order to maintain emissions below the licensed annual VOC limit of 49.9 tons.

C. Printing Presses

NEPCO operates three flexographic printing presses designated Presses #2, #3, and #4, with production capacity of 17,000 ft/hr each. VOC emissions from these presses are

controlled through the operation of a regenerative thermal oxidizer (RTO) when any of the presses use solvent-based ink[1].

The following requirements have been established as BPT for the printing presses at NEPCO.

1. The printing presses at NEPCO are licensed to use both water-based and solvent-based inks.

2. NEPCO shall limit VOC, single HAP, and total HAP from the facility to the following, on a 12-month rolling total basis:
   - 49.9 tons of VOC;
   - 9.9 tons of any single HAP; and
   - 24.9 tons of total HAP.

3. It was determined in Air Emission License A-894-71-D-A (issued February 7, 2019) that emissions of VOC from printing operations shall be calculated by tracking the monthly usage of solvent-based inks and their VOC contents, of which 100% is assumed to be to be emitted. The total mass emissions of VOC shall then be reduced by the capture and destruction efficiency of the latest test of the RTO.

4. Emissions of HAP are to be calculated by tracking the monthly usage of inks and their HAP content, of which 100% is assumed to be to be emitted and none destroyed or otherwise reduced.

5. NEPCO shall monitor the operation of all presses such that the solvent loading and flow rate to the RTO at any one time does not exceed the RTO's maximum rated capacities of 181 lb/hr (solvent loading) and 10,000 scfm (flow rate), and shall modify press operational scenarios as needed to not exceed the RTO's ratings. Records shall be maintained to document compliance.

6. Fugitive VOC emissions from the ink storage area are minimal; however, any losses will already be accounted for in the monthly inventory and material balance required to determine VOC emissions.

7. Inks, clean-up materials, and other VOC-containing materials shall be stored in containers with vapor tight lids which are kept closed at all times when material is not being added or removed.

8. A monthly record shall be maintained to document use and composition of cleanup solvents.

[1] Solvents used in solvent-based ink are VOC, whereas any VOC emissions from water-based inks are below de minimis levels and considered negligible.

9. The operations at NEPCO are subject to *Control of Volatile Organic Compounds from Flexible Package Printing*, 06-096 C.M.R. ch. 154, and shall comply with all applicable requirements thereof, including but not limited to the following:

   a. Emission Standards [06-096 C.M.R. ch. 154(3)]

      NEPCO shall at all times comply with one of the two following options:

      (1) Use only inks, coatings, and adhesives with an as-applied VOC content that does not exceed 0.8 lb VOC/lb of solids or 0.16 lb VOC/lb of materials. The VOC content limits may be met by averaging the VOC content of materials used on a single printing line in a single day; or

      (2) Install, operate, and maintain in accordance with the manufacturer's recommendations an emissions control system consisting of a capture system and a control device, which combination meets an overall minimum control efficiency level of 75 percent.

   b. Work Practice Standards [06-096 C.M.R. ch. 154(4)]

      (1) New and used VOC-containing ink, adhesive, coating, or cleaning solvent, including ink or coating mixed on the premises, shall be stored in a nonabsorbent, non-leaking, vapor-tight container. Such a container shall be kept closed at all times except when the container is being filled, emptied, or is otherwise actively in use.

      (2) Spills and leaks of VOC-containing ink, adhesives, coating, or cleaning solvent shall be minimized. Any leaked or spilled VOC-containing ink, coating or cleaning solvent shall be absorbed and removed immediately.

      (3) Absorbent applicators, such as cloth and paper, which are moistened with VOC containing ink, adhesives, coating, or solvent shall be stored in a closed, nonabsorbent, nonleaking container for disposal or recycling.

      (4) VOC-containing ink, adhesives, coating, and cleaning solvent shall be conveyed from one location to another in a closed container or pipe.

      (5) Cleaning shall be performed to minimize associated VOC emissions.

   c. Recordkeeping [06-096 C.M.R. ch. 154(5)]

      NEPCO shall maintain the following records:

      (1) Name and quantity of any ink, adhesives, coating, or cleaning solvent used;

(2) VOC content of each ink, adhesives, coating, or cleaning solvent used, as applied;

(3) A catalog of Material Safety Data Sheets for all inks, adhesives, coatings, and cleaning solvents used;

(4) Documentation of air pollution control equipment efficiency or capture efficiency, if applicable;

(5) Date and type of maintenance performed on air pollution control or capture equipment, if applicable; and

(6) The actual overall emission reduction efficiency achieved for each day for each flexible package printing press as determined using Procedure E of Appendix A;

(7) Control device monitoring data;

(8) A log of operating time for the capture system, control device, monitoring equipment, and the associated flexible package printing press;

(9) A maintenance log for the capture system, control device, and monitoring equipment detailing all routine and non-routine maintenance performed, including dates and duration of any outages; and

(10) All continuous 3-hour periods of operation in which the average combustion temperature of the control device was more than 50 degrees F below the average combustion temperature during the most recent performance test that demonstrated that the facility was in compliance.

10. The operations at NEPCO are subject to *Graphic Arts-Rotogravure and Flexography*, 06-096 C.M.R. ch. 132, and shall comply with all applicable requirements, including but not limited to the following:

a. Emissions Standards

NEPCO shall comply with one of the two following options:

(1) VOC Limit Option [06-096 C.M.R. ch. 132(3)(B)]

NEPCO shall not apply any coating or ink unless the VOC content is equal to or less than one of the following:
(a) 40% VOC by volume of the coating or ink, excluding water, as applied;
(b) 25% VOC by volume of the volatile content in the coating or ink, as applied; or

(c) 0.5 lb VOC per lb of coating solids, as applied.

Compliance is demonstrated through recordkeeping, as discussed later in this section.

(2) Control Device Option [06-096 C.M.R. ch. 132(5)]

NEPCO shall comply with the following:

(a) Control Efficiency
NEPCO shall not operate the printing presses unless both of the following control efficiencies are met:

(i) The facility's RTO has a destruction efficiency of at least 90% by weight of VOC emissions delivered from the capture system to the RTO; and

This requirement has been streamlined to the more stringent BPT requirement of 95% as found above and only the more stringent limit shall be included in the air emission license.

(ii) The operating presses are equipped with a capture system and control device that provides an overall emission reduction efficiency of at least 60%.

This requirement has been streamlined to the more stringent requirement as found above in 06-096 C.M.R. ch. 154(3) and only the more stringent limit shall be included in the air emission license.

(b) Control Device Operation
The RTO shall be operated at all times that a printing press is in operation.

(c) Monitoring Equipment
NEPCO shall continuously monitor and record the temperature of the RTO combustion chamber.

The temperature monitoring equipment shall be installed, calibrated, operated, and maintained per the manufacturer's specifications at all times that the RTO is in use. The temperature monitor shall be equipped with a continuous recorder and have an accuracy range of no greater than ± 1% of the 3-hour average combustion temperature, in degrees Celsius, from the most recent performance test that demonstrated compliance.

Compliance with this option is demonstrated through recordkeeping discussed in the *Recordkeeping and Reporting* section of this amendment and through testing of the RTO, as required per BPT, and other methods as approved by the Department.
[06-096 C.M.R. ch. 132(5) and 06-096 C.M.R. ch. 115, BPT]

b. Recordkeeping and Reporting

NEPCO shall complete the reporting and recordkeeping requirements listed below. All records shall be kept readily available for review during normal business hours, and copies shall be provided to the Department and/or EPA upon request. Records shall be maintained on-site for at least six years.

(1) NEPCO shall submit a compliance certification to the Department at least 30 days prior to making any change in the chosen compliance method. [06-096 C.M.R. ch. 132 (7)(B)(3)(b), and (7)(D)(3)(b)]

(2) If using the VOC limit option, NEPCO shall submit a notification to the Department at least 30 days after the use of any noncompliant coating usage. [06-096 C.M.R. ch. 132 (7)(B)(3)(a)]

(3) If using the control device option, NEPCO shall submit a notification to the Department at least 30 days after any non-compliance with control device requirements. This written report shall supply the following information: description of the cause, duration, remedial action, and steps to be taken to prevent recurrence of such malfunctions, failures, or downtimes. [06-096 C.M.R. ch. 132 (7)(D)(3)(a)]

(4) Recordkeeping for VOC Limit Option [06-096 C.M.R. ch. 132(7)(B)(2)]

NEPCO shall keep daily records of the names, identification numbers, and VOC contents of each coating or ink used, as applied, for operations complying using the VOC limit compliance method (water-based inks).

If all coatings and inks used at the facility comply with Ch. 132 via the VOC limit compliance method, records may be kept on a monthly basis.

(5) Recordkeeping for Control Device Option [06-096 C.M.R. ch. 132(7)(D)(2)]

NEPCO shall keep daily records of the information listed below for operations complying using the control device compliance method:

(a) The name and identification number of each applicable printing press;

(b) The mass of VOC per unit volume of coating solids, as applied; the volume of solids content, as applied; and the volume, as applied, of each coating used each day on each printing press;

(c) The overall emission reduction efficiency for each day for each printing press, required in Section (5)(A)(2) of 06-096 C.M.R. ch. 132 to be at least 60% overall emission reduction efficiency for a flexographic

printing press, accounting for the effectiveness of both the capture system and the control device;

(d) Control device monitoring data;

(e) A log of operating time for the capture system, control device, monitoring equipment, and the associated printing press or presses;

(f) A maintenance log for the capture system, control device, and monitoring equipment detailing all routine and non-routine maintenance performed, including dates and durations of any outages; and

(g) Records of all continuous 3-hour periods of operation in which the average combustion temperature was more than 28 degrees C (50 degrees F) below the average combustion temperature during the most recent performance test that demonstrated compliance.

(6) Additional Reporting Requirements

NEPCO shall notify and provide a written report to the Department of any noncompliance with the selected compliance methods within 30 calendar days following each occurrence.

A noncompliance report for the VOC limit compliance method shall include a statement certifying noncompliance with the applicable emission limit and the effected press or presses.

A noncompliance report for the control device compliance method shall include a description of the cause, duration, remedial action, and steps to be taken to prevent recurrence of such malfunctions, failures, or downtimes.

[06-096 C.M.R. ch. 132(7)(B)(3)(a) and (7)(D)(3)(a)]

(7) Handling of Materials Containing VOC [06-096 C.M.R. ch. 132(8)]

NEPCO shall take the following precautions for the handling, storage, and disposal of VOC containing materials:

(a) NEPCO shall use vapor-tight containers for the storage of spent or fresh VOC containing materials and for the storage or disposal of cloth or paper impregnated with VOC containing materials that are used for surface preparation, cleanup, or coating removal.

(b) NEPCO shall not use VOC containing materials for the cleanup of spray equipment unless other equipment is used to collect the cleaning compounds and minimize evaporation to the atmosphere.

D. Dryer #4

While each printing press has an associated dryer used to dry the ink used in its operation, only Press #4 has an associated dryer which has a heat input capacity above the insignificant threshold as defined in 06-096 C.M.R. ch. 115 Appendix B(B)(2).

Dryer #4, which is an integral part of Press #4, has two burners which have a combined rating of 1.0 MMBtu/hr firing propane. Dryer #4 was installed in 2018 as part of Press #4 and exhausts with Press #4 to the RTO when using solvent-based inks.

1. BPT Findings

The BPT emission limits for Dryer #4 were based on the following:

Propane

$PM/PM_{10}/PM_{2.5}$	–	0.7 lb/1000 gal based on AP-42 Table 1.5-1, dated 07/08
SO_2	–	0.018 lb/1000 gal based on AP-42 Table 1.5-1, dated 07/08 and the firing of propane with a sulfur content of 0.18 gr/100 ft^3
NO_x	–	13.0 lb/1000 gal based on AP-42 Table 1.5-1, dated 07/08
CO	–	7.5 lb/1000 gal based on AP-42 Table 1.5-1, dated 07/08
VOC	–	1.0 lb/1000 gal based on AP-42 Table 1.5-1, dated 07/08
Visible Emissions	–	06-096 C.M.R. ch. 115, BPT

The BPT emission limits for Dryer #4 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)
Dryer #4	0.01	0.01	0.01	0.01	0.12	0.07	0.01

2. Visible Emissions

Visible Emissions from Dryer #4 when not exhausting through the RTO shall not exceed 10% opacity on a six-minute block average basis.

E. Regenerative Thermal Oxidizer

NEPCO operates an RTO for control of emission of VOC from the printing press operations at the facility. The RTO consists of two energy recovery columns connected by a high temperature combustion chamber. Flow is directed through the unit by pneumatic valves where one column is in a gas-heating (inlet) mode while the other column is in a gas-cooling (outlet) mode. VOC-laden air enters the oxidizer through the inlet header and is fed into the base of the first column where it passes vertically up through ceramic heat exchange media and is preheated almost to the combustion chamber temperature. The

burner in the combustion chamber raises the air temperature to the operating set point where the oxidation process is completed. Hot purified air then enters column B and passes vertically down through the ceramic media and is cooled before exhausted to atmosphere.

The following has been established as BPT for the operation of the RTO:

1. NEPCO shall operate an RTO to control VOC and HAP emissions from the printing presses. The RTO shall achieve 95% destruction of VOC from the presses and shall be operated whenever solvent-based inks are used on a press. Presses are not required to be ducted to the RTO when not in operation or when using water-based inks.

2. The RTO shall be operated in accordance with the manufacturer's specifications.

3. The RTO shall maintain a temperature of at least the minimum temperature established during the most recent compliance testing on the system where the destruction efficiency requirement was met. Compliance shall be demonstrated by thermocouples (that shall not be in direct contact with the auxiliary burner flame) maintained at the RTO's combustion chamber exit. The temperature shall be recorded continuously and meet the parameter monitor uptime requirement.

4. NEPCO shall conduct monthly inspections of the RTO, including thermocouples. Annual calibrations on the thermocouples shall be performed in accordance with the manufacturer's recommendations. Records of inspections, calibrations, and resulting actions, as appropriate, shall be maintained and readily accessible for inspection upon request.

5. NEPCO shall monitor the operation of all presses such that the solvent loading and flow rate to the RTO at any one time does not exceed the RTO's maximum rated capacities of 181 lb/hr (solvent loading) and 10,000 scfm (flow rate), and shall modify press operational scenarios as needed to not exceed the RTO's ratings. Records shall be maintained to document compliance.

6. NEPCO shall conduct capture and destruction efficiency testing every fifth calendar year after the test performed in 2019, unless requested by the Department on a more frequent basis. Control equipment capture and destruction efficiency testing shall be conducted in accordance with 40 C.F.R. Part 60, Appendix A, Method 25A.

   If, at any time, testing demonstrates that the facility does not achieve the required overall VOC control efficiency or the annual VOC limit, NEPCO shall promptly undertake changes, such as modifying enclosure devices to increase capture efficiencies, to achieve compliance with these requirements.

7. NEPCO shall operate the RTO such that the visible emissions from the stack do not exceed 10% opacity on a six-minute block average basis.

8. The BPT emission limits for the RTO 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)
RTO	0.01	0.01	0.01	0.01	0.12	0.07	0.01

* These emissions are the byproduct of combustion and are not to be counted against the capture and destruction efficiency of the RTO.

F. Bag Machines

NEPCO operates seven bag machines that cut and seal polyethylene film into finished bags, designated Bag Machines #1-#7. This process creates smoke at times, which is vented off the machines. It was concluded in Air Emission License A-894-71-C-R (11/1/2013) that the quantity of VOC in smoke coming from the bag machines was undeterminable and considered de minimis. In January of 2006, NEPCO installed Smog Hogs (manufactured by United Air Specialists) which filter and clean smoke electrostatically. These units electrically charge even microscopic contaminants and then capture them in electrostatic precipitator (ESP) collection cells. NEPCO eliminated the prior rooftop stacks that vented emissions from the bag machines and now vent the bag machines through the Smog Hogs into the building interior.

The following is determined to be BPT for the operation of the Bag Machines:

NEPCO shall maintain electrostatic filters to clean smoke vented from the bag machines. Daily inspections shall be logged to determine proper operation of the ESP collection units whenever the bag machines are operating.

G. General Process Emissions

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

H. Fugitive Emissions

NEPCO 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.

NEPCO 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.

I. Parameter Monitors

Each parameter monitor must record accurate and reliable data. If the parameter monitor is recording accurate and reliable data less than 98% of the source operating time within any quarter of the calendar year, the Department may initiate enforcement action and may include in that enforcement action any period of time that the parameter monitor was not recording accurate and reliable data during that quarter unless the licensee can demonstrate to the satisfaction of the Department that the failure of the system to record accurate and reliable data was due to the performance of established quality assurance and quality control procedures or unavoidable malfunctions. [06-096 C.M.R. ch. 115, BPT]

J. Performance Test Protocol

For any performance testing required by this license, NEPCO 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]

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

K. Emission Statements

NEPCO is subject to emissions inventory requirements contained in *Emission Statements*, 06-096 C.M.R. ch. 137. NEPCO shall maintain the following records in order to comply with this rule:

1. The amount of propane fired in the RTO on a monthly basis;
2. The amount of propane fired in Dryer #4 on a monthly basis;
3. Calculations of the VOC and HAP emissions from the printing presses on a calendar year total basis; and
4. Hours of operation for each emission unit on a monthly basis.

In reporting year 2023 and every third year thereafter, NEPCO shall report to the Department emissions of hazardous air pollutants as required by 06-096 C.M.R. ch. 137, § (3)(C). The Department will use these reports to calculate and invoice for the applicable annual air quality surcharge for the subsequent three billing periods. NEPCO shall pay the annual air quality surcharge, calculated by the Department based on these reported emissions of hazardous air pollutants, by the date required in Title 38 M.R.S. § 353-A(3). [38 M.R.S. § 353-A(1-A)]

L. 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:

- Operating the RTO for 8,760 hrs/yr;
- Operating Dryer #4 for 8,760 hrs/yr; and
- Facility-wide VOC and HAP limits.

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
Dryer #4	0.1	0.1	0.1	0.1	0.6	0.4	49.9
RTO	0.1	0.1	0.1	0.1	1.1	0.7	
Process Emissions							
Total TPY	**0.2**	**0.2**	**0.2**	**0.2**	**1.7**	**1.1**	**49.9**

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
$PM_{2.5}$	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.

This determination is based on information provided by the applicant regarding 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 NEPCO 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, and
- will not violate applicable ambient air quality standards in conjunction with emissions from other sources.

The Department hereby grants Air Emission License A-894-71-F-R/M 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 beginning actual 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 the written test report by the Department, or another alternative timeframe approved by the Department, 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 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]

(16) The licensee 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). [06-096 C.M.R. ch. 115]

SPECIFIC CONDITIONS

(17) **Printing Presses**

A. The printing presses at NEPCO are licensed to use both water-based and solvent-based inks. [06-096 C.M.R. ch. 115, BPT]

B. NEPCO shall limit VOC, single HAP, and total HAP from the facility to the following, on a 12-month rolling total basis:

- 49.9 tons of VOC;
- 9.9 tons of any single HAP; and
- 24.9 tons of total HAP.

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

C. Emissions of VOC from printing operations shall be calculated by tracking the monthly usage of solvent based inks, and their VOC content, 100% of which is assumed to be emitted. The total mass emissions of VOC shall then be reduced by the capture and destruction efficiency of the latest test of the RTO. [06-096 C.M.R. ch. 115, BPT]

D. Emissions of HAP are to be calculated by tracking the monthly usage of inks, and their HAP content, of which 100% is assumed to be to be emitted. [06-096 C.M.R. ch. 115, BPT]

E. NEPCO shall monitor the operation of all presses such that the solvent loading and flow rate to the RTO at any one time does not exceed the RTO's maximum rated capacities of 181 lb/hr (solvent loading) and 10,000 scfm (flow rate), and shall modify press operational scenarios as needed to not exceed the RTO's ratings. Records shall be maintained to document compliance. [06-096 C.M.R. ch. 115, BPT]

F. Inks, clean-up materials, and other VOC-containing materials shall be stored in containers with vapor tight lids which are kept closed at all times when material is not being added or removed. [06-096 C.M.R. ch. 115, BPT]

G. A monthly record shall be maintained to document use and composition of cleanup solvents. [06-096 C.M.R. ch. 115, BPT]

H. 06-096 C.M.R. ch. 154 *Control of Volatile Organic Compounds from Flexible Package Printing*

1. Emission Standards [06-096 C.M.R. ch. 154(3)]

NEPCO shall comply with one of the two following options:

a. Use only inks, coatings and adhesives with an as applied VOC content that does not exceed 0.8 lb VOC/lb of solids or 0.16 lb VOC/lb of materials. The VOC content limits may be met by averaging the VOC content of materials used on a single printing line in a single day; or

b. Install, operate, and maintain in accordance with the manufacturer's recommendations an emissions control system, consisting of a capture and a control device, which meets an overall control efficiency level of 75 percent.

2. Work Practice Standards [06-096 C.M.R. ch. 154(4)]

a. New and used VOC-containing ink, adhesive, coating, or cleaning solvent, including ink or coating mixed on the premises, shall be stored in a nonabsorbent, non-leaking, vapor-tight container. Such a container shall be kept closed at all times except when the container is being filled, emptied or is otherwise actively in use.

b. Spills and leaks of VOC-containing ink, adhesive, coating, or cleaning solvent shall be minimized. Any leaked or spilled VOC-containing ink, coating, or cleaning solvent shall be absorbed and removed immediately.

c. Absorbent applicators, such as cloth and paper, which are moistened with VOC containing ink, adhesives, coating, or solvent, shall be stored in a closed, nonabsorbent, nonleaking container for disposal or recycling.

d. VOC-containing ink, adhesives, coating, and cleaning solvent shall be conveyed from one location to another in a closed container or pipe.

e. Cleaning shall be performed to minimize associated VOC emissions.

3. Recordkeeping [06-096 C.M.R. ch. 154(5)]

   NEPCO shall maintain the following records:

   a. Name and quantity of any ink, adhesives, coating, or cleaning solvent used;

   b. VOC content of each ink, adhesives, coating, or cleaning solvent used, as applied;

   c. A catalog of Material Safety Data Sheets for all inks, adhesives, coatings, and cleaning solvents used;

   d. Documentation of air pollution control equipment efficiency or capture efficiency, if applicable;

   e. Date and type of maintenance performed on air pollution control or capture equipment, if applicable; and

   f. The actual overall emission reduction efficiency achieved for each day for each flexible package printing press as determined using Procedure E of Appendix A.

   g. Control device monitoring data;

   h. A log of operating time for the capture system, control device, monitoring equipment, and the associated flexible package printing press; and

   i. A maintenance log for the capture system, control device, and monitoring equipment detailing all routine and non-routine maintenance performed, including dates and duration of any outages.

   j. All continuous 3-hour periods of operation in which the average combustion temperature of the control device was more 50 degrees F below the average combustion temperature during the most recent performance test that demonstrated that the facility was in compliance.

I. 06-096 C.M.R. ch. 132 *Graphic Arts-Rotogravure and Flexography*

a. Emissions Standards

At all times, NEPCO shall comply with one of the two following options:

1. VOC Limit Option [06-096 C.M.R. ch. 132(3)(B)]

NEPCO shall not apply any coating or ink unless the VOC content is equal to or less than one of the following:
(a) 40% VOC by volume of the coating or ink, excluding water, as applied;
(b) 25% VOC by volume of the volatile content in the coating or ink, as applied; or
(c) 0.5 lb VOC per lb of coating solids, as applied.

Compliance is demonstrated through recordkeeping, as discussed later in this section.

2. Control Device Option [06-096 C.M.R. ch. 132(5) and 06-096 C.M.R. ch. 115, BPT]

NEPCO shall comply with the following:

(a) Control Device Operation
The RTO shall be operated at all times that a printing press is in operation.

(b) Monitoring Equipment
NEPCO shall continuously monitor and record the temperature of the RTO combustion chamber.

The temperature monitoring equipment shall be installed, calibrated, operated, and maintained per the manufacturer's specifications at all times that the RTO is in use. The temperature monitor shall be equipped with a continuous recorder and have an accuracy range of no greater than ± 1% of the 3-hour average combustion temperature, in degrees Celsius, from the most recent performance test that demonstrated compliance.

Compliance with this option is demonstrated through recordkeeping discussed in the *Recordkeeping and Reporting* section of this amendment and through testing of the RTO, as required per BPT, and other methods as approved by the Department.

[06-096 C.M.R. ch. 132(5) and 06-096 C.M.R. ch. 115, BPT]

b. Recordkeeping and Reporting

NEPCO shall complete the reporting and recordkeeping requirements listed below. All records shall be kept readily available for review during normal business hours, and copies shall be provided to the Department and/or EPA upon request. Records shall be maintained on-site for at least six years.

(1) NEPCO shall submit a compliance certification to the Department at least 30 days prior to making any change in the chosen compliance method. [06-096 C.M.R. ch. 132 (7)(B)(3)(b), and (7)(D)(3)(b)]

(2) If using the VOC limit option, NEPCO shall submit a notification to the Department at least 30 days after the use of any noncompliant coating usage. [06-096 C.M.R. ch. 132 (7)(B)(3)(a)]

(3) If using the control device option, NEPCO shall submit a notification to the Department at least 30 days after any non-compliance with control device requirements. This written report shall supply the following information: description of the cause, duration, remedial action, and steps to be taken to prevent recurrence of such malfunctions, failures, or downtimes. [06-096 C.M.R. ch. 132 (7)(D)(3)(a)]

(4) Recordkeeping for VOC Limit Option [06-096 C.M.R. ch. 132(7)(B)(2)]

NEPCO shall keep daily records of the names, identification numbers, and VOC contents of each coating or ink used, as applied, for operations complying using the VOC limit compliance method (water-based inks).

If all coatings and inks used at the facility comply with Ch. 132 via the VOC limit compliance method, records may be kept on a monthly basis.

(5) Recordkeeping for Control Device Option [06-096 C.M.R. ch. 132(7)(D)(2)]

NEPCO shall keep daily records of the information listed below for operations complying using the control device compliance method:

(a) The name and identification number of each applicable printing press;

(b) The mass of VOC per unit volume of coating solids, as applied; the volume of solids content, as applied; and the volume, as applied, of each coating used each day on each printing press;

(c) The overall emission reduction efficiency for each day for each printing press, required in Section (5)(A)(2) of 06-096 C.M.R. ch. 132 to be at least 60% overall emission reduction efficiency for a flexographic

printing press, accounting for the effectiveness of both the capture system and the control device;

(d) Control device monitoring data;

(e) A log of operating time for the capture system, control device, monitoring equipment, and the associated printing press or presses;

(f) A maintenance log for the capture system, control device, and monitoring equipment detailing all routine and non-routine maintenance performed, including dates and durations of any outages; and

(g) Records of all continuous 3-hour periods of operation in which the average combustion temperature was more than 28 degrees C (50 degrees F) below the average combustion temperature during the most recent performance test that demonstrated compliance.

(6) Additional Reporting Requirements

NEPCO shall notify and provide a written report to the Department of any noncompliance with the selected compliance methods within 30 calendar days following each occurrence.

A noncompliance report for the VOC limit compliance method shall include a statement certifying noncompliance with the applicable emission limit and the effected press or presses.

A noncompliance report for the control device compliance method shall include a description of the cause, duration, remedial action, and steps to be taken to prevent recurrence of such malfunctions, failures, or downtimes.

[06-096 C.M.R. ch. 132(7)(B)(3)(a) and (7)(D)(3)(a)]

(7) Handling of Materials Containing VOC [06-096 C.M.R. ch. 132(8)]

NEPCO shall take the following precautions for the handling, storage, and disposal of VOC containing materials:

(a) NEPCO shall use vapor-tight containers for the storage of spent or fresh VOC containing materials and for the storage or disposal of cloth or paper impregnated with VOC containing materials that are used for surface preparation, cleanup, or coating removal.

(b) NEPCO shall not use VOC containing materials for the cleanup of spray equipment unless other equipment is used to collect the cleaning compounds and minimize evaporation to the atmosphere.

(18) **Dryer #4**

A. Dryer #4 is licensed to fire propane. [06-096 C.M.R. ch. 115, BPT]

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

Emission 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)
Dryer #4	0.01	0.01	0.01	0.01	0.12	0.07	0.01

C. Visible emissions from Dryer #4 shall not exceed 10% opacity on a six-minute block average basis. [06-096 C.M.R. ch. 115, BPT]

(19) **Regenerative Thermal Oxidizer**

A. NEPCO shall operate an RTO to control VOC and HAP emissions from the printing presses. The RTO shall achieve 95% destruction of VOC from the presses and shall be operated whenever solvent-based inks are used on a press. Presses are not required to be ducted to the RTO when not in operation or when using water-based inks. [06-096 C.M.R. ch. 115, BPT]

B. The RTO shall be operated in accordance with the manufacturer's specifications. [06-096 C.M.R. ch. 115, BPT]

C. The RTO shall maintain a temperature of at least the minimum temperature established during the most recent compliance testing on the system where the destruction efficiency requirement was met. Compliance shall be demonstrated by thermocouples (that shall not be in direct contact with the auxiliary burner flame) maintained at the RTO's combustion chamber exit. The temperature shall be recorded continuously and meet the parameter monitor uptime requirement. [06-096 C.M.R. ch. 115, BPT]

D. NEPCO shall conduct monthly inspections of the RTO, including thermocouples. Annual calibrations on the thermocouples shall be performed in accordance with the manufacturer's recommendations. Records of inspections, calibrations, and resulting actions, as appropriate, shall be maintained and readily accessible for inspection upon request. [06-096 C.M.R. ch. 115, BPT]

E. NEPCO shall monitor the operation of all presses such that the solvent loading and flow rate to the RTO at any one time does not exceed the RTO's maximum rated capacities of 181 lb/hr (solvent loading) and 10,000 scfm (flow rate), and shall modify press operational scenarios as needed to not exceed the RTO's ratings. Records shall be maintained to document compliance. [06-096 C.M.R. ch. 115, BPT]

F. NEPCO shall conduct capture and destruction efficiency testing every fifth calendar year after the test performed in 2019, unless requested by the Department on a more

frequent basis. Control equipment capture and destruction efficiency testing shall be conducted in accordance with 40 CFR Part 60, Appendix A, Method 25A.

If, at any time, testing demonstrates that the facility does not achieve the required overall VOC control efficiency or the annual VOC limit, NEPCO shall promptly undertake changes, such as modifying enclosure devices to increase capture efficiencies, to achieve compliance with these requirements.
[06-096 C.M.R. ch. 115, BPT]

G. NEPCO shall operate the RTO such that the visible emissions from the stack do not exceed 10% opacity on a six-minute block average basis.
[06-096 C.M.R. ch. 115, BPT]

H. Emissions from the RTO shall not exceed the following [06-096 C.M.R. ch. 115, BPT]:

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)
RTO	0.01	0.01	0.01	0.01	0.12	0.07	0.01

* These emissions are the byproduct of combustion and are not to be counted against the capture and destruction efficiency of the RTO.

(20) **Bag Machines**

NEPCO shall maintain electrostatic filters to clean smoke vented from the bag machines. Daily inspections shall be logged to determine proper operation of the ESP collection units whenever the bag machines are operating.

(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. 101, § 4(B)(4)]

(22) **Fugitive Emissions**

A. NEPCO 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. NEPCO 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)]

(23) **Parameter Monitors**

If any parameter monitor is recording accurate and reliable data less than 98% of the source-operating time within any quarter of the calendar year, the Department may initiate enforcement action. The Department may include in that enforcement action any period of time that the parameter monitor was not recording accurate and reliable data during that quarter unless the licensee can demonstrate to the Department's satisfaction that the failure of the system to record such data was due to the performance of established quality assurance and quality control procedures or unavoidable malfunctions.
[06-096 C.M.R. ch. 115, BPT]

(24) **Performance Test Protocol**

For any performance testing required by this license, NEPCO 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]

(25) **Annual Emission Statements**

A. In accordance with *Emission Statements,* 06-096 C.M.R. ch. 137, NEPCO shall annually report to the Department, in a format prescribed by the Department, the information necessary to accurately update the State's emission inventory. The emission statement shall be submitted as specified by the date in 06-096 C.M.R. ch. 137.

B. NEPCO shall keep the following records in order to comply with 06-096 C.M.R. ch. 137:

1. The amount of propane fired in the RTO on a monthly basis;
2. The amount of propane fired in the Dryer #4 on a monthly basis;
3. Calculations of the VOC and HAP emissions from the printing presses on a calendar year total basis; and
4. Hours of operation for each emission unit on a monthly basis.

[06-096 C.M.R. ch. 137]

C. In reporting year 2023 and every third year thereafter, NEPCO shall report to the Department emissions of hazardous air pollutants as required by 06-096 C.M.R. ch. 137, § (3)(C). NEPCO shall pay the annual air quality surcharge, calculated by the Department based on these reported emissions of hazardous air pollutants, by the date required in Title 38 M.R.S. § 353-A(3). [38 M.R.S. § 353-A(1-A)]

(26) If the Department determines that any parameter value pertaining to construction and operation of the emissions units, including but not limited to stack size, configuration, flow rate, emission rates, nearby structures, etc., deviates from what was submitted in the application or ambient air quality impact analysis for this air emission license, NEPCO may be required to submit additional information. Upon written request from the Department, NEPCO shall provide information necessary to demonstrate AAQS will not be exceeded, potentially including submission of an ambient air quality impact analysis or an application to amend this air emission license to resolve any deficiencies and ensure compliance with AAQS. Submission of this information is due within 60 days of the Department's written request unless otherwise stated in the Department's letter.
[06-096 C.M.R. ch. 115, § 2(O)]

DONE AND DATED IN AUGUSTA, MAINE THIS 30th DAY OF April, 2024.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: _____ for _____
MELANIE LOYZIM, 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: 8/4/23
Date of application acceptance: 8/9/23

Date filed with the Board of Environmental Protection:

This Order prepared by Chris Ham, Bureau of Air Quality.

FILED

APR 30, 2024

State of Maine
Board of Environmental Protection