PAUL R. LEPAGE
GOVERNOR

PATRICIA W. AHO
COMMISSIONER

Huhtamaki, Inc.
Kennebec County
Waterville, Maine
A-416-70-G-A

Departmental
Findings of Fact and Order
Part 70 Air Emission License
Amendment #1

FINDINGS OF FACT

After review of the Part 70 License amendment 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, §344 and §590, the Maine Department of Environmental Protection (the Department) finds the following facts:

I. REGISTRATION

A. Introduction

FACILITY	Huhtamaki Inc.
LICENSE TYPE	Part 70 Minor License Modification
NAICS CODES	322299
NATURE OF BUSINESS	Converted Paper Product Manufacturing
FACILITY LOCATION	242 College Avenue, Waterville, Maine

Huhtamaki, Inc. (Huhtamaki) is a molded pulp products manufacturing facility consisting of fiber processing, forming, drying, and laminating operations, along with boilers and other associated equipment.

Huhtamaki has the potential to emit more than 100 tons per year (TPY) of sulfur dioxide (SO_2) and nitrogen oxides (NO_x); therefore, the source is a major source for criteria pollutants. Huhtamaki does not have the potential to emit more than 10 TPY of a single hazardous air pollutant (HAP) or more than 25 TPY of combined HAP; therefore, the source is an area source for HAP.

B. Amendment Description

This Part 70 license amendment is to incorporate subsequently issued New Source Review (NSR) licenses and/or amendments into the facility's Part 70 operating license.

C. Emission Equipment

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

Fuel Burning Equipment

Equipment	Max. Capacity (MMBtu/hr)	Maximum Firing Rate	Fuel Type, % sulfur	Year of Installation	Stack #
Boiler #2	32.6**	32 Mscf/hr +	natural gas	1959	1
	29.3	195.3 gal/hr	#6 fuel oil,* 1.7% S		
Boiler #3	32.6**	32 Mscf/hr +	natural gas	1950	
	29.3	195.3 gal/hr	#6 fuel oil,* 1.7% S		
Boiler #5	71.3**	69.9 Mscf/hr+	natural gas	1966	3
	64.8	432 gal/hr	#6 fuel oil,* 1.7% S		

+ based on 1020 BTU/scf, including a 10% increase due to lower fuel use efficiency for natural gas compared to fuel oil.

* Propane & diesel are used for start-up purposes. Specification waste oil is also mixed into the #6 fuel oil tank. Emissions from these supplemental fuels are accounted for in the #6 fuel oil emissions.

** The boilers are identified with higher MMBtu/hr capacities when firing natural gas to account for the lower fuel use efficiency for natural gas compared to fuel oil.

D. Application Classification

Pursuant to Section 1(C)(7) of 06-096 CMR 140, Huhtamaki has requested incorporation into their Part 70 Air License the relevant terms and conditions of the 06-096 CMR 115 New Source Review (NSR) license A-416-77-2-A issued September 19, 2012, and NSR license amendment A-416-77-3-M issued June 10, 2013.

A Part 70 Minor License Modification is for a license change that meets the following criteria:

- Does not violate any Applicable requirement;
- Does not involve a Part 70 Significant License Modification to existing monitoring, reporting, or recordkeeping requirements in the license;
- Does not require or change a case-by-case determination of an emission limitation or other standard, or a source-specific determination for temporary sources of ambient impact or a visibility or increment analysis;
- Does not seek to establish or change a Part 70 license term or condition for which there is no corresponding underlying Applicable requirement, and that the source has assumed to avoid an Applicable requirement to which the source would otherwise be subject. Such terms and conditions include a federally enforceable emissions cap assumed to avoid classification as a Title I modification or a modification or reconstruction under any provision of Section 111, or 112 of the Clean Air Act (CAA); and an alternative emissions

limit approved pursuant to regulations promulgated under section 112(i)(5) of the CAA;

- Is not a Title I modification or a modification or reconstruction under any provision of Section 111 or 112 of the CAA, and
- Is not required by the Department to be processed under Part 70 Significant License Modification procedures.

The request to add natural gas as a licensed fuel for Boilers #2 and #3 (per NSR license #2) is not a Part 70 Significant License Modification under 06-096 CMR 140, nor is the correction of inconsistencies in factors and calculations (per NSR #3). The facility is not proposing substantial changes to existing monitoring and testing requirements, nor is it proposing the relaxation of existing license conditions (definition of Part 70 Significant Modification). The burners and their oil firing components will not be replaced or modified as part of the project, and the heat output of either boiler will not increase.

The facility's request is classified as a Part 70 Minor License Modification and has been processed under *Part 70 Air Emission License Regulations*, 06-096 CMR 140 (as amended).

II. NEW SOURCE REVIEW DESCRIPTIONS AND EMISSION STANDARDS

A. New Source Review (NSR) License Descriptions

1. NSR License A-416-77-2-A

The Department issued NSR License A-416-77-2-A to Huhtamaki on September 19, 2012. The license was issued to include the use of natural gas (NG) as an alternative fuel in Boilers #2 and #3, from either liquefied natural gas (LNG) stored on site or from a natural gas pipeline system currently planned but not yet available in the area. The license was issued pursuant to federal NSR Prevention of Significant Deterioration (PSD) requirements and the Department's air licensing requirements for minor modifications at major stationary sources. Huhtamaki has modified equipment and processes, and had undergone the appropriate air licensing procedures to address these changes.

2. NSR License A-416-77-3-M

The Department issued NSR License Amendment A-416-77-3-M to Huhtamaki on June 10, 2013. This NSR license amendment was issued to amend the following inconsistencies in NSR licenses #1 and #2 previously issued to the facility:

a. The conversion factor used in NSR #1 to calculate emission rates and the natural gas fuel cap for Boiler #5 was inconsistent with the natural gas conversion factor used industry-wide.

b. The combined tons per year emissions calculated for assessing the annual license fee as contained in NSR license #2 were based on inaccurate assumptions of co-firing capabilities of the boilers and the licensed fuels for each.

These two inconsistencies were addressed and corrected in NSR #3.

B. Boilers #2 and #3

Huhtamaki operates Boilers #2 and #3 for steam and heat to support facility operations when Boiler #5 is offline or unable to meet production demands operating alone. Both of these boilers are Babcock and Wilcox boilers, Boiler #2 installed in 1959 and Boiler #3 installed in 1950. Each of these two boilers has a capacity of 29.3 MMBtu/hour firing No. 6 fuel oil, waste oil, propane, and diesel fuel at a maximum rate of 195.3 gallons/hour. These two boilers are also licensed to fire natural gas at a maximum rate of 32,000 standard cubic feet per hour (32 Mscf/hour) each, equivalent to an input capacity of 32.6 MMBtu/hour. Boilers #2 and #3 exhaust through a common stack, Stack #1, with an above ground level (AGL) height of 84 feet.

1. National Emissions Standards for Hazardous Air Pollutants (NESHAP)

Because Huhtamaki is an area source of hazardous air pollutants, boilers at the facility may be subject to the requirements of 40 CFR Part 63, Subpart JJJJJJ, *National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources*. Boilers #2 and #3 will not be subject to the requirements of this Subpart if they are operated as gas-fired boilers. [40 CFR §63.11195(e)] A gas-fired boiler is defined by this Subpart as follows:

> ...any boiler that burns gaseous fuels not combined with any solid fuels, burns liquid fuel only during periods of gas curtailment, gas supply emergencies, or periodic testing on liquid fuel. Periodic testing firing liquid fuel shall not exceed a combined total of 48 hours during any calendar year for each boiler. [40 CFR §63.11237]

Operation of either Boiler #2 or #3 outside of these parameters may trigger applicability of 40 CFR Part 63, Subpart JJJJJJ. Records shall be maintained to document operation of Boilers #2 and #3 as gas-fired boilers, as defined, or as otherwise in compliance with the applicable provisions of Subpart JJJJJJ.

2. Emission Limits

Emission rates for Boilers #2 and #3 firing No. 6 fuel oil and specification waste oil are as specified in license A-416-70-D-R (October 9, 2012) and have not been changed in this license amendment.

Emission rates for Boilers #2 and #3 firing natural gas are based on firing a combined total of 64,000 scf/hour of natural gas in these two boilers and the following factors:

PM – 7.6 lb/MMscf: AP-42, Table 1.4-2 (date 7/98)
PM_{10} – derived from PM limit
SO_2 – 0.6 lb/MMscf: AP-42, Table 1.4-2 (dated 7/98)
NO_x – 157.5 lb/MMscf: factor provided by burner vendor
CO – 84 lb/MMscf: AP-42, Table 1.4-1 (dated 7/98)
VOC – 5.5 lb/MMscf: AP-42, Table 1.4-2 (dated 7/98)
Opacity – 06-096 CMR 101

The Best Available Control Technology (BACT) emission limits, in lb/hour, for Boilers #2 and #3 firing natural gas are as follows:

Emissions Unit lb/hr:	PM	PM_{10}	SO_2	NO_x	CO	VOC
Boilers #2 and #3, combined emissions	0.48	0.48	0.04	10.08	5.38	0.35

Opacity - When operating either Boiler #2 or Boiler #3 and firing natural gas, visible emissions from Stack #1 shall not exceed 10% opacity on a six-minute block average basis, except for no more than one six-minute block average in a three-hour period. [06-096 CMR 101 (2)(B)(1)(c)]

When operating both Boiler #2 and Boiler #3 firing natural gas or any of these boilers firing fuel oil, visible emissions from Stack #1 shall not exceed 30% opacity on a six-minute block average basis, except for no more than three six-minute block averages in a three-hour block period. [06-096 CMR 101(2)(B)(5)(i)]

Huhtamaki shall be limited to a total of 553.6 MMscf/year of natural gas fired in Boilers #2 and #3.

3. Parameter Monitors

There are no parameter monitoring requirements associated with Boiler #2 or Boiler #3.

4. Periodic Monitoring

Periodic monitoring for Boilers #2 and #3 shall include recordkeeping for each boiler to document both fuel oil use and natural gas use both on a monthly and 12-month rolling total basis.

5. Continuous Emission Monitoring Systems (CEMS)

There are no requirements for CEMS in association with Boiler #2 or #3.

C. Conversion Factor Adjustment

An inconsistent factor for converting MMBtu to millions of standard cubic feet (MMscf) of natural gas was used to develop the NSR #1 license. A conversion factor of 1050 Btu/scf was used, rather than EPA's AP-42 standard conversion factor of 1020 Btu/scf. This resulted in a 3% negative error in calculating the natural gas fuel firing rate for Boiler #5 (Mscf/hr) and the natural gas fuel use cap for Boiler #5 (MMscf/year). The equivalent energy use is not affected. Therefore, the natural gas maximum firing rate for Boiler #5 is corrected to 69.9 Mscf/hr, and the annual fuel use cap for Boiler #5 is corrected to 503.2 MMscf/year rather than 488.8 MMscf/year as stated in the Part 70 license A-416-70-D-R (October 9, 2012).

Based on the natural gas firing rate of 69.9 Mscf/hr, Boiler #5 is licensed to fire natural gas at a maximum heat input of 71.3 MMBtu/hour. The lb/hr emission limits determined as BACT in NSR license A-416-77-1-A (March 23, 2012) shall not change as a result of this correction.

D. Facility Annual Emissions

1. Total Annual Emissions

For the purpose of calculating the combined tons per year of emissions in order to assess the annual licensing fee, several factors need to be considered, including the licensed annual fuel use caps, as follows:

- Boiler #5's use of #6 fuel oil is limited to 3,110,400 gallons/year, with fuel sulfur content not to exceed 1.7% by weight (as previously licensed).
- The facility-wide #6 fuel oil use is limited to 3.5 million gallons per year, with fuel sulfur content not to exceed 1.7% by weight (as previously licensed).
- Boiler #5's use of natural gas is limited to 503.2 MMscf/year (using the corrected conversion factor).

- The natural gas use in Boilers #2 and #3 combined is limited to 553.6 MMscf/year (as previously licensed).

Based on the existing lb/hour emission limits as specified in the current air emission license and emissions factors used for each fuel type in each boiler, the operating scenario for the facility which results in the highest emission levels is the following:

a. Boilers #2 and #3 fire #6 fuel oil continuously at their maximum rated capacities for 8760 hours/year (equal to 3,421,656 gallons);

b. Boiler #5 fires the oil remaining under the facility fuel use cap (equal to 78,344 gallons), since Boiler #2 and #3 are not physically capable of firing 3.5 million gallons of #6 fuel oil; and

c. Boiler #5 then fires natural gas up to its natural gas fuel use cap of 503.2 MMscf (after the annual fuel oil quantity is expended).

The resulting, facility-wide, worst-case annual emissions for the facility are presented in the table below and shall be the basis for calculation of the facility's annual licensing fee.

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

Units	PM	PM_{10}	SO_2	NO_x	CO	VOC
Boilers #2, #3, and #5, combined	41.6	41.6	466.1	157.6	30.2	3.7

2. Greenhouse Gases

Based on the facility's fuel use limits, the worst case emission factors from AP-42, IPCC (Intergovernmental Panel on Climate Change), and *Mandatory Greenhouse Gas Reporting*, 40 CFR Part 98, and the global warming potentials contained in 40 CFR Part 98, Huhtamaki is below the major source threshold of 100,000 tons of CO_2e per year.

III. AMBIENT AIR QUALITY ANALYSIS

Huhtamaki previously submitted an ambient air quality analysis, as part of Air Emission License A-416-70-A-I (January 14, 2002), 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 minor modification.

ORDER

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

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

The Department hereby grants the Part 70 License A-416-70-G-A pursuant to 06-096 CMR 140 and the preconstruction permitting requirements of 06-096 CMR 115, and subject to the conditions found in Air Emission License A-416-70-D-R, in amendment A-416-70-F-A, and 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.

SPECIFIC CONDITIONS

Upon issuance of this Part 70 air emission license amendment, the following Specific Condition (15) shall replace Specific Condition (15) of Air Emission License A-416-70-D-R (October 9, 2012).

(15) **Boilers #2 and #3**

A. **Operating Restrictions**

1. Huhtamaki is licensed to operate each boiler at a maximum design heat input capacity of 29.3 MMBtu/hour firing fuel oil and 32.6 MMBtu/hour firing natural gas. [06-096 CMR 140, BPT]

2. Huhtamaki is licensed to fire either No. 6 fuel oil or natural gas as the primary fuel in Boilers #2 and #3.

3. Natural gas use in Boilers #2 and #3 shall not exceed 553.6 MMscf/year. Compliance shall be demonstrated by fuel records from the supplier showing the quantity and type of the fuel used. Records of annual fuel use shall be kept on a monthly and 12-month rolling total basis. [06-096 CMR 115, BPT]

B. **Emission Limits**

1. Emissions from Boilers #2 and #3 shall not exceed the following limits:

Pollutant	lb/MMBtu	Origin and Authority
PM	0.15	06-096 CMR 140, BPT
PM_{10}		

2. Emissions from Boilers #2 and #3 shall not exceed the following limits when firing natural gas as the primary fuel in both boilers [A-416-77-2-A (September 19, 2012), BACT]:

Emission Unit lb/hr:	PM	PM_{10}	SO_2	NO_x	CO	VOC
Boilers #2 and #3, combined	0.48	0.48	0.04	10.08	5.38	0.35

3. Emissions from each boiler shall not exceed the following limits when firing fuel oil as the primary fuel:

Pollutant	lb/hr	Origin and Authority	Enforceability
PM	4.4	06-096 CMR 140, BPT	**Enforceable by State-only**
PM_{10}	4.4		
SO_2	52		
NO_X	13.2		
CO	1.0		
VOC	0.25		

C. **Compliance Testing** [06-096 CMR 140] **Enforceable by State-only**

Compliance with the emission limits listed above shall be demonstrated in accordance with the following methods or other methods as approved by the Department and in accordance with the following frequencies, unless otherwise directed by the Department:

Pollutant	Unit of Standard	Compliance Method	Frequency
PM	lb/MMBtu and lb/hr	40 CFR Part 60, App. A, Method 5	As requested
PM_{10}		40 CFR Part 60, App. A, Method 5 or EPA Test Method 201 or 201A	
SO_2	lb/hr	40 CFR Part 60, App. A, Method 6	
NO_X		40 CFR Part 60, App. A, Method 7	As requested
CO		40 CFR Part 60, App. A, Method 10	
VOC		40 CFR Part 60, App. A, Method 25 or 25A	

D. **Visible Emissions Limits**

1. When operating either Boiler #2 or Boiler #3 and firing natural gas, visible emissions from Stack #1 shall not exceed 10% opacity on a six-minute block average basis, except for no more than one six-minute block average in a three-hour period. [06-096 CMR 101 (2)(B)(1)(c)]

2. When operating both Boiler #2 and Boiler #3 firing natural gas or any combination of the two boilers firing fuel oil, visible emissions from Stack #1 shall not exceed 30% opacity on a six-minute block average basis, except for no more than three six-minute block averages in a three-hour block period. [06-096 CMR 101(2)(B)(5i)]

E. **Automated Boiler Controls**

To meet the intent of and as a substitute for an annual tune-up on each boiler as required in Section 3(L)(1) and (2) of 06-096 CMR 138, Huhtamaki shall utilize automated boiler controls on Boilers #2 and #3 in order to optimize operation of these boilers on a continuous basis due to the automatic adjustments made by the systems, and thereby minimize emissions of air pollutants. The utilization of automated boiler controls meets the intent of the annual tune-up and thus satisfies the requirement. [06-096 CMR 138 and 06-096 CMR 140, BPT]

The automated boiler controls shall be calibrated annually per the manufacturer's instructions or an alternate calibration method developed by Huhtamaki which meets the manufacturer's specifications. Documentation of the calibration of boiler controls shall be maintained by the facility and made available to the Department upon request. [06-096 CMR 140, BPT]

F. **Periodic Monitoring**

For Boilers #2 and #3, Huhtamaki shall monitor and record the amount of fuel oil fired and natural gas fired in each boiler on both a monthly and a 12-month rolling total basis. [06-096 CMR 140, BPT]

G. **NESHAPs Compliance**

Records shall be maintained to document Boilers #2 and #3 as natural gas fired boilers, as defined at 40 CFR § 63.11237, or the facility shall comply with the applicable requirements of 40 CFR Part 63, Subpart JJJJJJ.

Upon issuance of this Part 70 air emission license amendment, the following Specific Condition (16), Part A shall replace Specific Condition (16), Part A of Air Emission License A-416-70-D-R (October 9, 2012).

(16) **Boiler No. 5**

A. **Operating Restrictions**

1. Huhtamaki is licensed to operate Boiler No. 5 at a maximum design heat input capacity of 64.8 MMBtu/hour firing fuel oil and 71.3 MMBtu/hour firing natural gas.

2. Huhtamaki is licensed to fire either #6 fuel oil or natural gas as the primary fuel in Boiler No. 5.

3. Natural gas use in Boiler No. 5 shall not exceed 503.2 MMscf/year. Compliance shall be demonstrated by fuel records from the supplier showing the quantity and type of the fuel used. Records of annual fuel use shall be kept on a monthly and 12-month rolling total basis.

4. The total amount of #6 fuel oil and specification waste oil fired in Boiler No. 5 shall not exceed 3,110,400 gallons per year.

[06-096 CMR 140, BPT]

DONE AND DATED IN AUGUSTA, MAINE THIS 23 DAY OF September , 2013.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: Marc Allen Robert Cone for
PATRICIA W. AHO, COMMISSIONER

The term of this amendment shall be concurrent with the term of Air Emission License A-416-70-D-R.

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: November 21, 2012
Date of application acceptance: November 26, 2012

Date filed with the Board of Environmental Protection:

This Order prepared by Jane E. Gilbert, Bureau of Air Quality.

Filed
SEP 24 2013
State of Maine
Board of Environmental Protec