Northeast Packaging Company
Aroostook County
Presque Isle, Maine
A-894-71-A-N (SM)

Departmental
Findings of Fact and Order
Air Emission License

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 M.R.S.A., Section 344 and Section 590, the Department finds the following facts:

I. REGISTRATION

A. Introduction

Northeast Packaging Company (NPC) of Presque Isle, Maine has applied for a new Air Emission License, permitting the operation of emission sources associated with their printing process.

B. Emission Equipment

NPC is licensed to operate the following equipment:

Fuel Burning Equipment *

Equipment	Maximum Capacity (MMBTU/hr)	Fuel Type, %Sulfur	Maximum Firing Rate	Stack height (ft)
Boiler #3	0.8	#2 fuel oil	5.5 gal/hr	28

* Noted for inventory purposes only, less than 1.0 MMBtu/hr heat input.

Process Equipment

Equipment	Max process rate	Date of Manufacture	Date of Installation	Stack #
Printing Press #1	17,000 ft/hr	1994	1995	1
Printing Press #2	17,000 ft/hr	1999	2000	2
Printing Press #3	17,000 ft/hr	1994	2006	4
(4) Bag Machines	8500 lb/day	1994	1995	--

Associated Fuel Burning Equipment *

Equipment	Maximum Capacity	Maximum Firing Rate	Fuel Type	Stack #
Dryer for Press #1	0.8 MMBtu/hr	8.5 gal/hr	propane	1
Dryer for Press #2	0.8 MMBtu/hr	8.5 gal/hr	propane	2
Dryer for Press #3	0.8 MMBtu/hr	8.5 gal/hr	propane	4

* Noted for inventory purposes only, all propane dryers are each less than 1.0 MMBtu/hr heat input.

C. Application Classification

A new source is considered a major source based on whether or not expected emissions exceed the "Significant Emission Levels" as defined in the Department's regulations. The emissions for NPC are determined by the maximum future license allowed emissions, as follows:

Pollutant	Future License (TPY)	Sig. Level
PM	N/A	100
PM_{10}	N/A	100
SO_2	N/A	100
NO_x	N/A	100
CO	N/A	100
VOC	39.9	50

The Department has determined the facility is a minor source and the application has been processed through Chapter 115 of the Department's regulations. With the boiler and dryer heaters less than 1.0 MMBtu/hr, these units are considered insignificant per Chapter 115 of the Department regulations. For this reason, no emissions from these units are calculated. The VOC emissions limit keeps the facility licensed below the major source thresholds and applicability to VOC RACT and therefore this facility is considered a synthetic minor.

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 Chapter 100 of the Bureau of Air Quality Control regulations. Separate control requirement categories exist for new and existing equipment as well as for those sources located in designated non-attainment areas.

BPT for new sources and modifications requires a demonstration that emissions are receiving Best Available Control Technology (BACT), as defined in Chapter 100 of the Department's regulations. BACT is a top-down approach to selecting air emission controls considering economic, environmental and energy impacts.

B. Process Description

NPC prints and manufacturers multiwall paper bags and printed polyethylene film bags. Currently NPC uses both water based and solvent based inks for printings purposes. The facility was under licensing thresholds using mainly water based inks for many years. However, several customers, including several of the major supermarket stores have required certain product quality and appearance that can only be achieved currently through use of solvent-based inks. NPC is working with new ink suppliers on water-based technology for printing on polyethylene. Water-based inks are improving constantly; however, solvent-based inks are still necessary for current orders.

C. Printing Press Control System

BACT for the printing presses involves researching the most economically and technically feasible add-on control technology. The add-on control system most likely to meet this criteria are the permanent total enclosure in conjunction with the regenerative thermal oxidizer. Due to the high air volume and low VOC concentration associated with the process at NPC, add-on control technology will not be required for this facility at this time. BACT for the printing presses will include a limit on the VOC content of the inks and documented further research into water based ink technology. To meet BACT, the presses, roll cleaning, and ink preparations at NPC will have a VOC emissions limit of 39 tons per year, based on a 12 month rolling total. This will be based on material usage and VOC content specified in Material Safety Data Sheets (MSDS).

NPC is subject to the applicable requirements of Chapter 132 of the Department's regulations (Graphic Arts-Rotogravure and Flexography), including the requirements for recordkeeping and reporting. This regulation applies to printing press facilities that have maximum theoretical emissions of volatile organic compounds (VOC) from all printing presses greater than 50 tons per year. NPC is licensed to 39.9 tons per year, however, its maximum theoretical emissions is greater than 50 tons per year. NPC will meet the applicable standards, recordkeeping, and reporting as outlined in Chapter 132.

D. Dryers

The combined heat input of the heaters is 2.4 MMBtu/hr with three Maxon dryers each with a maximum heat input of 0.8 MMBtu/hr. These heaters are not subject to NSPS and are considered insignificant due to their size per Chapter 115 Appendix B. To continue status as insignificant sources, NPC will notify the Department if changes occur to the maximum design heat input, fuel type, or stack. Visible emissions shall not exceed 10% opacity on a six (6) minute block average basis.

E. Fugitive VOC Emissions

Fugitive VOC emissions from the ink storage area are minimal, however, any losses will be accounted for in the monthly inventory and material balance required to determine VOC emissions. BACT for the ink storage is covering containers with vapor tight lids on fresh or spent VOC and cleanup materials.

F. Bag Machines

NPC operate four bag machines that cut and seal polyethylene film into finished bags. This process creates small amounts of smoke at times which is vented off the machines. It was concluded that the small amount of smoke coming from the bag machines was at an undeterminable level of VOC. Therefore, NPC conducted tests on their film to establish what percentage of material was being lost "turned into smoke". In such a scenario that the smoke was conservatively estimated at 100% VOC, NPC conducted tests to determine how much film is actually being lost during the bag making process. Sixty pounds of raw film was run through the bag machines and sealed in a regular commercial procedure. The film was then weighed after the converting process to determine the loss of film. After conducting the test three times, it was concluded that for every 60 pounds of film being processed through the machines, about 0.02 pounds were being emitted.

Therefore, at the current rate of production, Northeast Packaging is processing about 8500 pounds of film a day, 6 days a week and 300 days a year. This equals out to 2.83 pounds per day or 850 pounds per year. With the added increase from the new press, NPC estimates 1100 pounds of VOC per year. In January of 2006, NPC installed Smog Hogs (manufactured by United Air Specialists) which filters and cleans smoke electrostactically. These units electrically charge even microscopic contaminants and then capture them in the ESP collection cells. NPC eliminated the prior roof top stacks that vented emissions from the bag machines and now vent the bag machines inside through these units.

G. Annual Emission

Total Annual Emission for the Facility
(used to calculate the annual license fee)

Pollutant	Total (tons/year)
PM	N/A
PM_{10}	N/A
SO_2	N/A
NO_x	N/A
CO	N/A
VOC	39.9

III. AMBIENT AIR QUALITY ANALYSIS

According to Chapter 115 of the Department's regulations, the level of air quality analyses required for a renewal source shall be determined on a case-by case basis. Based on the above total facility emissions, NPC is below the emissions level required for modeling.

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, or increment standards either alone or in conjunction with emissions from other sources.

The Department hereby grants Air Emission License A-894-71-A-N, subject to the following conditions:

Severability. The invalidity or unenforceability of any provision, or part thereof, of this License 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 MRSA §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. [MEDEP Chapter 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. [MEDEP Chapter 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. [MEDEP Chapter 115]

(5) The licensee shall pay the annual air emission license fee to the Department, calculated pursuant to Title 38 M.R.S.A. §353. [MEDEP Chapter 115]

(6) The license does not convey any property rights of any sort, or any exclusive privilege. [MEDEP Chapter 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. [MEDEP Chapter 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. [MEDEP Chapter 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. [MEDEP Chapter 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. [MEDEP Chapter 115]

(11) In accordance with the Department's air emission compliance test protocol and 40 CFR 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 CFR 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.

[MEDEP Chapter 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 CFR 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.
[MEDEP Chapter 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. [MEDEP Chapter 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 emission 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. [MEDEP Chapter 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. [MEDEP Chapter 115]

SPECIFIC CONDITIONS

(16) NPC shall comply with all applicable requirements of Chapter 132 of the Department's regulations (Graphic Arts-Rotogravure and Flexography), including the requirements for recordkeeping and reporting. [MEDEP Chapter 132, BACT]

(17) Visible emissions from the dryers shall not exceed 10% opacity on a six minute block average. [MEDEP Chapter 101]

(18) **VOC Emissions/Records** [MEDEP Chapter 132 and Chapter 115, BACT]

A. NPC shall comply with the recordkeeping requirements of Chapter 132 of the Department's regulations by compiling monthly volumes of VOC content of alcohol and ink used as a total rather than press-by-press basis.

B. NPC shall be limited to 78,000 lbs VOC/year from solvents and inks on the presses, based on a 12 month rolling total. This equates to 39 tons/year of process VOC emissions. Records of solvent and ink VOC content and usage

shall be maintained documenting this limit on a monthly and 12 month rolling total basis.

(19) NPC 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.
[MEDEP Chapter 115, BACT]

(20) **Storage**
Fugitive VOC emissions shall be minimized by covering containers with vapor tight lids on fresh or spent VOC and cleanup materials. [MEDEP Chapter 115, BPT]

(21) To ensure compliance with Chapter 115 BACT for VOC control, NPC shall continue research and manufacturing test trials of pollution prevention technologies and low VOC inks, etc. An annual report shall be sent to the Department by January 31st documenting the research and results for the previous year. [MEDEP Chapter 115, BACT]

(22) A monthly record shall be maintained to document use and composition of cleanup solvents. [MEDEP Chapter 115, BPT]

(23) **Annual Emission Statement** [MEDEP Chapter 137]
NPC is licensed to emit more than 25 tons per year of VOC, therefore, in accordance with MEDEP Chapter 137, the licensee shall annually report to the Department by September 1, the information necessary to accurately update the State's emission inventory by means of:

1) A computer program and accompanying instructions supplied by the Department;

   or

2) A written emission statement containing the information required in MEDEP Chapter 137.

Reports and questions should be directed to:

Attn: Criteria Emission Inventory Coordinator
Maine DEP

Bureau of Air Quality
17 State House Station
Augusta, ME 04333-0017

Phone: (207) 287-2437

(24) A copy of this Order shall be kept on-site and the operator(s) must be familiar with the terms of the Order. [MEDEP Chapter 115, BPT]

(25) NPC shall pay the annual air emission license fee within 30 days of October 30th of each year. Pursuant to 38 MRSA §353-A, failure to pay this annual fee in the stated timeframe is sufficient grounds for revocation of the license under 38 MRSA §341-D, subsection 3. [38 MRSA §353-A]

DONE AND DATED IN AUGUSTA, MAINE THIS DAY OF 2006.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY:_____
DAVID P. LITTELL, COMMISSIONER

The term of this license shall be five (5) years from the signature date above.

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: June 10, 2004
Date of application acceptance: June 14, 2004

Date filed with Board of Environmental Protection:_____

This Order prepared by Edwin Cousins, Bureau of Air Quality