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

DEPARTMENT ORDER

ND OTM LLC **Penobscot County** **Old Town, Maine** **A-180-70-Q-A**	**Departmental** **Findings of Fact and Order** **Part 70 Air Emission License** **Amendment #7**

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 Maine Revised Statutes (M.R.S.) § 344 and § 590, the Maine Department of Environmental Protection (Department) finds the following facts:

I. REGISTRATION

A. Introduction

FACILITY	ND OTM LLC
LICENSE TYPE	Part 70 Significant License Modification
NAICS CODES	322110 Wood Pulp manufacturing 221119 Electric Power Generation
NATURE OF BUSINESS	Pulp Manufacturing
FACILITY LOCATION	24 Portland Street, Old Town, Maine

ND OTM LLC (ND OTM) is a pulp manufacturing facility located in Old Town, Maine operating as an air emissions source under the authority of Part 70 Air Emission License A-180-70-A-I (December 2, 2009) and subsequent amendments.

New Source Review (NSR) License A-180-77-11-A (issued September 24, 2020) addressed an increase in the allowable low volume high concentration (LVHC) non-condensable gases (NCGs) incineration time in the #5 Power Boiler and the Biomass Boiler. NSR License A-180-77-13-A (issued October 30, 2020) extended the compliance schedule for a previously established CO emission limit associated with the Biomass Boiler. ND OTM has requested that the provisions of these NSR licenses be incorporated into the Part 70 license.

B. Emission Equipment

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

Equipment	Maximum Capacity (MMBtu/hr)	Fuel Type, % sulfur
#5 Power Boiler	249	Distillate fuel, 0.0015%
		#6 fuel oil, 0.5%
	271	Natural gas, negligible
Biomass Boiler	265.2	Biomass, negligible
		Natural gas, negligible

C. Definitions

Biomass means any biomass-based solid fuel that is not a solid waste. This includes, but is not limited to, wood residue; wood products (*e.g.,* trees, tree stumps, tree limbs, bark, lumber, sawdust, sander dust, chips, scraps, slabs, millings, and shavings); animal manure, including litter and other bedding materials; vegetative agricultural and silvicultural materials, such as logging residues (slash), nut and grain hulls and chaff (*e.g.,* almond, walnut, peanut, rice, and wheat), bagasse, orchard prunings, corn stalks, coffee bean hulls and grounds. This definition also includes wood chips and processed pellets made from wood or other forest residues. Inclusion in this definition does not constitute a determination that the material is not considered a solid waste. ND OTM should consult with the Department before adding any new biomass type to its fuel mix.

Distillate Fuel means the following:

- Fuel oil that complies with the specifications for fuel oil numbers 1 or 2, as defined by the American Society for Testing and Materials (ASTM) in ASTM D396;
- Diesel fuel oil numbers 1 or 2, as defined in ASTM D975;
- Kerosene, as defined in ASTM D3699;
- Biodiesel, as defined in ASTM D6751; or
- Biodiesel blends, as defined in ASTM D7467.

D. Application Classification

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

ND OTM has requested incorporation into the Part 70 Air License the relevant terms and conditions of NSR licenses A-180-77-11-A, issued September 24, 2020, and A-180-77-13-A, issued October 30, 2020, pursuant to *Major and Minor Source Air Emission License Regulations*, 06-096 Code of Maine Rules (C.M.R.) ch. 115. Therefore, this license application was considered a Part 70 Significant License Modification and processed under *Part 70 Air Emission License Regulations*, 06-096 C.M.R. ch. 140.

II. BEST PRACTICAL TREATMENT (BPT) AND EMISSION STANDARDS

A. Introduction

In order to receive a license, the applicant must control emissions from each unit to a level considered by the Department to represent Best Practical Treatment (BPT), as defined in *Definitions Regulation*, 06-096 C.M.R. ch. 100. Separate control requirement categories exist for new and existing equipment as well as for those sources located in designated non-attainment areas.

BPT for existing emissions equipment means that method which controls or reduces emissions to the lowest possible level considering:

- the existing state of technology;
- the effectiveness of available alternatives for reducing emission from the source being considered; and
- the economic feasibility for the type of establishment involved.

B. NCG Incineration in #5 Power Boiler and Biomass Boiler

NSR A-180-77-11-A (9/24/2020) increased the total allowable LVHC gas incineration time in the #5 Power Boiler or Biomass Boiler from 23.8% to 100% of the total incineration time on an annual basis. To partially offset the increase in SO_2 emissions from the additional LVHC gas incineration in the #5 Power Boiler and Biomass Boiler, the NSR also limited the combustion of #6 fuel oil and distillate fuel in the #5 Power Boiler to a combined total of 8,175,000 gallons per year.

NSR A-180-77-11-A established the following as BACT for SO_2 emissions from the #5 Power Boiler and Biomass Boiler:

- Total combined use of distillate fuel and #6 fuel oil in the #5 Power Boiler shall not exceed 8,175,000 gal/year on a 12-month rolling total basis.

- SO_2 emissions from the #5 Power Boiler and Biomass Boiler shall not exceed the following:

Equipment	Fuel	SO_2 lb/hr
#5 Power Boiler	Fuel oil* without NCG incineration	126.99
	Fuel oil* with NCG incineration	205.39
	Natural gas without NCG incineration	0.16
	Natural gas with NCG incineration	78.6
Biomass Boiler	Biomass/natural gas without NCG incineration	6.6
	Biomass/natural gas with NCG incineration	85.0

*Distillate fuel, #6 fuel oil, or a combination thereof.

C. Biomass Boiler CO Emission Limit Compliance Schedule

NSR A-180-77-13-A (10/30/2020) extended the compliance schedule for a previously established CO emission limit associated with the Biomass Boiler. NSR A-180-77-4-A (10/12/2012) was issued to Red Shield Acquisition, LLC, the owner of the Old Town Mill at the time, and established a CO emission limit for the Biomass Boiler of 0.45 lb/MMBtu and provided approximately 38 months for the mill to demonstrate compliance with this limit per 06-096 C.M.R. ch. 115, BPT. This limit was incorporated into the facility's Part 70 license with license amendment A-180-70-D-A (10/12/2012). Expera Old Town, LLC acquired the mill in late 2014, and requested a similar 38-month extension as that granted to Red Shield, extending the compliance schedule from January 2016 to March 2019.

Mill operation was suspended in September of 2015, and the Mill was acquired by ND OTM on October 19, 2018. ND OTM has identified and undertaken repair and maintenance work that had been deferred by previous owners, including repairs and upgrades to the ESP, ash handling system, fuel handling system, fuel distribution and combustion systems, mechanical dust collectors, and the air heater. To accommodate this work, NSR A-180-77-13-A was issued on October 30, 2020, granting the following extension to the CO emission limit compliance schedule:

The Biomass Boiler shall not exceed the following CO emission limits when firing biomass:

Pollutant	lb/MMBtu	Averaging Time	Compliance Method
CO	0.8 (Prior to November 30, 2021)	30-day rolling average, at all operating times	CEMS
	0.45 (Beginning November 30, 2021)	30-day rolling average, excluding startup and shutdown	

Pollutant	lb/hr	Compliance Method
CO	212.2 (Prior to November 30, 2021)	40 C.F.R. Part 60, Appendix A
	119.3 (Beginning November 30, 2021)	

ND OTM shall submit a Biomass Boiler CO emissions progress report to the Department by April 30, 2021. The report shall include the progress-to-date on CO emission minimization and the expected plan to meet future license requirements.

ND OTM shall develop and submit a boiler startup and shutdown CO minimization procedure to the Department by November 30, 2021. The procedure shall include startup and shutdown definitions and other information such as specific startup and shutdown timeframe ranges (including warm and cold startups), operating parameter measurements (i.e., boiler temperature, definition of first-fire, oxygen levels), and additional information as appropriate.

D. Facility Annual Emissions

The table below provides an estimate of facility-wide annual emissions for the purposes of calculating the facility's annual air license fee. Only licensed equipment is included, i.e., emissions from insignificant activities are excluded. Similarly, unquantifiable fugitive particulate matter emissions are not included. Emissions for the #5 Power Boiler were calculated based on a combined total 8,715,000 gal/year distillate fuel and #6 fuel oil, with the remainder of the operating time firing natural gas. Emissions from NCG incineration were calculated based on 8,760 hours NCG incineration in either the #5 Power Boiler or Biomass Boiler. All other emissions are unchanged by this license amendment.

Please note, this information provides the basis for fee calculation only and should not be construed to represent a comprehensive list of license restrictions or permissions. That information is provided in the Order section of this license.

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

	PM	PM_{10}	SO_2	NO_x	CO	VOC
#5 Power Boiler	57.03	57.03	333.6	221.10	109.98	35.23
Biomass Boiler	35.0	35.0	29.0	290.3	929.3	19.7
NCG incineration in either #5 Power Boiler or Biomass Boiler	--	--	343.4	--	--	--
Gas Turbine	1.1	1.1	0.5	20.9	12.8	5.7
#4 Recovery Boiler	177.2	177.2	768.3	812.3	1,396.6	92.4
#4 Smelt Tank	33.07	33.07	14.61	0.28	0.28	0.28
Lime Kiln	144.1	144.1	31.1	157.7	357.8	5.3
Total Services Backup Sump Pump	0.1	0.1	0.02	1.4	0.3	0.1

	PM	PM_{10}	SO_2	NO_x	CO	VOC
Water Intake Emergency Generator	0.2	0.2	0.002	2.2	0.2	0.1
Power House Fire Backup Pump	0.1	0.1	0.02	1.5	0.3	0.1
#4 Turbine Backup Generator	0.09	0.09	0.02	1.3	0.3	0.1
Backup gen. for Biomass Boiler	0.1	0.1	0.14	5.1	1.4	0.3
Screw Press Steam Generator	2.2	2.2	5.5	81.1	17.5	6.6
Biorefinery	--	--	--	--	--	2.5
Total TPY	**450.3**	**450.3**	**1,526.2**	**1,595.2**	**2826.8**	**168.4**

III. AMBIENT AIR QUALITY ANALYSIS

ND OTM 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.

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 Amendment A-180-70-Q-A pursuant to 06-096 C.M.R. ch. 140 and the preconstruction permitting requirements of *Major and Minor Source Air Emission License Regulations*, 06-096 C.M.R. ch. 115 and subject to the conditions found in Air Emission License A-180-70-A-I; in amendments A-180-70-B-A, A-180-70-C-A, A-180-70-D-A, A-180-70-G-A, A-180-70-H-A, and A-180-70-O-A; and the following conditions.

Federally enforceable conditions in this Part 70 license must be changed pursuant to the applicable requirements in 06-096 C.M.R. ch. 115 for making such changes and pursuant to the applicable requirements in 06-096 C.M.R. ch. 140.

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

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

SPECIFIC CONDITIONS

The following shall replace Special Condition (14) B, C, and E of Air Emission License A-180-70-A-I (December 2, 2009):

(14) **#5 Power Boiler**

B. Fuel

1. Combined total distillate fuel and #6 fuel oil use for the #5 Power Boiler shall not exceed 8,715,000 gal/year, based on a 12-month rolling total basis.
2. ND OTM shall not purchase or otherwise obtain distillate fuel with a maximum sulfur content that exceeds 0.0015% by weight (15 ppm).
3. ND OTM shall not purchase or otherwise obtain #6 fuel oil with a maximum sulfur content that exceeds 0.5% by weight.
4. Compliance shall be demonstrated by fuel records showing the quantity, type, and the percent sulfur of the fuel delivered or fuel used (if applicable). Records of annual fuel use shall be kept on a monthly and 12-month rolling total basis. Fuel sulfur content compliance shall be demonstrated by fuel delivery receipts from the supplier, fuel supplier certification, certificate of analysis, or testing of the tank containing the fuel to be fired.

[A-180-77-11-A (9/24/2020), BACT]

C. ND OTM is licensed to fire low volume high concentration (LVHC) non-condensable gases (NCGs) in the #5 Power Boiler.
[A-180-77-11-A (9/24/2020), BACT]

E. Emissions from the #5 Boiler shall not exceed the following limits:

Pollutant	lb/MMBtu	Avg. Time	Compliance Method
PM	0.08	-	Stack test per condition 14(J) of Air Emission License A-180-70-A-I (12/3/2009)
NO_x	0.28	30-day rolling average as described in 40 C.F.R. Part 60, Subpart Db	CEMS data

Pollutant	lb/hr	Avg. Time	Compliance Method
PM	19.92	-	Stack test per condition 14(J) of Air Emission License A-180-70-A-I (12/3/2009)
PM_{10}	19.92	-	Stack test (upon request)
SO_2	126.99 when not incinerating NCGs 205.39 when incinerating NCGs	-	Fuel sulfur content receipts
NO_x	69.72	24-hour block	CEMS data in conjunction with fuel (F) factor
CO	27.39	-	Stack test (upon request)
VOC	12.45	-	Stack test (upon request)

[A-180-71-M-A (12/14/1994) and A-180-77-11-A (9/24/2020), BACT]

The following shall replace Specific Condition (15) F and H of Air Emission License A-180-70-D-A (October 12, 2012):

(15) **Biomass Boiler and Turbine**

F. Non-condensable Gases

ND OTM is licensed to fire low volume high concentration (LVHC) non-condensable gases (NCGs) in the Biomass Boiler. [A-180-77-11-A (9/24/2020), BACT]

H. Emission Limits

1. Emissions from the Biomass Boiler shall not exceed the following:

Pollutant	lb/MMBtu	Avg. Time	Compliance Method
PM	0.03	-	40 C.F.R. Part 60, Appendix A
PM_{10}	0.03	-	40 C.F.R. Part 60, Appendix A; 40 C.F.R. Part 51, Appendix M
NO_x	0.25	24-hr block avg	CEMS data
CO	0.8 (Prior to November 30, 2021)	30-day rolling average, at all operating times	CEMS data
	0.45 (Beginning November 30, 2021)	30-day rolling average, excluding startup and shutdown	

Pollutant	lb/hr	Compliance Method
PM	8.0	40 C.F.R. Part 60, Appendix A
PM_{10}	8.0	40 C.F.R. Part 60, Appendix A; 40 C.F.R. Part 51, Appendix M
SO_2	6.6 (when not incinerating NCGs)	Fuel use Recordkeeping or 40 C.F.R. Part 60, Appendix A
	85 (when incinerating NCGs)	
NO_x	66.3	40 C.F.R. Part 60, Appendix A
CO	212.2 * (Prior to November 30, 2021)	40 C.F.R. Part 60, Appendix A
	119.3 * (Beginning November 30, 2021)	
VOC	4.5	40 C.F.R. Part 60, Appendix A, Method 25 or 25A
Lead	0.106	40 C.F.R. Part 60, Appendix A

* lb/hr limits shall apply at all times.

2. Calculations Corrections

   a. For no more than four (4) hours during start-up, ND OTM may make the following calculation corrections for the Biomass Boiler: Stack O_2 levels that exceed 14.0% may be replaced with a value of 14.0.

   b. Hourly lb/MMBtu averages for CO may be recalculated if the observed stack O_2 is greater than 14.0% for no more than four (4) hours during startup.

   c. The recalculated hourly lb/MMBtu averages may be used for compliance purposes.

[A-180-71-AI-A (4/26/2004), A-180-71-AJ-A (5/6/2005), A-180-71-AL-M (9/16/2005), A-180-71-AX-A (1/13/2009), A-180-71-BA-A (9/21/2009), A-180-77-11-A (9/24/2020), A-180-77-13-A (10/30/2020); BACT/BPT]

The following shall replace Specific Condition (15) M of Air Emission License A-180-70-G-A (December 29, 2014):

(15) **Biomass Boiler and Turbine**

M. By November 30, 2021, ND OTM shall develop and submit to the Department a Biomass Boiler startup and shutdown procedure for the minimization of CO. The procedure shall include startup and shutdown definitions and other information such as specific startup and shutdown timeframe ranges (including warm and cold startups), operating parameter measurements (i.e., boiler temperature, definition of first-fire, oxygen levels), and additional information as appropriate.
[A-180-77-13-A (10/30/2020), BPT]

The following shall replace Specific Condition (15) N of Air Emission License A-180-70-D-A (October 12, 2012):

(15) **Biomass Boiler and Turbine**

N. By April 30, 2021, ND OTM shall submit a Biomass Boiler CO Emissions progress report to the Department. The report shall include progress-to-date on CO emission minimization and the expected plan to meet the future license requirements.
[A-180-77-13-A (10/30/2020), BPT]

The following shall replace Specific Condition (25) C of Air Emission License A-180-70-D-A (October 12, 2012):

(25) **Lime Kiln**

C. ND OTM is licensed to fire low volume high concentration (LVHC) non-condensable gases (NCGs) in the Lime Kiln.
[06-096 C.M.R. ch. 124 and 06-096 C.M.R. ch. 115, BPT]

DONE AND DATED IN AUGUSTA, MAINE THIS 16th DAY OF JUNE, 2021.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: _____ for ____
MELANIE LOYZIM, COMMISSIONER

The term of this amendment shall be concurrent with the term of Air Emission License A-180-70-A-I.

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: June 3, 2020
Date of application acceptance: June 15, 2020

Date filed with the Board of Environmental Protection:

This Order prepared by Benjamin Goundie, Bureau of Air Quality.

FILED

JUN 16, 2021

State of Maine
Board of Environmental Protection