

Spencer Press of Maine, Inc.
York County
Wells, Maine
A-38-70-F-R

Departmental
Findings of Fact and Order
Part 70 Air Emission License

After review of the Part 70 License renewal 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

FACILITY	Spencer Press of Maine, Inc. (Spencer)
LICENSE NUMBER	A-38-70-F-R
LICENSE TYPE	Part 70 License Renewal
NAICS CODES	323110
NATURE OF BUSINESS	Commercial Printing
FACILITY LOCATION	90 Spencer Dr., Wells
DATE OF LICENSE ISSUANCE	August 24, 2005
LICENSE EXPIRATION DATE	August 24, 2010

B. Emission Equipment

The following emission units are addressed by this Part 70 License:

EMISSION UNIT ID	UNIT CAPACITY	UNIT TYPE
Boiler #1 (1B)	11.7 MMBtu/hr	Fuel Burning (natural gas)
Air Rotation Unit (1H)	3.9 MMBtu/hr	Fuel Burning (natural gas)
M1000A Printing Press (2P)	2,359 lbs finished material /hr	Process Equipment
Dryer (2P)	3.7 MMBtu/hr	Process Equipment
M1000B Printing Press (3P)	6,641 lbs finished material /hr	Process Equipment
Dryer (3P) <i>two identical units</i>	5.9 MMBtu/hr (each)	Process Equipment
M110B#1 Printing Press (4P)	1,962 lbs finished material /hr	Process Equipment
Dryer (4P)	3.0 MMBtu/hr	Process Equipment

M110B#2 Printing Press (5P)	1,962 lbs finished material /hr	Process Equipment
Dryer (5P)	3.0 MMBtu/hr	Process Equipment
Langbein Englebracht America Regenerative Thermal Oxidizer (L&E RTO)	3.0 MMBtu/hr	Pollution Control Equipment
M3000 Printing Press (6P)	15,031 lbs finished material /hr	Process Equipment
Dryer 6P/ Ecotherm #1 Thermal Oxidizer	11.9 MMBtu/hr	Integrated Process Equipment and Pollution Control Equipment
M3000 Printing Press (7P)	15,031 lbs finished material /hr	Process Equipment
Dryer 7P/ Ecotherm #2 Thermal Oxidizer	11.9 MMBtu/hr	Integrated Process Equipment and Pollution Control Equipment
Ka-Tec Thermal Oxidizer (Ka-Tec TO)	5.7 MMBtu/hr	Pollution Control Equipment
Domino Ink Jet Printers	Variable	Process Equipment
Cheshire Video Jet Printers	Variable	Process Equipment
Degreaser	15 Gallon capacity	Maintenance Equipment

Spencer previously permitted a 1.0 MMBtu/hr emergency generator which fires diesel fuel with a sulfur content of 0.05% or less. This unit is considered an insignificant activity per MEDEP Chapter 140, Appendix B, §B.3 and is therefore no longer required to be included on the license.

Spencer also had previously permitted a M850 Lithographic Printing Press (1P). Spencer has requested that this press be removed from their license.

Spencer has additional insignificant activities which do not need to be listed in the emission equipment table above. The list of insignificant activities can be found in the Part 70 license application and in Appendix B of Chapter 140 of the Department's Regulations.

C. Application Classification

The application for Spencer does not include the licensing of increased emissions or the installation of new or modified equipment, therefore the license is considered to be a Part 70 License Renewal issued under Chapter 140 of the Department's regulations for a Part 70 source. This license does include an amendment to Spencer's NSR permit A-38-70-E-A. This change is has been processed in accordance with the requirements of MEDEP Chapter 115.

II. FACILITY AND EMISSION UNIT DESCRIPTION

A. Process Description

Spencer conducts heatset web offset lithography at their Wells, Maine facility. Offset lithography consists of an unwind stand, in-feed, printing stations, drying, chilling and folding.

Paper utilized for printing is provided in large rolls which are placed on the unwind stand, allowing for the continuous supply of paper, known as the web. The web then enters the in-feed section where a variety of roller/pulleys apply tension to the web throughout the entire printing press. After exiting the in-feed, the web enters the first printing station. The printing station consists of ink fountains, in-line rollers, water fountains, plate cylinders and blanket cylinders.

Spencer manufactures printing plates in the preparation room through a variety of methods, including artwork and photography. Prior to leaving the prep room, the plates are treated such that the image area repels water and the non-image area accepts water. The plates are then placed on the plate cylinders. Ink and fountain solutions are applied to the plate cylinder, which transfers the image to the blanket cylinder which in turn transfers the image to the web. The fountain solution is applied to the non-image area of the plate, thereby preventing the ink from adhering to this area. Fountain solutions typically contain isopropyl alcohol; however, Spencer uses an alcohol replacement fountain solution which contains water and various glycol ethers. Depending on the particular job specifications, the web may next enter additional printing stations.

After printing has been completed, the web enters a natural gas-fired dryer where temperatures reach approximately 500°F and the remaining volatile constituents of the ink and fountain solution are evaporated. The web then passes through a series of chill rolls which cause a sudden drop in the web temperature, thereby setting the ink in the paper. Finally, the web exits the chillers and is folded and cut prior to entering the binding and labeling area where the finished product is assembled and mailing labels are applied.

During the printing process ink buildup will occur in the plate and blanket cylinders, negatively affecting the print image. When this occurs, the cylinders are cleaned using blanket wash, either by applying manually as for the two M110B units or automatically for the remaining presses.

B. Boiler #1

Boiler #1 was manufactured by Johnston Boiler Company in 1981 with a maximum design heat input capacity of 11.7 MMBtu/hr firing natural gas and is therefore not subject to the New Source Performance Standards (NSPS) Subpart Dc for steam generating units greater than 10 MMBtu/hr manufactured after June 9, 1989.

Streamlining

1. Opacity
MEDEP Chapter 101, Section 2(B)(c) contains the only applicable opacity standard. **No streamlining requested.**
2. PM
 - a. MEDEP Chapter 103, Section 2(B)(1)(a) contains the only applicable PM lb/MMBtu emission standard. **No streamlining requested**
 - b. BPT establishes the only applicable PM lb/hr emission limit. [BPT per A-38-70-A-I, 11/16/99] **No streamlining requested.**
3. PM₁₀
BPT establishes the only applicable PM₁₀ lb/hr emission limit. [BPT per A-38-70-A-I, 11/16/99] **No streamlining requested.**
4. SO₂
BPT establishes the only applicable SO₂ lb/hr emission limit. [BPT per A-38-70-A-I, 11/16/99] **No streamlining requested.**
5. NO_x
BPT establishes the only applicable NO_x lb/hr emission limit. [BPT per A-38-70-A-I, 11/16/99] **No streamlining requested.**
6. CO
BPT establishes the only applicable CO lb/hr emission limit. [BPT per A-38-70-A-I, 11/16/99] **No streamlining requested.**
7. VOC
BPT establishes the only applicable VOC lb/hr emission limit. [BPT per A-38-70-A-I, 11/16/99] **No streamlining requested.**

Periodic Monitoring

Periodic monitoring shall consist of record keeping which includes records of hours of boiler operation.

Based on best management practices and the type of fuel for which Boiler #1 was designed it is unlikely that Boiler #1 will exceed permitted emission limits. Therefore, periodic monitoring by the source is not required. However, neither the EPA nor the State is precluded from requesting Spencer to perform testing and may take enforcement action for any violations discovered.

Parameter Monitors

There are no Parameter Monitors required for Boiler #1.

Control Equipment

There is no add on control equipment required for Boiler #1.

C. Air Rotation Unit (1H)

Air rotation unit 1H has a rated input heat capacity of 3.9 MMBtu/hr firing natural gas and is used for facility heating needs. This unit was manufactured in 1998.

Streamlining

1. Opacity
 - a. MEDEP Chapter 101, Section 2(B)(f) contains an applicable opacity standard.
 - b. BPT establishes an applicable opacity standard. [BACT per A-38-71-F-A, 1/19/99]

Spencer accepts streamlining for the opacity standard. The BPT limit is the most stringent and is therefore the only opacity limit included in this license.

2. PM
 - a. MEDEP Chapter 103, Section 2(B)(1)(a) contains the only applicable PM lb/MMBtu emission standard. **No streamlining requested**
 - b. BPT establishes the only applicable PM lb/hr emission limit. [BACT per A-38-71-F-A, 1/19/99] **No streamlining requested.**
3. PM₁₀

BPT establishes the only applicable PM₁₀ lb/hr emission limit. [BACT per A-38-71-F-A, 1/19/99]
No streamlining requested.

4. SO₂
BPT establishes the only applicable SO₂ lb/hr emission limit.
[BACT per A-38-71-F-A, 1/19/99]
No streamlining requested.
5. NO_x
BPT establishes the only applicable NO_x lb/hr emission limit.
[BACT per A-38-71-F-A, 1/19/99] **No streamlining requested.**
6. CO
BPT establishes the only applicable CO lb/hr emission limit.
[BACT per A-38-71-F-A, 1/19/99] **No streamlining requested.**
7. VOC
BPT establishes the only applicable VOC lb/hr emission limit.
[BACT per A-38-71-F-A, 1/19/99] **No streamlining requested.**

Periodic Monitoring

Based on best management practices and the type of fuel for which 1H was designed it is unlikely that 1H will exceed permitted emission limits. Therefore, periodic monitoring by the source is not required. However, neither the EPA nor the State is precluded from requesting Spencer to perform testing and may take enforcement action for any violations discovered.

Parameter Monitors

There are no Parameter Monitors required for 1H.

Control Equipment

There is no add on control equipment required for 1H.

D. Presses and Dryers

Printing Press 2P

Lithographic Printing Press 2P, model number M1000A, was manufactured by Heidelberg Harris, Inc. in 1976 with a nominal hourly, process rate of 2,359 pounds of printed paper. The raw materials that feed printing press 2P are paper, inks, fountain solution, and blanket wash.

Dryer 2P

Dryer 2P, model number OF-4289, was manufactured by Thermo Electron. This natural gas fired dryer reaches temperatures of approximately 500°F to drive off the solvents (ink, fountain solution, and blanket wash) on the web of printing press 2P, before the ink sets. Dryer 2P has a nominal firing rate of 3,700 SCF/hr

(equates to a nominal heat input rating of 3.70 MMBtu/hr). Emissions from Dryer 2P vent to the L&E RTO. Emissions from Dryer 2P may vent to the Ka-Tec Thermal Oxidizer as a back-up control device.

Printing Press 3P

Lithographic Printing Press 3P, model number M1000B, was manufactured by Heidelberg Harris, Inc. in 1990 with a nominal hourly, process rate of 6,640.5 pounds of printed paper. The raw materials that feed printing press 3P are paper, inks, fountain solution, and blanket wash.

Dryer 3P

Dryer 3P, model number OF-4009, is actually two identical dryers, each with a maximum heat input rating of 5.9 MMBtu/hr. This natural gas fired dryer which was manufactured by Thermo Electron, reaches temperatures of approximately 500°F to drive off the solvents (ink, fountain solution, and blanket wash) on the web of printing press 3P before the ink is set. Dryer 3P has a total nominal firing rate of 11,800 SCF/hr (equates to a nominal heat input rating of 5.9 MMBtu/hr for each dryer). Emissions from Dryer 3P vent to the L&E RTO. Emissions from Dryer 3P may vent to the Ka-Tec Thermal Oxidizer as a back-up control device.

Lithographic Printing Press 4P

Lithographic Printing Press 4P, model number M110B#1, was manufactured by Heidelberg Harris, Inc. in 1987 with a nominal hourly process rate of 1,962.3 pounds of printed paper. The raw materials that feed printing press 4P are paper, inks, fountain solution, and blanket wash.

Dryer 4P

Dryer 4P, model number F-4156A, was manufactured by Thermo Electron. This natural gas fired dryer reaches temperatures of approximately 500°F to drive off the solvents (ink, fountain solution, and blanket wash) on the web of printing press 4P before the ink is set. Dryer 4P has a total nominal firing rate of 2,960 SCF/hr (equates to a nominal heat input capacity of 2.96 MMBtu/hr). Emissions from Dryer 4P vent to the L&E RTO. Emissions from Dryer 4P may vent to the Ka-Tec Thermal Oxidizer as a back-up control device.

Lithographic Printing Press 5P

Lithographic Printing Press 5P, model number M110B#2, was manufactured by Heidelberg Harris, Inc. in 1986 with a nominal hourly process rate of 1,962.3 pounds of printed paper. The raw materials that feed printing press 5P are paper, inks, fountain solution and blanket wash.

Dryer 5P

Dryer 5P, model number 4008, was manufactured by Thermo Electron. This natural gas fired dryer reaches temperatures of approximately 500°F to drive off

the solvents (ink, fountain solution, and blanket wash) on the web of printing press 5P before the ink is set. Dryer 5P has a total nominal firing rate of 2,960 SCF/hr (equates to a nominal heat input capacity of 2.96 MMBtu/hr). Emissions from Dryer 5P vent to the L&E RTO. Emissions from Dryer 5P may vent to the Ka-Tec Thermal Oxidizer as a back-up control device.

Lithographic Printing Press 6P

Lithographic Printing Press 6P, model number M3000, was manufactured by Heidelberg Harris, Inc. in 1994 with a nominal hourly process rate of 15,031 pounds of printed paper. The raw materials that feed printing press 6P are paper, inks, fountain solution, and blanket wash.

Dryer 6P/Ecotherm #1

Dryer 6P/Ecotherm #1 (E1), model number V100-101, is a combined dryer and thermal oxidizer unit which was manufactured by Stork Contiweb. The natural gas fired dryer reaches temperatures of approximately 500°F to drive off the solvents (ink, fountain solution, and blanket wash) on the web of printing press 6P before the ink is set. E1 acts as a dryer for Press 6P as well as a control device for incineration of VOCs.

Lithographic Printing Press, 7P

Lithographic Printing Press 7P, model number M3000, was manufactured by Heidelberg Harris, Inc. in 1998 with a nominal hourly process rate of 15,031 pounds of printed paper. The raw materials that feed printing press 7P are paper, inks, fountain solution, and blanket wash.

Dryer 7P/Ecotherm #2

Dryer 7P/Ecotherm #2 (E2), model number V100-101, is a combined dryer and thermal oxidizer unit which was manufactured by Stork Contiweb. This natural gas fired dryer reaches temperatures of approximately 500°F to drive off the solvents (ink, fountain solution, and blanket wash) on the web of printing press 7P before the ink is set. E2 acts as a dryer for Press 7P as well as a control device for incineration of VOCs.

E. Langbein Engelbracht America Regenerative Thermal Oxidizer (L&E RTO)

The L&E RTO was installed in 2003 to replace the Ka-Tec Thermal Oxidizer (Ka-Tec TO). The Ka-Tec TO is still permitted for use as a back-up control device.

The L&E RTO is used to control VOCs from printing presses 2P-5P. The L&E RTO uses a regenerative heat exchanger to capture energy used during the thermal oxidation process and return it to the incoming process exhaust. Therefore, this unit uses less energy to complete the oxidation process than tradition thermal oxidizers.

The L&E RTO shall maintain a minimum destruction efficiency of 99%. Therefore, the L&E RTO shall be operated with a set temperature of at least 1500°F and the temperatures at the exits of Chamber One and Chamber Two shall not fall below 1350°F. The retention time above the minimum temperature shall be no less than 0.8 seconds.

Spencer’s previous NSR permit, A-38-70-E-A, required that the temperature in the combustion chamber of the L&E RTO be maintained above 1500°F (Condition 46.C). Spencer has demonstrated through stack testing that it is able to meet the 99% VOC destruction efficiency at 1350°F. Therefore, this requirement has been amended, per the requirements of MEDEP Chapter 115.

Compliance Assurance Monitoring

The L&E RTO is used to achieve compliance with a VOC emission limit from printing presses 2P-5P. Pre-control emissions from these units totals greater than 50 tons/year of VOC. Therefore, the L&E RTO is subject to 40 CFR Part 64, *Compliance Assurance Monitoring* (CAM). (§64.2)

Spencer was required to submit a CAM plan for the L&E RTO which provided a reasonable assurance of compliance with the VOC emission limits. The CAM plan monitoring approach for the L&E RTO includes the following:

	Indicator #1
Indicator	L&E RTO Combustion Chamber Exit Temperatures (T3.1 & T3.2)
General Criteria	
Measurement Method	Temperature is monitored with thermocouples.
Indicator Range	Temperature at the chamber exits are maintained above 1350°F. If the temperatures drops below this threshold, the system is shut down until the problem is identified and repairs are completed. The excursion is reported.
Performance Criteria	
Data Representativeness	Thermocouples installed at the chamber exit per manufacturer’s design. Thermocouples are accurate to within +/- 40°F.
QA/QC	Inspections of the RTO, including thermocouples, are performed by the manufacturer on an annual basis. Annual calibrations on the thermocouples are performed in accordance with manufacturer

	recommendations.
Monitoring Frequency	Temperatures are measured continuously.
Data Collection Procedure	Temperature is recorded continuously on a chart recorder with a minimum sensitivity of <10°F.
Averaging Period	none

The minimum combustion chamber exit temperature of 1350°F is based on stack testing which demonstrates that compliance with the VOC destruction efficiency will be achieved at this temperature.

The maximum design flow rate for the L&E RTO is 13,000 scfm. The total maximum flow rate from presses 2P-5P is 8,820 scfm. Therefore, monitoring flow rate as an additional indicator was determined not to be necessary since it is not possible for the presses to produce a flow rate which exceeds the designed capacity of the L&E RTO.

Streamlining

1. Opacity
 - a. MEDEP Chapter 101, Section 2(B)(f) contains an applicable opacity standard.
 - b. BPT establishes an applicable opacity standard. [BACT per A-38-70-E-A, 6/16/03]

Spencer accepts streamlining for the opacity standard. The BPT limit is the most stringent and is therefore the only opacity limit included in this license.

2. PM
 - a. MEDEP Chapter 103, Section 2(B)(1)(a) contains an applicable PM lb/MMBtu emission standard.
 - b. BPT establishes an applicable PM lb/MMBtu emission limit. [BACT per A-38-70-E-A, 6/16/03]

Spencer accepts streamlining for the PM lb/MMBtu emission limit. The BPT limit is the most stringent and is therefore the only PM lb/MMBtu limit included in this license.

- c. BPT establishes the only applicable PM lb/hr emission limit. [BACT per A-38-70-E-A, 6/16/03] **No streamlining requested.**
3. PM₁₀

BPT establishes the only applicable PM₁₀ lb/hr emission limit. [BACT per A-38-70-E-A, 6/16/03] **No streamlining requested.**

4. SO₂
BPT establishes the only applicable SO₂ lb/hr emission limit.
[BACT per A-38-70-E-A, 6/16/03] **No streamlining requested.**

5. NO_x
BPT establishes the only applicable NO_x lb/hr emission limit.
[BACT per A-38-70-E-A, 6/16/03] **No streamlining requested.**

6. CO
BPT establishes the only applicable CO lb/hr emission limit.
[BACT per A-38-70-E-A, 6/16/03] **No streamlining requested.**
7. VOC
BPT establishes the only applicable VOC lb/hr emission limit.
[BACT per A-38-70-E-A, 6/16/03] **No streamlining requested.**
8. HAP
BPT establishes the only applicable HAP lb/hr emission limit.
[BACT per A-38-70-E-A, 6/16/03] **No streamlining requested.**

Periodic Monitoring

Periodic monitoring shall consist of the following:

Item to be monitored	Record
temperature of L&E RTO combustion chamber	continuously

Spencer shall test the L&E RTO for VOC in accordance with 40 CFR Part 60, Appendix A, Method 25A by December 31, 2003 and every five years thereafter.

Based on best management practices and the type of fuel for which the L&E RTO was designed it is unlikely that it will exceed permitted emission limits. Therefore, periodic monitoring by the source for opacity, PM, SO₂, NO_x, and CO is not required. However, neither the EPA nor the State is precluded from requesting Spencer to perform testing and may take enforcement action for any violations discovered.

Parameter Monitors

There are no Parameter Monitors required for the L&E RTO.

F. Ka-Tec, Thermal Oxidizer:

The Ka-Tec TVA 800 Series, thermal oxidizer is used as a back-up control of VOCs from printing presses 2P-5P. The Ka-Tec thermal oxidizer was manufactured in 1985 and installed in 1991.

The Ka-Tec combustion system uses cleaned exhaust gases that have been subject to 1,300-1,400°F for 0.7 seconds to preheat the incoming press and dryer emissions. The system then subjects the press and dryer emissions to a turbulent mixing zone and a sufficient retention time at elevated temperatures in order to achieve destruction efficiencies of 98% or greater.

To ensure a minimum destruction efficiency of 98%, the combustion chamber shall maintain a temperature of at least 1,400°F when in use. This temperature shall be monitored during periods of operation with a thermocouple equipped with a continuous chart recorder in the thermal combustion system at the combustion chamber exit. The thermocouple shall not be in direct contact with the auxiliary burner flame.

Compliance Assurance Monitoring

The Ka-Tec TO is used as back up control to achieve compliance with a VOC emission limit from printing presses 2P-5P. Pre-control emissions from these units totals greater than 50 tons/year of VOC. Therefore, the L&E RTO is subject to 40 CFR Part 64, *Compliance Assurance Monitoring (CAM)*. (§64.2)

Spencer was required to submit a CAM plan for the Ka-Tec TO which provided a reasonable assurance of compliance with VOC emission limits. The CAM plan monitoring approach for the Ka-Tec TO includes the following:

	Indicator #1
Indicator	Ka-Tec TO Combustion Chamber Temperature
General Criteria	
Measurement Method	Temperature is monitored with thermocouples.
Indicator Range	Temperatures are maintained above 1400°F. If the temperature drops below this threshold, the system is shut down until the problem is identified and repairs are completed. The excursion is reported.
Performance Criteria	
Data Representativeness	Thermocouples installed at the chamber exit per manufacturer's design. Thermocouples are accurate to within +/- 40°F.
QA/QC	Annual calibrations on the thermocouples are performed in accordance with manufacturer recommendations.
Monitoring Frequency	Temperatures are measured continuously.
Data Collection Procedure	Temperature is recorded continuously on a chart recorder with a minimum sensitivity of <10°F.
Averaging Period	none

The maximum design flow rate for the Ka-Tec TO is 13,685 scfm. The total maximum flow rate from presses 2P-5P is 8,820 scfm. Therefore, monitoring flow rate as an additional indicator was determined not to be necessary since it is not possible for the presses to produce a flow rate which exceeds the designed capacity of the Ka-Tec TO.

Streamlining

1. Opacity
 - a. MEDEP Chapter 101, Section 2(B)(f) contains an applicable opacity standard.
 - b. BPT establishes an applicable opacity standard. [BACT per A-38-74-A-N, 8/29/90]

Spencer accepts streamlining for the opacity standard. The BPT limit is the most stringent and is therefore the only opacity limit included in this license.

2. PM
 - a. MEDEP Chapter 103, Section 2(B)(1)(a) contains an applicable PM lb/MMBtu emission standard.
 - b. BPT establishes an applicable PM lb/MMBtu emission limit. [BPT per A-38-70-A-I, 11/16/99]

Spencer accepts streamlining for the PM lb/MMBtu emission limit. The BPT limit is the most stringent and is therefore the only PM lb/MMBtu limit included in this license.

- c. BPT establishes the only applicable PM lb/hr emission limit. [BPT per A-38-70-A-I, 11/16/99] **No streamlining requested.**
3. PM₁₀

BPT establishes the only applicable PM₁₀ lb/hr emission limit. [BPT per A-38-70-A-I, 11/16/99] **No streamlining requested.**
4. SO₂

BPT establishes the only applicable SO₂ lb/hr emission limit. [BPT per A-38-70-A-I, 11/16/99] **No streamlining requested.**
5. NO_x

BPT establishes the only applicable NO_x lb/hr emission limit. [BPT per A-38-70-A-I, 11/16/99] **No streamlining requested.**
6. CO
BPT establishes the only applicable CO lb/hr emission limit. [BPT per A-38-70-A-I, 11/16/99] **No streamlining requested.**
7. VOC
BPT establishes the only applicable VOC lb/hr emission limit. [BPT per A-38-70-A-I, 11/16/99] **No streamlining requested.**

8. HAP

BPT establishes the only applicable HAP lb/hr emission limit. [BPT per A-38-70-A-I, 11/16/99] **No streamlining requested.**

Periodic Monitoring

Periodic monitoring shall consist of the following:

Item to be monitored	Record
temperature of Ka-Tec RO combustion chamber	continuously

Spencer shall test the Ka-Tec TO for VOC in accordance with 40 CFR Part 60, Appendix A, Method 25A after each 730 days of accumulated operation.

Based on best management practices and the type of fuel for which the Ka-Tec TO was designed it is unlikely that it will exceed permitted emission limits. Therefore, periodic monitoring by the source for opacity, PM, SO₂, NO_x, and CO is not required. However, neither the EPA nor the State is precluded from requesting Spencer to perform testing and may take enforcement action for any violations discovered.

Parameter Monitors

There are no Parameter Monitors required for the Ka-Tec TO.

G. Dryer 6P/Ecotherm #1

The Dryer/Ecotherm #1 thermal oxidizer unit has two burners; each rated at 5.94 MMBtu/hr, for a combined total of 11.9 MMBtu/hr. The Ecotherm #1 is used to control VOCs from printing press 6P and dryer 6P. The Ecotherm #1 thermal oxidizer was manufactured and installed in 1994. The capture efficiency varies with raw material and the control efficiency is approximately 98%.

The Ecotherm #1 combustion system uses cleaned exhaust gases that have been subject to 1,300-1,400°F for 0.7 seconds to preheat the incoming press and dryer emissions. The system then subjects the press and dryer emissions to a turbulent mixing zone and a sufficient retention time at elevated temperatures in order to achieve destruction efficiencies of 98% or greater.

To ensure a minimum destruction efficiency of 98%, the combustion chamber shall maintain a temperature of at least 1,300°F. This temperature shall be monitored with a thermocouple equipped with a continuous chart recorder in the thermal combustion system at the combustion chamber exit. The thermocouple shall not be in direct contact with the auxiliary burner flame.

Compliance Assurance Monitoring

Ecotherm #1 is used to achieve compliance with a VOC emission limit from printing press 6P and dryer 6P. Pre-control emissions from these units totals greater than 50 tons/year of VOC. Therefore, Ecotherm #1 is subject to 40 CFR Part 64, *Compliance Assurance Monitoring* (CAM). (§64.2)

Spencer was required to submit a CAM plan for Ecotherm #1 which provided a reasonable assurance of compliance with VOC emission limits. The CAM plan monitoring approach for Ecotherm #1 includes the following:

	Indicator #1
Indicator	Ecotherm #1 Combustion Chamber Temperature
General Criteria	
Measurement Method	Temperature is monitored with thermocouples.
Indicator Range	Temperatures are maintained above 1300°F. If the temperature drops below this threshold, the system is shut down until the problem is identified and repairs are completed. The excursion is reported.
Performance Criteria	
Data Representativeness	Thermocouples installed at the chamber exit per manufacturer's design. Thermocouples are accurate to within +/- 40°F.
QA/QC	Annual calibrations on the thermocouples are performed in accordance with manufacturer recommendations.
Monitoring Frequency	Temperatures are measured continuously.
Data Collection Procedure	Temperature is recorded continuously on a chart recorder with a minimum sensitivity of <10°F.
Averaging Period	none

The dryer and thermal oxidizer (Ecotherm #1) for printing press 6P is a single unit designed specifically to meet the control needs of the press. Therefore, monitoring flow rate as an additional indicator was determined not to be necessary since it is not possible for the presses to produce a flow rate which exceeds the designed capacity of Ecotherm #1.

Streamlining

1. Opacity
 - a. MEDEP Chapter 101, Section 2(B)(f) contains an applicable opacity standard.
 - b. BPT establishes an applicable opacity standard. [BACT per A-38-74-D-A, 7/2/96]

Spencer accepts streamlining for the opacity standard. The BPT limit is the most stringent and is therefore the only opacity limit included in this license.

2. PM
 - a. MEDEP Chapter 103, Section 2(B)(1)(a) contains the only applicable PM lb/MMBtu emission standard. **No streamlining requested.**
 - b. BPT establishes the only applicable PM lb/hr emission limit. [BPT per A-38-71-E-A, 12/23/98] **No streamlining requested.**
3. PM₁₀

BPT establishes the only applicable PM₁₀ lb/hr emission limit. [BPT per A-38-71-E-A, 12/23/98] **No streamlining requested.**
4. SO₂

BPT establishes the only applicable SO₂ lb/hr emission limit. [BPT per A-38-71-E-A, 12/23/98] **No streamlining requested.**
5. NO_x

BPT establishes the only applicable NO_x lb/hr emission limit. [BPT per A-38-71-E-A, 12/23/98] **No streamlining requested.**
6. CO

BPT establishes the only applicable CO lb/hr emission limit. [BPT per A-38-71-E-A, 12/23/98] **No streamlining requested.**
7. VOC

BPT establishes the only applicable VOC lb/hr emission limit. [BPT per A-38-71-E-A, 12/23/98] **No streamlining requested.**
8. HAP

BPT establishes the only applicable HAP lb/hr emission limit. [BPT per A-38-71-E-A, 12/23/98] **No streamlining requested.**

Periodic Monitoring

Periodic monitoring shall consist of the following:

Item to be monitored	Record
temperature of Ecotherm #1 combustion chamber	continuously

Spencer shall test Ecotherm #1 for VOC in accordance with 40 CFR Part 60, Appendix A, Method 25A by December 31, 2003 and every five years thereafter.

Based on best management practices and the type of fuel for which Ecotherm #1 was designed it is unlikely that it will exceed permitted emission limits. Therefore, periodic monitoring by the source for opacity, PM, SO₂, NO_x, and CO is not required. However, neither the EPA nor the State is precluded from requesting Spencer to perform testing and may take enforcement action for any violations discovered.

Parameter Monitors

There are no Parameter Monitors required for Ecotherm #1.

H. Dryer 7P/Ecotherm #2

The Dryer/Ecotherm #2 thermal oxidizer unit has two burners; each rated at 5.94 MMBtu/hr, for a combined total of 11.9 MMBtu/hr. The Ecotherm #2 is used to control VOCs from printing press 7P and dryer 7P. The Ecotherm #2 thermal oxidizer was manufactured and installed in 1994. The capture efficiency varies with raw material and the control efficiency is approximately 98%.

The Ecotherm #2 combustion system uses cleaned exhaust gases that have been subject to 1,300-1,400°F for 0.7 seconds to preheat the incoming press and dryer emissions. The system then subjects the press and dryer emissions to a turbulent mixing zone and a sufficient retention time at elevated temperatures in order to achieve destruction efficiencies of 98% or greater.

To ensure a minimum destruction efficiency of 98%, the combustion chamber shall maintain a temperature of at least 1,300°F. This temperature shall be monitored with a thermocouple equipped with a continuous chart recorder in the thermal combustion system at the combustion chamber exit. The thermocouple shall not be in direct contact with the auxiliary burner flame.

Compliance Assurance Monitoring

Ecotherm #2 is used to achieve compliance with a VOC emission limit from printing press 7P and dryer 7P. Pre-control emissions from these units totals greater than 50 tons/year of VOC. Therefore, Ecotherm #2 is subject to 40 CFR Part 64, *Compliance Assurance Monitoring* (CAM). (§64.2)

Spencer was required to submit a CAM plan for Ecotherm #2 which provided a reasonable assurance of compliance with VOC emission limits. The CAM plan monitoring approach for Ecotherm #2 includes the following:

	Indicator #1
Indicator	Ecotherm #2 Combustion Chamber Temperature
General Criteria	
Measurement Method	Temperature is monitored with thermocouples.
Indicator Range	Temperatures are maintained above 1300°F. If the temperature drops below this threshold, the system is shut down until the problem is identified and repairs are completed. The excursion is reported.
Performance Criteria	
Data Representativeness	Thermocouples installed at the chamber exit per manufacturer's design. Thermocouples are accurate to within +/- 40°F.
QA/QC	Annual calibrations on the thermocouples are performed in accordance with manufacturer recommendations.
Monitoring Frequency	Temperatures are measured continuously.
Data Collection Procedure	Temperature is recorded continuously on a chart recorder with a minimum sensitivity of <10°F.
Averaging Period	none

The dryer and thermal oxidizer (Ecotherm #2) for printing press 7P is a single unit designed specifically to meet the control needs of the press. Therefore, monitoring flow rate as an additional indicator was determined not to be necessary since it is not possible for the presses to produce a flow rate which exceeds the designed capacity of Ecotherm #2.

Streamlining

1. Opacity
 - a. MEDEP Chapter 101, Section 2(B)(f) contains an applicable opacity standard.
 - b. BPT establishes an applicable opacity standard. [BACT per A-38-71-F-A, 1/19/99]

Spencer accepts streamlining for the opacity standard. The BPT limit is the most stringent and is therefore the only opacity limit included in this license.

2. PM
 - a. MEDEP Chapter 103, Section 2(B)(1)(a) contains the only applicable PM lb/MMBtu emission standard. **No streamlining requested.**

- b. BPT establishes the only applicable PM lb/hr emission limit.
[BACT per A-38-71-F-A, 1/19/99] **No streamlining requested.**

- 3. PM₁₀
BPT establishes the only applicable PM₁₀ lb/hr emission limit.
[BACT per A-38-71-F-A, 1/19/99] **No streamlining requested.**

- 4. SO₂
BPT establishes the only applicable SO₂ lb/hr emission limit.
[BACT per A-38-71-F-A, 1/19/99] **No streamlining requested.**

- 5. NO_x
BPT establishes the only applicable NO_x lb/hr emission limit.
[BACT per A-38-71-F-A, 1/19/99] **No streamlining requested.**

- 6. CO
BPT establishes the only applicable CO lb/hr emission limit.
[BACT per A-38-71-F-A, 1/19/99] **No streamlining requested.**

- 7. VOC
BPT establishes the only applicable VOC lb/hr emission limit.
[BACT per A-38-71-F-A, 1/19/99] **No streamlining requested.**

- 8. HAP
BPT establishes the only applicable HAP lb/hr emission limit.
[BACT per A-38-71-F-A, 1/19/99] **No streamlining requested.**

Periodic Monitoring

Periodic monitoring shall consist of the following:

Item to be monitored	Record
temperature of Ecotherm #2 combustion chamber	continuously

Spencer shall test Ecotherm #2 for VOC in accordance with 40 CFR Part 60, Appendix A, Method 25A by December 31, 2003 and every five years thereafter.

Based on best management practices and the type of fuel for which Ecotherm #2 was designed it is unlikely that it will exceed permitted emission limits. Therefore, periodic monitoring by the source for opacity, PM, SO₂, NO_x, and CO is not required. However, neither the EPA nor the State is precluded from requesting Spencer to perform testing and may take enforcement action for any violations discovered.

Parameter Monitors

There are no Parameter Monitors required for Ecotherm #2.

I. Inkjet Printers

Spencer operates several Cheshire Video Jet Printers. These printers are used to print mailing labels. The raw material used in each Cheshire Video Jet Printer is printed paper, ink, and wash. Emissions from the Cheshire Video Jet Printers are fugitive.

Spencer operates several Domino Ink Jet Printers. These printers are used to print mailing labels. The raw material used in each Domino Ink Jet Printer is printed paper, ink, and wash. Emissions from the Domino Ink Jet Printers are fugitive.

Periodic Monitoring

Periodic monitoring shall consist of record keeping which includes records of the total amount of each ink and wash used (12-month rolling total basis) and the VOC content of each.

Parameter Monitors

There are no Parameter Monitors required for the Inkjet Printers.

J. Safety Kleen Degreaser

The degreaser has a capacity of 15 gallons.

Periodic monitoring

Periodic monitoring for the degreaser units shall consist of recordkeeping which complies with MEDEP Chapter 130.

K. Facility Emissions

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

	PM	PM₁₀	SO₂	NO_x	CO	VOC	HAP
NG firing	15.6	15.6	0.1	12.6	10.6	0.7	-
L&E RTO	0.7	0.7	-	4.4	2.6	3.9	0.1
Ecotherm #1	6.2	6.2	0.1	5.1	4.3	10.4	0.1
Ecotherm #2	6.2	6.2	0.1	5.1	4.3	10.4	0.1
Ka-Tec TO	4.4	4.4	1.8	16.2	3.1	19.3	0.1
Inkjet Printer Ink	-	-	-	-	-	16.5	16.5
Inkjet Wash	-	-	-	-	-	5.0	5.0
Press Fugitives	-	-	-	-	-	42.9	6.1
Total TPY	33.1	33.1	2.1	43.4	24.9	109.1	28.0

Based on:

- Facility wide natural gas cap of 252.0 MM cft/yr
- 70% of the fountain solution flashes off in the dryer
- 40% of the machine applied blanket wash flashes off in the dryer
- 20% of the VOCs in the ink are retained in the substrate
- The remaining 80% of the VOCs in the ink flash off in the dryer
- 100% of the remaining VOCs and HAPs, that are not shipped off-site as hazardous waste, are emitted.

III. AIR QUALITY ANALYSIS

Spencer previously submitted an ambient air quality analysis demonstrating that emissions from the facility, in conjunction with all other sources, do not violate ambient air quality standards. An additional ambient air quality analysis is not required for this Part 70 License Renewal.

ORDER

Based on the above Findings and subject to conditions listed below, the Department concludes that emissions from this sources:

- will receive Best Practical Treatment;
- will not violate applicable emissions standards
- will not violate applicable ambient air quality standards in conjunction with emissions from other sources.

The Department hereby grants the Part 70 License A-38-70-F-R pursuant to MEDEP Chapter 140 and the preconstruction permitting requirements of MEDEP Chapter 115 and subject to the standard and special conditions below.

All federally enforceable and State-only enforceable conditions in existing air licenses previously issued to Spencer pursuant to the Department's preconstruction permitting requirements in Chapters 108 or 115 have been incorporated into this Part 70 license, except for such conditions that MEDEP has determined are obsolete, extraneous or otherwise environmentally insignificant, as explained in the findings of fact accompanying this permit.

Federally enforceable conditions in this Part 70 license must be changed pursuant to the applicable requirements in Chapter 115 for making such changes and pursuant to the applicable requirements in Chapter 140.

For each standard and special condition which is state enforceable only, state-only enforceability is designated with the following statement: **Enforceable by State-only.**

STANDARD STATEMENTS

- (1) 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 140]
- (2) The Part 70 license does not convey any property rights of any sort, or any exclusive privilege; [MEDEP Chapter 140]
- (3) All terms and conditions are enforceable by EPA and citizens under the CAA unless specifically designated as state enforceable. [MEDEP Chapter 140]

- (4) 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 140]
- (5) Notwithstanding any other provision 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 140]
- (6) Compliance with the conditions of this Part 70 license shall be deemed compliance with any Applicable requirement as of the date of license issuance and is deemed a permit shield, provided that:
 - A. Such Applicable and state requirements are included and are specifically identified in the Part 70 license, except where the Part 70 license term or condition is specifically identified as not having a permit shield; or
 - B. The Department, in acting on the Part 70 license application or revision, determines in writing that other requirements specifically identified are not applicable to the source, and the Part 70 license includes the determination or a concise summary, thereof.

Nothing in this section or any Part 70 license shall alter or effect the provisions of Section 303 of the CAA (emergency orders), including the authority of EPA under Section 303; the liability of an owner or operator of a source for any violation of Applicable requirements prior to or at the time of permit issuance; or the ability of EPA to obtain information from a source pursuant to Section 114 of the CAA.

The following requirements have been specifically identified as not applicable based upon information submitted by the licensee in an application dated February 27, 2004.

	SOURCE	CITATION	DESCRIPTION	BASIS FOR DETERMINATION
A	Facility	MEDEP Chapter 104	Incinerator Particulate Emission Standard	The L&E RTO, Ka-Tec TO, and Ecotherm #1 and #2 are not considered incinerators.
B	Facility	MEDEP Chapter 123	Paper Coating Regulation	Facility does not have a paper coater.
C	Facility	MEDEP Chapter 132	Graphic Arts-Rotogravure and Flexography	Facility does not conduct rotogravure or flexographic printing
D	Facility	MEDEP Chapter 134	VOC RACT	Facility wide potential VOC emissions do not equal or exceed 40 TPY, excluding exempted equipment and processes. VOC emissions are BACT as specified in the following license amendments: A-38-74-D-A, A-38-71-E-A, A-38-71-F-A
E	Facility	40 CFR Part 63, Subpart KK	Printing and Publishing MACT	No applicable sources at this facility
F	Facility	40 CFR Part 63, Subpart JJJ	Paper and Other Web Coating MACT	No applicable sources at this facility

[MEDEP Chapter 140]

- (7) The Part 70 license shall be reopened for cause by the Department or EPA, prior to the expiration of the Part 70 license, if:
- A. Additional Applicable requirements under the CAA become applicable to a Part 70 major source with a remaining Part 70 license term of 3 or more years. However, no opening is required if the effective date of the requirement is later than the date on which the Part 70 license is due to expire, unless the original Part 70 license or any of its terms and conditions has been extended pursuant to Chapter 140;
 - B. Additional requirements (including excess emissions requirements) become applicable to a Title IV source under the acid rain program. Upon approval by EPA, excess emissions offset plans shall be deemed to be incorporated into the Part 70 license;

- C. The Department or EPA determines that the Part 70 license contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the Part 70 license; or
- D. The Department or EPA determines that the Part 70 license must be revised or revoked to assure compliance with the Applicable requirements.

The licensee shall furnish to the Department within a reasonable time any information that the Department may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the Part 70 license or to determine compliance with the Part 70 license.

[MEDEP Chapter 140]

- (8) No license revision or amendment shall be required, under any approved economic incentives, marketable licenses, emissions trading and other similar programs or processes for changes that are provided for in the Part 70 license. [MEDEP Chapter 140]

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 and this license (Title 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 140; [MEDEP Chapter 140]
- (3) 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 140]
Enforceable by State-only
- (4) The licensee shall pay the annual air emission license fee to the Department, calculated pursuant to Title 38 MRSA §353.

- (5) The licensee shall maintain and operate all emission units and air pollution control systems required by the air emission license in a manner consistent with good air pollution control practice for minimizing emissions; [MEDEP Chapter 140]
Enforceable by State-only
- (6) The licensee shall retain records of all required monitoring data and support information for a period of at least six (6) years from the date of the monitoring sample, measurement, report, or application. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by the Part 70 license. The records shall be submitted to the Department upon written request or in accordance with other provisions of this license; [MEDEP Chapter 140]
- (7) The licensee shall comply with all terms and conditions of the air emission license. The submission of notice of intent to reopen for cause by the Department, 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 the renewal of a Part 70 license or amendment shall not stay any condition of the Part 70 license. [MEDEP Chapter 140]
- (8) 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 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;
 - 2. to demonstrate compliance with the applicable emission standards; or
 - 3. 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 140]
Enforceable by State-only

- (9) If the results of a stack test performed under circumstances representative of the facility's normal process and operating conditions indicates 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 140]

Enforceable by State-only

- (10) The licensee shall maintain records of all deviations from license requirements. Such deviations shall include, but are not limited to malfunctions, failures, downtime, and any other similar change in operation of air pollution control systems or the emission unit itself that is not consistent with the terms and conditions of the air emission license.
- A. The licensee shall notify the Commissioner within 48 hours of a violation of any emission standard and/or a malfunction or breakdown in any component part that causes a violation of any emission standard, and shall report the probable cause, corrective action, and any excess emissions in the units of the applicable emission limitation;
 - B. The licensee shall submit a report to the Department on a quarterly basis if a malfunction or breakdown in any component part causes a violation of any emission standard, together with any exemption requests.

Pursuant to 38 MRS § 349(9), the Commissioner may exempt from civil penalty an air emission in excess of license limitations if the emission occurs during start-up or shutdown or results exclusively from an unavoidable malfunction entirely beyond the control of the licensee and the licensee has

taken all reasonable steps to minimize or prevent any emission and takes corrective action as soon as possible. There may be no exemption if the malfunction is caused, entirely or in part, by poor maintenance, careless operation, poor design or any other reasonably preventable condition or preventable equipment breakdown. The burden of proof is on the licensee seeking the exemption under this subsection.

- C. All other deviations shall be reported to the Department in the facility's semiannual report.
[MEDEP Chapter 140]
- (11) Upon the written request of 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 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 140]
- (12) The licensee shall submit semiannual reports of any required periodic monitoring. All instances of deviations from Part 70 license requirements must be clearly identified in such reports. All required reports must be certified by a responsible official. [MEDEP Chapter 140]
- (13) The licensee shall submit a compliance certification to the Department and EPA at least annually, or more frequently if specified in the applicable requirement or by the Department. The compliance certification shall include the following:
- (a) The identification of each term or condition of the Part 70 license that is the basis of the certification;
 - (b) The compliance status;
 - (c) Whether compliance was continuous or intermittent;
 - (d) The method(s) used for determining the compliance status of the source, currently and over the reporting period; and
 - (e) Such other facts as the Department may require to determine the compliance status of the source;
- [MEDEP Chapter 140]

SPECIAL CONDITIONS

- (14) **Boiler #1**
- A. Spencer shall fire only natural gas in Boiler #1. [MEDEP Chapter 140, BPT]
Enforceable by State-only

B. Emissions from Boiler #1 shall not exceed the following limits:

Pollutant	Lb/MMBtu	Origin and Authority	Enforceability
PM	0.12	MEDEP, Chapter 103, Section 2(B)(1)(a)	-

Pollutant	lb/hr	Origin and Authority	Enforceability
PM	0.6	A-38-74-A-N (8/29/90), BPT	Enforceable by State-only
PM ₁₀	0.6	A-38-74-A-N (8/29/90), BPT	Enforceable by State-only
SO ₂	0.01	A-38-74-A-N (8/29/90), BPT	Enforceable by State-only
NO _x	1.1	A-38-74-A-N (8/29/90), BPT	Enforceable by State-only
CO	0.96	A-38-74-A-N (8/29/90), BPT	Enforceable by State-only
VOC	0.06	A-38-74-A-N (8/29/90), BPT	Enforceable by State-only

C. Spencer shall operate Boiler #1 such that the visible emissions from the stack do not exceed 10% opacity on a six (6) minute block average basis, for more than one (1) six (6) minute block average in a 3-hour period. [MEDEP Chapter 101]

(15) **Air Rotation Unit (1H)**

A. Spencer shall fire only natural gas in 1H. [MEDEP Chapter 140, BPT]
Enforceable by State-only

B. Emissions from 1H shall not exceed the following limits:

Pollutant	Lb/MMBtu	Origin and Authority	Enforceability
PM	0.12	MEDEP, Chapter 103, Section 2(B)(1)(a)	Federally Enforceable

Pollutant	lb/hr	Origin and Authority	Enforceability
PM	0.47	A-38-71-F-A (1/19/99), BACT	Federally Enforceable
PM ₁₀	0.47	A-38-71-F-A (1/19/99), BACT	Federally Enforceable
SO ₂	0.01	A-38-71-F-A (1/19/99), BACT	Federally Enforceable
NO _x	0.38	A-38-71-F-A (1/19/99), BACT	Federally Enforceable
CO	0.32	A-38-71-F-A (1/19/99), BACT	Federally Enforceable
VOC	0.02	A-38-71-F-A (1/19/99), BACT	Federally Enforceable

C. Facility shall operate 1H such that the visible emissions from the stack do not exceed 10% opacity on a six (6) minute block average basis. [A-38-71-F-A (1/19/99), BACT]

(16) **Presses 2P, 3P, 4P, 5P, 6P, and 7P**

- A. Spencer is licensed to operate Presses 2P, 3P, 4P, 5P, 6P, and 7P and the associated dryers. [MEDEP Chapter 140, BPT]
- B. Spencer shall fire only natural gas or propane in the dryers, the L&E RTO, Ecotherm #1, Ecotherm #2, and the Ka-Tec TO. [MEDEP Chapter 140, BPT]
Enforceable by State-only
- C. Whenever Presses 2P, 3P, 4P, and 5P are in operation, the L&E RTO shall be operated. In the event the L&E RTO is not operational, the Ka-Tec TO shall be in operation. [A-38-70-E-A (1/16/03), BACT]
- D. Emissions from the L&E RTO shall not exceed the following limits:

Pollutant	Lb/MMBtu	Origin and Authority	Enforceability
PM	0.05	A-38-70-E-A (1/16/03), BACT	Federally Enforceable

Pollutant	lb/hr	Origin and Authority	Enforceability
PM	0.15	A-38-70-E-A (1/16/03), BACT	Federally Enforceable
PM ₁₀	0.15	A-38-70-E-A (1/16/03), BACT	Federally Enforceable
SO ₂	0.01	A-38-70-E-A (1/16/03), BACT	Federally Enforceable
NO _x	1.00	A-38-70-E-A (1/16/03), BACT	Federally Enforceable
CO	0.60	A-38-70-E-A (1/16/03), BACT	Federally Enforceable
VOC	0.90	A-38-70-E-A (1/16/03), BACT	Federally Enforceable
HAP	0.03	A-38-70-E-A (1/16/03), BACT	Federally Enforceable

- E. The L&E RTO shall achieve 99% destruction of VOCs from the dryers of Presses 2P, 3P, 4P, and 5P. [A-38-70-E-A (1/16/03), BACT]
- F. Compliance with the destruction efficiency shall be demonstrated by stack testing in accordance with 40 CFR Part 60, Appendix A, Method 25A every five years. [A-38-70-E-A (1/16/03), BACT]
- G. The L&E RTO shall maintain a temperature of at least 1350°F for a minimum of 0.8 seconds. Compliance shall be demonstrated by thermocouples (that shall not be in direct contact with the auxiliary burner flame) maintained at the incinerator chamber exits. The temperature shall be recorded continuously. [MEDEP Chapter 140, BPT]

H. Spencer shall operate the L&E RTO such that the visible emissions from the stack do not exceed 10% opacity on a six (6) minute block average basis. [A-38-70-E-A (1/16/03), BACT]

I. Emissions from the Ka-Tec TO shall not exceed the following limits:

Pollutant	Lb/MMBtu	Origin and Authority	Enforceability
PM	0.18	A-38-70-A-I (11/16/99), BPT	Federally Enforceable

Pollutant	lb/hr	Origin and Authority	Enforceability
PM	1.0	A-38-70-A-I (11/16/99), BPT	Enforceable by State-only
PM ₁₀	1.0	A-38-70-A-I (11/16/99), BPT	Enforceable by State-only
SO ₂	0.4	A-38-70-A-I (11/16/99), BPT	Enforceable by State-only
NO _x	3.7	A-38-70-A-I (11/16/99), BPT	Enforceable by State-only
CO	0.7	A-38-70-A-I (11/16/99), BPT	Enforceable by State-only
VOC	4.4	A-38-70-A-I (11/16/99), BPT	Enforceable by State-only
HAP	0.03	A-38-70-A-I (11/16/99), BPT	Enforceable by State-only

J. The Ka-Tec TO shall achieve 98% destruction of VOCs from the dryers of Presses 2P, 3P, 4P, and 5P. [A-38-74-A-N (8/29/90), BPT]

K. After each 730 days of operation, Spencer shall stack test the Ka-Tec TO to demonstrate compliance with the VOC emission limit. Stack testing shall be performed in accordance with 40 CFR Part 60, Appendix A, Method 25A. Spencer shall maintain a log documenting the days the Ka-Tec TO is operated. Partial days of operation shall be counted as a whole day. [A-38-70-E-A (1/16/03), BPT]

L. The Ka-Tec TO shall maintain a temperature of at least 1400°F for a minimum of 0.7 seconds. Compliance shall be demonstrated by a thermocouple (that shall not be in direct contact with the auxiliary burner flame) maintained at the incinerator chamber exit. The temperature shall be recorded continuously. [MEDEP Chapter 140, BPT]

M. Spencer shall operate the Ka-Tec TO such that the visible emissions from the stack do not exceed 10% opacity on a six (6) minute block average basis. [A-38-74-A-N (8/29/90), BPT]

N. Whenever Press 6P is in operation, Ecotherm #1 shall be operated. [A-38-71-E-A (12/23/98), BPT]

O. Emissions from Ecotherm #1 shall not exceed the following limits:

Pollutant	Lb/MMBtu	Origin and Authority	Enforceability
PM	0.12	MEDEP Chapter 103, §(2)(B)(1)(a)	Federally Enforceable

Pollutant	lb/hr	Origin and Authority	Enforceability
PM	1.42	A-38-71-E-A (12/23/98), BPT	Enforceable by State-only
PM ₁₀	1.42	A-38-71-E-A (12/23/98), BPT	Enforceable by State-only
SO ₂	0.02	A-38-71-E-A (12/23/98), BPT	Enforceable by State-only
NO _x	1.16	A-38-71-E-A (12/23/98), BPT	Enforceable by State-only
CO	0.98	A-38-71-E-A (12/23/98), BPT	Enforceable by State-only
VOC	2.38	A-38-71-E-A (12/23/98), BPT	Enforceable by State-only
HAP	0.02	A-38-71-E-A (12/23/98), BPT	Enforceable by State-only

P. Ecotherm #1 shall achieve 98% destruction of VOCs from 6P.
 [A-38-74-D-A (7/1/96), BACT]

Q. Compliance with the destruction efficiency shall be demonstrated by stack testing in accordance with 40 CFR Part 60, Appendix A, Method 25A by December 31, 2003 and every five years thereafter.
 [A-38-70-A-I (11/16/99), BPT]

R. Ecotherm #1 shall maintain a temperature of at least 1300°F for a minimum of 0.7 seconds. Compliance shall be demonstrated by a thermocouple (that shall not be in direct contact with the auxiliary burner flame) maintained at the incinerator chamber exit. The temperature shall be recorded continuously.
 [A-38-74-D-A (7/1/96), BACT]

S. Spencer shall operate Ecotherm #1 such that the visible emissions from the stack do not exceed 10% opacity on a six (6) minute block average basis.
 [A-38-74-D-A (7/1/96), BACT]

T. Whenever Press 7P is in operation, Ecotherm #2 shall be operated.
 [A-38-71-F-A (1/19/99), BACT]

U. Emissions from Ecotherm #2 shall not exceed the following limits
 [A-38-71-F-A]:

Pollutant	Lb/MMBtu	Origin and Authority	Enforceability
PM	0.12	MEDEP Chapter 103, §(2)(B)(1)(a)	Federally Enforceable

Pollutant	lb/hr	Origin and Authority	Enforceability
PM	1.42	A-38-71-F-A (1/19/99), BACT	Federally Enforceable
PM ₁₀	1.42	A-38-71-F-A (1/19/99), BACT	Federally Enforceable
SO ₂	0.02	A-38-71-F-A (1/19/99), BACT	Federally Enforceable
NO _x	1.16	A-38-71-F-A (1/19/99), BACT	Federally Enforceable
CO	0.98	A-38-71-F-A (1/19/99), BACT	Federally Enforceable
VOC	2.38	A-38-71-F-A (1/19/99), BACT	Federally Enforceable
HAP	0.02	A-38-71-F-A (1/19/99), BACT	Federally Enforceable

V. Ecotherm #2 shall achieve 98% destruction of VOCs from 7P. [A-38-71-F-A (1/19/99), BACT]

W. Compliance with the destruction efficiency shall be demonstrated by stack testing in accordance with 40 CFR Part 60, Appendix A, Method 25A by December 31, 2003 and every five years thereafter. [A-38-70-A-I (11/16/99), BPT]

X. Ecotherm #2 shall maintain a temperature of at least 1300°F for a minimum of 0.7 seconds. Compliance shall be demonstrated by a thermocouple (that shall not be in direct contact with the auxiliary burner flame) maintained at the incinerator chamber exit. The temperature shall be recorded continuously. [A-38-71-F-A (1/19/99), BACT]

Y. Spencer shall operate Ecotherm #2 such that the visible emissions from the stack do not exceed 10% opacity on a six (6) minute block average basis. [A-38-71-F-A (1/19/99), BACT]

(17) **Facility Fuel Use Cap**

Spencer shall not exceed a facility wide natural gas fuel usage of 252 MMft³/year, based on a 12 month rolling total. Spencer shall maintain records of natural gas use indicating the quantity of fuel consumed, demonstrated by purchase records from the supplier, and the heat content of the fuel combusted. [A-38-71-F-A (1/19/99), BPT]

(18) **Domino Ink Jet Printers and Cheshire Video Jet Printers**

A. VOC emissions from the inkjet printer ink shall not exceed 16.5 tons/year (12 month rolling total). Compliance shall be demonstrated by record keeping including total ink usage and VOC content. [A-38-70-A-I (11/16/99), BPT]

B. Total HAP emissions from the inkjet printer ink shall not exceed 16.5 tons/year (12 month rolling total). Compliance shall be demonstrated by

record keeping including total ink usage and HAP content. [A-38-70-A-I (11/16/99), BPT]

- C. VOC emissions from the inkjet printer wash shall not exceed 5.0 tons/year (12 month rolling total). Compliance shall be demonstrated by record keeping including total wash usage and VOC content. [A-38-70-A-I (11/16/99), BPT]
- D. Total HAP emissions from the inkjet printer wash shall not exceed 5.0 tons/year (12 month rolling total). Compliance shall be demonstrated by record keeping including total wash usage and HAP content. [A-38-70-A-I (11/16/99), BPT]

(19) **Assumptions**

When calculating the annual facility emissions, the following assumptions shall be made [Based on the September 1993, *Control of Volatile Organic Compound Emissions from Offset Lithographic Printing Draft Control Techniques Guideline (CTG)* and the June 1994, *Alternative Control Techniques Document (ACT) for Offset Lithographic Printing*] [A-38-71-F-A (1/19/99), BACT]:

1. 70% of the fountain solution flashes off in the dryer.
2. 40% of the machine applied blanket wash flashes off in the dryer.
3. 20% of the VOCs in the ink are retained in the substrate.
4. The remaining 80% of the VOCs in the ink flash off in the dryer.
5. 100% of the remaining VOCs and HAPs, that are not shipped off-site as hazardous waste, are emitted.

(20) **Facility VOC/HAP Limits**

- A. Spencer shall not exceed a facility wide emission limit of 109.1 tons per year of VOC based on a 12 month rolling total. [A-38-70-A-I (11/16/99), BPT]
- B. Spencer shall not exceed a facility wide emission limit of 28.0 tons per year of HAP, based on a 12 month rolling total. [A-38-70-A-I (11/16/99), BPT]

(21) **Parts Washer**

Spencer shall keep records and operate the parts washer as required by MEDEP Chapter 130.

(22) **Monitoring and Recordkeeping Requirements**

A. The following are identified as Periodic Monitoring [MEDEP Chapter 140]:

1. Hours of operation for Boiler #1.
2. Facility natural gas fuel use.
3. Temperature in the combustion chamber for L&E RTO, Ka-Tec TO, Ecotherm #1, and Ecotherm #2.
4. Days of operation for the Ka-Tec TO.
5. Amount of ink and wash used in the inkjet/video jet printers.
6. VOC and HAP content of ink and wash used in the inkjet/video jet printers (example: MSDS sheets).
7. Record keeping as required by MEDEP Chapter 130 for the parts washer.

B. The following are identified as CAM monitors [40 CFR 64]:

1. Temperature in the combustion chamber for L&E RTO, Ka-Tec TO, Ecotherm #1, and Ecotherm #2

(23) **Compliance Assurance Monitoring**

A. VOC CAM for the L&E RTO [40 CFR Part 64]

Condition	Indicator #1 L&E RTO Combustion Chamber Exit Temperatures
1. Measurement Method	Spencer shall monitor the L&E RTO combustion chamber exit temperatures (T3.1 and T3.2) with thermocouples.
2. Indicator Range	The L&E RTO combustion chamber temperatures shall be maintained above 1350°F. If the temperature drops below this threshold, it is considered an excursion and the system is shut down until the problem is identified and repairs are completed. The excursion is reported.
3. Data Representativeness	The thermocouples shall be installed in the combustion chamber per manufacturer's design. Thermocouples shall be accurate within $\pm 40^\circ\text{F}$.
4. QA/QC	Annual calibrations on the thermocouples shall be performed in accordance with manufacturer recommendations.
5. Monitoring Frequency	Spencer shall measure the L&E RTO combustion chamber exit temperatures continuously.
6. Data Collection Procedure	Temperature is recorded continuously on a chart recorder with a minimum sensitivity of $< 10^\circ\text{F}$.
7. Averaging Period	none

B. VOC CAM for the Ka-Tec TO [40 CFR Part 64]

Condition	Indicator #1 Ka-Tec TO Combustion Chamber Temperature
1. Measurement Method	Spencer shall monitor the Ka-Tec TO combustion chamber temperature with thermocouples.
2. Indicator Range	The Ka-Tec TO combustion chamber temperature shall be maintained above 1400°F. If the temperature drops below this threshold, it is considered an excursion and the system is shut down until the problem is identified and repairs are completed. The excursion is reported.
3. Data Representativeness	The thermocouples shall be installed in the combustion chamber per manufacturer's design. Thermocouples shall be accurate within ±40°F.
4. QA/QC	Annual calibrations on the thermocouples shall be performed in accordance with manufacturer recommendations.
5. Monitoring Frequency	Spencer shall measure Ka-Tec TO combustion chamber temperature continuously.
6. Data Collection Procedure	Spencer shall record Ka-Tec TO combustion chamber temperature continuously on a chart recorder with a minimum sensitivity of <10°F.
7. Averaging Period	none

C. VOC CAM for Ecotherm #1 [40 CFR Part 64]

Condition	Indicator #1 Ecotherm #1 Combustion Chamber Temperature
1. Measurement Method	Spencer shall monitor the Ecotherm #1 combustion chamber temperature with thermocouples.
2. Indicator Range	The Ecotherm #1 combustion chamber temperature shall be maintained above 1300°F. If the temperature drops below this threshold, it is considered an excursion and the system is shut down until the problem is identified and repairs are completed. The excursion is reported.
3. Data Representativeness	The thermocouples shall be installed in the combustion chamber per manufacturer's design. Thermocouples shall be accurate within ±40°F.
4. QA/QC	Annual calibrations on the thermocouples shall be performed in accordance with manufacturer recommendations.
5. Monitoring Frequency	Spencer shall measure Ecotherm #1 combustion chamber temperature continuously.
6. Data Collection Procedure	Spencer shall record Ecotherm #1 combustion chamber temperature continuously on a chart recorder with a minimum sensitivity of <10°F.
7. Averaging Period	none

D. VOC CAM for Ecotherm #2 [40 CFR Part 64]

Condition	Indicator #1 Ecotherm #2 Combustion Chamber Temperature
1. Measurement Method	Spencer shall monitor the Ecotherm #2 combustion chamber temperature with thermocouples.
2. Indicator Range	The Ecotherm #2 combustion chamber temperature shall be maintained above 1300°F. If the temperature drops below this threshold, it is considered an excursion and the system is shut down until the problem is identified and repairs are completed. The excursion is reported.
3. Data Representativeness	The thermocouples shall be installed in the combustion chamber per manufacturer's design. Thermocouples shall be accurate within ±40°F.
4. QA/QC	Annual calibrations on the thermocouples shall be performed in accordance with manufacturer recommendations.
5. Monitoring Frequency	Spencer shall measure Ecotherm #2 combustion chamber temperature continuously.
6. Data Collection Procedure	Spencer shall record Ecotherm #2 combustion chamber temperature continuously on a chart recorder with a minimum sensitivity of <10°F.
7. Averaging Period	none

- E. Spencer shall operate and monitor the L&E RTO, Ka-Tec TO, Ecotherm #1, and Ecotherm #2 within the ranges established by their CAM plan. Prior to making any changes to the approved CAM plan, Spencer shall notify the Department and, if necessary, submit a proposed modification to this permit to address the necessary monitoring changes. Such a modification may include, but is not limited to, reestablishing indicator ranges or designated conditions, modifying the frequency of conducting monitoring and collecting data, or the monitoring of additional parameters. [40 CFR 64.7.e]
- F. Upon detecting an excursion, Spencer shall restore normal operation of the control equipment as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. [40 CFR 64.7.d]
- G. In addition to the requirements of Standard Condition (10), any excursions shall be reported on semiannual reports. If excursions occur, Spencer must also certify intermittent compliance with the emission limits for the control device monitored on their annual compliance certification. [40 CFR 64]

(24) **Semiannual Reporting**

The licensee shall submit semiannual reports every six months to the Bureau of Air Quality. The semiannual reports are due on July 31st and Jan 31st of each year. The semiannual report shall be considered on-time if the postmark of the submittal is before the due date or if the report is received by the DEP within seven calendar days of the due date.

- A. Each semiannual report shall include a summary of the periodic monitoring required by this license.
- B. All instances of deviations from license requirements or excursions from the CAM plan and the corrective action taken must be clearly identified and provided to the Department in summary form for each six-month interval.

[MEDEP Chapter 140]

(25) **Annual Compliance Certification**

Spencer shall submit an annual compliance certification to the Department in accordance with Standard Condition (13) of this license. The annual compliance certification is due January 31 of each year.

The annual compliance certification shall be considered on-time if the postmark of the submittal is before the due date or if the report is received by the DEP within seven calendar days of the due date. Certification of compliance is to be based on the stack testing or monitoring data required by this license. Where the license does not require such data, or the license requires such data upon request of the Department and the Department has not requested the testing or monitoring, compliance may be certified based upon other reasonably available information such as the design of the equipment or applicable emission factors.

[MEDEP Chapter 140]

(26) **Annual Emission Statement**

In accordance with MEDEP Chapter 137, the licensee shall annually report to the Department the information necessary to accurately update the State's emission inventory by means of:

- A. A computer program and accompanying instructions supplied by the Department;
- or
- B. 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

The emission statement must be submitted as specified in Chapter 137.
[MEDEP Chapter 137]

(27) **Air Toxics Emissions Statement**

If Spencer exceeds the thresholds for HAPs listed in Appendix A of MEDEP Chapter 137 in an inventory year, in accordance with MEDEP Chapter 137 the licensee shall report, no later than July 1 every three years (2005, 2008, 2011, etc.) or as otherwise stated in Chapter 137, the information necessary to accurately update the State's toxic air pollutants emission inventory by means of a written emission statement containing the information required in MEDEP Chapter 137.

Reports and questions on the Air Toxics emissions inventory portion should be directed to:

Attn: Toxics Inventory Coordinator
Maine DEP
Bureau of Air Quality
17 State House Station
Augusta, ME 04333-0017
Phone: (207) 287-2437

The emission statement must be submitted as specified in Chapter 137.
[MEDEP Chapter 137]

(28) **General Applicable State Regulations**

The licensee is subject to the State regulations listed below.

<u>Origin and Authority</u>	<u>Requirement Summary</u>	<u>Enforceability</u>
Chapter 102	Open Burning	-
Chapter 109	Emergency Episode Regulation	-
Chapter 110	Ambient Air Quality Standard	-
Chapter 116	Prohibited Dispersion Techniques	-
38 M.R.S.A. §585-B, sub-§5	Mercury Emission Limit	Enforceable by State-only

(29) **Units Containing Ozone Depleting Substances**

When repairing or disposing of units containing ozone depleting substances, the licensee shall comply with the standards for recycling and emission reduction pursuant to 40 CFR Part 82, Subpart F, except as provided for motor vehicle air conditioning units in Subpart B. An example of such units include refrigerators and any size air conditioner that contain CFCs.

[40 CFR, Part 82, Subpart F]

(30) **Asbestos Abatement**

When undertaking Asbestos abatement activities, Spencer shall comply with the Standard for Asbestos Demolition and Renovation 40 CFR Part 61, Subpart M.

(31) **Certification by a Responsible Official**

All reports (including semiannual reports and annual compliance certifications) required by this license to be submitted to the Bureau of Air Quality must be signed by a responsible official. [MEDEP Chapter 140]

(32) **Annual Fee**

Spencer shall pay the annual air emission license fee within 30 days of August 31st of each year. Pursuant to 38 M.R.S.A 353-A, failure to pay this annual fee in the stated timeframe is sufficient grounds for revocation of the license under section 341-D, subsection 3.

DONE AND DATED IN AUGUSTA, MAINE THIS _____ DAY OF _____ 2005.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: _____
DAWN R. GALLAGHER, 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: 2/27/04

Date of application acceptance: 3/2/04

Date filed with the Board of Environmental Protection: _____

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