STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION

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IN Madison, LLC
Somerset County
Madison, Maine
A-1042-71-A-N

Departmental
Findings of Fact and Order
Air Emission License

After review of the air emissions license application, staff investigation reports and other documents in the applicant's file in the Bureau of Air Quality, pursuant to 38 M.R.S.A., §344 and §590, the Department finds the following facts:

I. REGISTRATION

A. Introduction

IN Madison, LLC (IN Madison) has applied for an air emission license to construct and operate a 135 MMBtu/hr wood fired boiler, a diesel fired emergency generator, and a wood chip handling operation on a parcel of land leased from Madison Paper Industries in Madison, Maine. The boiler will provide steam to Madison Paper Industries.

B. Emission Equipment

The following equipment is addressed in this air emission license:

Boiler

Equipment	Maximum Capacity (MMBtu/hr)	Maximum Firing Rate (lb/hr)	Fuel Type	Stack #
Boiler 1	135	44,850 (wet, 3010 Btu/lb)	Wet bark supplemented with green wood residues	1

Electrical Generation Equipment

Equipment	Kilowatt (kW)	Max. Capacity (MMBtu/hr)	Firing Rate (gal/hr)	Fuel Type, % sulfur	Stack #
Emergency Generator 1	400	4.37	31.9	Diesel, 0.0015%	2

C. Application Classification

A new source is considered a major source based on whether or not expected emissions exceed the "Significant Emission Levels" as defined in *Definitions Regulation*, 06-096 CMR 100 (as amended). The emission levels for a new source are determined from the maximum future license allowed emissions, as follows:

Pollutant	Max. Future License (TPY)	Sig. Level
PM	14.8	100
PM_{10}	14.8	100
SO_2	24.8	100
NO_x	160.7	100
CO	355.8	100
VOC	29.6	50

The Department has determined the facility is a major source and the application has been processed through *Major and Minor Source Air Emission License Regulations*, 06-096 CMR 115 (as amended).

Within 12 months of commencing operation, IN Madison shall apply for a Part 70 license under Part 70 Air Emission License Regulation, 06-096 CMR 140, Section 1(J)(2)(D) (as amended), as provided in 40 CFR Part 70.5.

D. Units of Measurements Referenced in this License

K	degree Kelvin
g/s	grams per second
km	kilometers
kW	kilowatt
lb/hp-hr	pounds per horsepower hour
lb/hr	pounds per hour
lb/MMBtu	pounds per million British Thermal Units
m	meters
m/s	meters per second
MMBtu/hr	million British Thermal Units per hour
ppm	parts per million
tpy	tons per year
ug/m^3	micrograms per cubic meter

II. BEST PRACTICAL TREATMENT (BPT)

A. Introduction

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

BPT for new sources and modifications requires a demonstration that emissions are receiving Best Available Control Technology (BACT), as defined in 06-096 CMR 100. BACT is a top-down approach to selecting air emission controls considering economic, environmental and energy impacts.

B. Boiler 1

The proposed biomass boiler is a 135 MMBtu/hr stoker fired unit having a base fuel of wet bark (up to 80,000 tons/yr), supplemented with wood materials including wood chips, untreated wood residues, hogged fuels, slash, and processed clean pallets (as needed for a maximum of 130,000 tons/yr). The boiler will be used to provide steam to Madison Paper Industries, with no additional power generated by the unit. Steam production is expected to be approximately 90,000 lb/hr.

NSPS requirements
The boiler is subject to the New Source Performance Standards (NSPS) 40 CFR Part 60, Subpart Db, *Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units*, for units greater than 100 MMBtu/hr manufactured after June 19, 1984.

NESHAP requirements
The boiler may be subject to the proposed 40 CFR Part 63, Subpart DDDDD, *National Emission Standards for Hazardous Air Pollutants (NESHAP) for Industrial, Commercial and Institutional Boilers and Process Heaters* or the proposed 40 CFR Part 63, Subpart JJJJJJ, *National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial and Institutional Boilers and Process Heaters at area sources*, once the regulations are promulgated.

BACT
IN Madison submitted a BACT analysis as part of the license application. EPA's RACT/BACT/LAER Clearinghouse was reviewed for requirements on similar units. IN Madison also included a review of 23 Maine air emission licenses and one New Hampshire permit. The information was used to determine the available control technologies and corresponding levels of control.

The summary of the BACT analysis for the boiler is the following:

$PM/PM_{10}/PM_{2.5}$ – The options for controlling particulate matter from the boiler include a cyclonic separator (multiclone), wet scrubber, electrostatic precipitator (ESP), fabric filter, and electrified filter beds. Ranking these technically feasible options, the most effective PM control equipment being successfully applied to biomass boilers are fabric filters and ESPs (90-99% removal). The potential problems with fire danger for fabric filters makes the ESP the preferred option.

PM limits for biomass boilers listed in EPA's BACT/RACT/LAER Clearinghouse range from 0.012 lb/MMBtu to 0.14 lb/MMBtu with varying averaging times. The lowest emission rate was not yet demonstrated in practice.

IN Madison proposes to install an ESP in conjunction with an upstream multiclone.

The BACT emission limit for PM/PM_{10} from the boiler is 0.025 lb/MMBtu. (3.38 lb/hr). The limit applies at all times, except during periods of startup and shutdown.

This limit is more stringent than the PM/PM_{10} NSPS 40 CFR Part 60, Subpart Db standard of 0.1 lb/MMBtu and the 0.08 lb/MMBtu standard in *Fuel Burning Equipment Particulate Emission Standard*, 06-096 CMR 103 (as amended).

IN Madison shall perform two $PM_{2.5}$ stack tests within a 16 month period after startup of the boiler. The stack tests shall be performed in accordance with the appropriate EPA method or other method as approved by EPA and the Department. IN Madison shall submit an amendment application to the Department which shall include a proposed $PM_{2.5}$ limit for the boiler within 6 month of the last test date.

SO_2 – The options for controlling sulfur dioxide from the boiler include a sorbent injection, wet scrubber, spray dryer absorber, and a low sulfur fuel with good combustion controls. Sorbent injection is technically feasible only with boilers of fluidized bed design (not stoker designs), so it was not considered as feasible for this boiler. Post combustion controls of wet scrubber and spray dryer absorber are normally only limited to biomass boilers that are permitted to burn alternative fuels such as coal or tire derived fuel in addition to biomass. This boiler will not be firing high sulfur fuels so post combustion controls were not considered as BACT.

IN Madison proposes to use wood, which has an inherently low sulfur content, as the sole fuel for the boiler.

The BACT emission limit for SO_2 from the boiler is 0.042 lb/MMBtu (5.67 lb/hr).

NO_X – The options for controlling nitrogen oxides from the boiler include boiler design and combustion control, selective catalytic reduction (SCR), regenerative selective catalytic reduction (RSCR), selective non-catalytic reduction (SNCR), and EcoJet.

SCR, which uses a reducing agent (ammonia) and a catalyst placed in the flue gas stream at a specific temperature, was determined to be technically infeasible for this boiler. The SCR system would need to be placed after other air pollution control equipment (on the cold side) to prevent the catalyst from high particulate loads which could cause erosion, thermal sintering, and fly ash deposition. An SCR placed on the cold side would require flue gas reheat (using fossil fuel) to raise the temperature for the optimum catalyst reaction. This additional fuel with its energy, environmental, and financial impacts, and the need to manage ammonia with its environmental and financial considerations made this option infeasible.

RSCR, SNCR, EcoJet, and good combustion control were considered technically feasible. RSCR is a combination of standard SCR technology and the regenerative heat recovery technology utilized with Regenerative Thermal Oxidizers (RTOs). With the direct contact regenerative technology, in which cycling beds of ceramic media are used to transfer heat, the fossil fuel requirement is significantly reduced when compared to traditional SCR technology. SNCR uses injection of ammonia or urea into the flue gas downstream of the combustion zone. The high temperature of the injection zone supports high chemical reaction so that a catalyst is not required. EcoJet is a type of enhanced overfire air system that provides high velocity, high energy, variable flow air with enough energy to improve the mixing and recirculation of gases in the furnace beyond standard overfire air.

RSCR was estimated at a total capital investment of $3,405,900 with an estimated annual operation cost of $840,100. The cost effectiveness value is $6900 per ton of NO_X removed. Based on the economics, the energy impacts of firing additional fossil fuel, and the environmental impacts of additional greenhouse gas emissions and ammonia slip, RSCR was not proposed as BACT.

SNCR was estimated at a total capital investment of $1,133,700 with an estimated annual operation cost of $342,300. The cost effectiveness value is $3600 per ton of NO_X removed. Based on the economics, the energy impact of additional electrical use, and the environmental impacts of ammonia slip, SNCR was not proposed as BACT.

EcoJet was estimated at a total capital investment of $1,679,800 with an estimated annual operation cost of $281,000. The cost effectiveness value is $5300 per ton of NO_X removed. Based on the economics and the energy impact of additional electrical use, EcoJet was not proposed as BACT.

Wood biomass boilers in the Northeast have been issued permits with the limits in the range of 0.065 to 0.0752 lb/MMBtu (with various averaging times and justifications) using Selective Catalytic Reduction (SCR), Selective Non-Catalytic Reduction (SNCR), or modified configurations of these controls. These limits were included in IN Madisons's BACT analysis and were found to be neither technically nor economically feasible for the facility. The permits incorporating modified SCR/SNCR technologies fell into one or more of the following three categories which do not apply to the proposed IN Madison boiler: (1) subject to LAER; (2) electing to install the technology to meet a given State's Renewable Portfolio Standard (RPS); and /or (3) have not yet been constructed and have not proven simultaneous compliance with NO_X and CO BACT limits.

The proposed IN Madison boiler differs from the facilities that have been permitted with modified SCR/SNCR for the following reasons:

- it is not similar in size. This is a much smaller boiler (135 MMBtu/hr) than the MA Russell plant, for instance, which is 740 MMBtu/hr. The ecomomic burden is greater on smaller units since the basic capital cost of additional control equipment is similar for both large and small units;
- it is not being used to produce energy for the Renewable Energy Credit (REC) market as are some of the other facilities referenced by EPA. This should be taken into account in the economic comparison for BACT since use of additional controls actually generates significant income for power plants in the REC market as opposed to no incremental income in IN Madison's scenario.
- it is not subject to LAER;
- it serves a manufacturing plant and therefore swings based on changing demand, unlike a base-loaded electric utility operation which is more steady state; and
- the lb/MMBtu limit includes startup and shutdown conditions.

NO_X limits for biomass boilers recently licensed with good combustion control ranged from 0.17 lb/MMBtu to 1.43 lb/MMBtu.

IN Madison proposes the utilization of the boiler design and good combustion controls to minimize NO_X emissions from the boiler. This includes multi-staged gasification and combustion to control the fuel oxidation rate in multiple and separate zones, heated combustion air introduced at strategic levels to optimize mixing of the fuel and air, controlling combustion zone temperatures to below 2500°F, and controlling excess air.

The BACT emission limit for NO_X from the boiler is 0.27 lb/MMBtu (36.45 lb/hr). IN Madison shall install the injection ports and piping allowances for SNCR control during construction of the boiler. If, in the future, a lower NO_X or CO limit is necessary to meet requirements issued by the state or EPA, then the hardware will be in place to control NO_X but IN Madison will not be required to operate SNCR at this time.

CO – The options for controlling carbon monoxide from the boiler include good combustion control and an oxidation catalyst. An oxidation catalyst is more typically applied to boilers without a high particulate matter emission rate since the catalyst should be placed before the PM control device to take advantage of the optimum temperature for catalyst activation. For a biomass boiler, the oxidation catalyst would need to be placed after the PM control device which would mean reheating the flue gas. An oxidation catalyst was estimated at a total capital investment of $348,700 with an estimated annual operation cost of $765,900. The cost effectiveness value is $4100 per ton of CO removed. Based on the economics, the energy impacts of firing additional fossil fuel, and the environmental impacts of additional greenhouse gas emissions, an oxidation catalyst was not proposed as BACT.

CO limits for recently licensed biomass boilers ranged from 0.08 lb/MMBtu to 4.67 lb/MMBtu with varying averaging times. The lowest proposed limits have design and/or fuel differences from this project, including fluidized beds (different boiler technology), oxidation catalyst (never built), different fuels with lower CO emissions (dry fuels, fiber, and fossil fuel mixtures), etc.

IN Madison proposes to use good combustion practices to minimize CO emissions.

The BACT emission limit for CO from the boiler is 0.60 lb/MMBtu (81.00 lb/hr).

VOC – The options for controlling volatile organic compounds from the boiler include good combustion control and an oxidation catalyst. For the same reasons as described for CO above, but with a cost effectiveness value of $28,800 per ton of VOC removed, an oxidation catalyst was not proposed as BACT.

IN Madison proposes to use good combustion practices to minimize VOC emissions.

The BACT emission limit for VOC from the boiler is 0.05 lb/MMBtu (6.75 lb/hr).

Opacity – Visible emissions from the boiler shall not exceed 20% opacity on a six minute average, except for one six minute period per hour of not more than 27% opacity. The limit applies at all times, except during periods of startup, shutdown, or malfunction.

To minimize opacity as an indicator of particulate matter emissions, IN Madison shall use an indicator set point of 9% opacity at which level an inspection of the particulate control parameters will be initiated. Specifically, when an opacity reading of 9% for ten consecutive six-minute block average periods is reached, IN Madison will immediately check the parameters of the multiclone and the ESP. An opacity reading of 9% for ten consecutive six-minute block average periods will be considered an excursion that shall be reported in the quarterly report, along with corrective action.

HAPs (Hazardous Air Pollutants) – IN Madison estimated HAPs from the boiler to be less than 5 tons per year for any single HAP (highest was hydrochloric acid, HCl) and 16 tons per year total HAPs. The boiler HAPs were calculated using EPA's AP-42 Chapter 1.6, except HCl which was calculated based on data collected for the proposed boiler MACT (Maximum Achievable Control Technology) rule: 40 CFR Part 63, Subpart DDDDD.

Control Equipment

Emissions from the boiler will be controlled with a multiclone, an electrostatic precipitator (ESP), and good combustion.

Periodic Monitoring

IN Madison shall maintain records of steam production on a 24-hour basis. IN Madison shall maintain records of wood fuel use on a monthly and 12 month rolling total basis per the fuel measurement method to be submitted by IN Madison.

Per 38 MRSA §589, sub-section 2, IN Madison shall stack test the boiler for particulate matter once every five year calendar period beginning with the initial performance test required in 40 CFR Part 60, Subpart Dc.

In order to demonstrate compliance with the NO_X and CO emission limits, IN Madison shall stack test for both NO_X and CO during the initial performance test. The results of the initial performance test shall be based on a 1 hour average. Continuous compliance shall then be demonstrated using an alternative compliance demonstration to be developed by IN Madison and submitted as a license amendment. The 24 hour block average for NO_X and the 30 day rolling average for CO may be retained unless the alternative compliance demonstration requires a shorter averaging period.

ESP secondary current and secondary voltages shall be recorded once per day.

CEM and COM
IN Madison shall install, calibrate, maintain, and operate a continuous opacity monitoring system (COMS) for measuring opacity from the boiler per *Source Surveillance*, 06-096 CMR 117 (as amended) and 40 CFR Part 60, Subpart Dc.

Report Submittals
IN Madison shall submit quarterly reports to the Department addressing the operation of control equipment and COMS per 06-096 CMR 117.

IN Madison shall submit initial reports, notifications, maintain records, and submit reports as required by NSPS Part 60, Subparts A and Db.

Within 270 days from initial startup, IN Madison shall submit a plan to the Department for approval that defines the fuel measurement method for the facility.

Within 270 days from initial startup, IN Madison shall submit an air emission license amendment application to the Department defining startup for the boiler, including startup timeframes and any startup operating set points (ie temperature).

Within 270 days from initial startup, IN Madison shall submit an air emission license amendment application to the Department defining an alternative compliance demonstration for NO_X and CO.

C. Emergency Generator

IN Madison proposes to operate a 400 kW emergency diesel engine firing 15 ppm sulfur diesel fuel and a maximum of 500 hours of emergency operations per year and 100 hours of maintenance and testing operations.

The emergency generator is subject to NSPS 40 CFR Part 60, Subpart IIII, *Standards of Performance for Stationary Compression Ignition Internal Combustion Engines* and NESHAP 40 CFR Part 63, Subpart ZZZZ, *National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines.*

For a NSPS applicable unit, emergency generator is defined as any stationary internal combustion engine whose operation is limited to emergency situations and required testing and maintenance. Examples include stationary engines used to produce power for critical networks or equipment (including power supplied to portions of a facility) when electric power from the local utility (or the normal power source, if the facility runs on its own power production) is interrupted, or stationary engines used to pump water in the case of fire or flood. Stationary engines used to supply power to an electric grid or that supply power as part of a financial arrangement with another entity are not considered to be emergency engines.

A summary of the BACT analysis for the emergency generator is the following:

Add-on controls are technically feasible for internal combustion engines, but are not cost effective since this 40 CFR Part 60, Subpart IIII engine will have to meet low emission standards and will have limited operating hours. IN Madison proposes good combustion practices inherent in the generator design, efficient operation of the unit, the use of ultra low sulfur fuel, and restricted operating hours.

The emission limits were calculated based on the EPA certified limits and the following equation:

lb/hr = (g/hp-hr emission rate) x (lb/453.6 g) x (hp/0.746 kW) x (400 kW)

PM/PM_{10} – The BACT emission limit for PM/PM_{10} from the emergency engine is 0.034 g/hp-hr (0.040 lb/hr). This limit is more stringent than the PM standard in 06-096 CMR 103.

SO_2 – The BACT emission limit for SO_2 from the emergency engine is 0.006 g/hp-hr (0.0067 lb/hr). This limit is based on 0.0015% sulfur fuel (15 ppm).

NO_X – The BACT emission limit for NO_X from the emergency generator is 3.49 g/hp-hr (4.12 lb/hr).

CO – The BACT emission limit for CO from the emergency engine is 0.35 g/hp-hr (0.41 lb/hr).

VOC – The BACT emission limit for VOC from the emergency generator is 0.04 g/hp-hr (0.047 lb/hr).

Opacity - Visible emissions from the emergency generator shall not exceed 20% opacity on a six (6) minute block average, except for no more than two (2) six (6) minute block averages in a continuous 3-hour period.

Additional requirements for the NSPS emergency generator include, but are not limited to:

- Only diesel fuel with a maximum sulfur content not to exceed 15 ppm shall be fired.
- The emergency generator shall be limited to 100 hr/yr of operation for maintenance checks and readiness testing. The generator shall be limited to 500 hours per year of total operation. Both of these limits are based on a 12 month rolling total. Compliance shall be demonstrated by a written log of all generator operating hours.
- The generator shall be equipped with a non-resettable hour meter.
- IN Madison shall operate and maintain the generator in accordance with the manufacturer's written instructions. IN Madison shall not change settings that are not approved in writing by the manufacturer.

D. Fugitive Emissions – Fuel and Ash Handling

Fugitive emissions are possible from on-site traffic, fuel delivery, and material handling. The wood handling fuel system will consist of a truck dumper, conveyance systems, chip storage buildings, screens, and sizing operations. Due to the high moisture content of the fuel and ash, it is expected that the potential fugitive emissions from these operations will be reduced. Wet and dry ash will be in covered storage on site until transported off site. Overall truck traffic will decrease, as the wood delivery trucks will replace the trucks that currently transport bark off site.

Visible emissions from a fugitive emission source (including stockpiles and roadways) shall not exceed 20% opacity, except for no more than five (5) minutes in any 1-hour period. Compliance shall be determined by an aggregate of the individual fifteen (15)-second opacity observations which exceed 20% in any one (1) hour.

E. General Process Emissions

Visible emissions from any general process source shall not exceed an opacity of 20% on a six (6) minute block average basis, except for no more than one (1) six (6) minute block average in a 1-hour period.

F. Annual Emissions

IN Madison shall be restricted to the following annual emissions calculated from operating the boiler for 8760 hours/year and the emergency generator for 500 hrs/yr based on a 12 month rolling total:

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
Boiler	14.8	14.8	24.8	159.7	354.8	29.6
Generator	0.01	0.01	0.0017	1.0	0.10	0.01
Total TPY	**14.8**	**14.8**	**24.8**	**160.7**	**355.8**	**29.6**

III. AMBIENT AIR QUALITY ANALYSIS

A. Overview

A refined modeling analysis was performed to show that emissions from IN Madison, in conjunction with other sources, will not cause or contribute to violations of Maine and National Ambient Air Quality Standards (MAAQS, NAAQS) for SO_2, PM_{10}, NO_2 or CO or to Class II increments for SO_2, PM_{10} or NO_2.

Based upon the distance from IN Madison to the nearest Class I area (121 kilometers) and the magnitude of emissions, the affected Federal Land Managers (FLMs) and MEDEP-BAQ have determined that an assessment of Class I increment standards and Air Quality Related Values (AQRVs) is not required.

B. Model Inputs

The AERMOD-PRIME refined model was used to address standards and increments in all areas. The modeling analysis accounted for the potential of building wake and cavity effects on emissions from all modeled stacks that are below their calculated formula GEP stack heights.

All modeling was performed in accordance with all applicable requirements of the Maine Department of Environmental Protection, Bureau of Air Quality (MEDEP-BAQ) and the United States Environmental Protection Agency (USEPA).

A valid five-year hourly on-site meteorological database was used in the AERMOD-PRIME refined modeling analysis. Five years of wind data was

collected at heights of 10 and 70 meters at the Madison Paper Industries meteorological monitoring site from 1991-1995. When possible, surface data collected at the Augusta State Airport FAA site were substituted for missing on-site data. All other missing data were interpolated or coded as missing, per USEPA guidance. In addition, hourly Augusta FAA data, from the same time period, were also used to supplement the primary surface dataset for the required variables that were not explicitly collected at the Madison Paper Industries monitoring site.

The surface meteorological data was combined with concurrent hourly cloud cover and upper-air data obtained from the Caribou National Weather Service (NWS). Missing cloud cover and/or upper-air data values were interpolated or coded as missing, per USEPA guidance.

All necessary representative micrometeorological surface variables for inclusion into AERMET (surface roughness, Bowen ratio and albedo) were calculated using AERSURFACE from procedures recommended by USEPA.

Point-source parameters, used in the modeling are listed in Table III-1.

TABLE III-1 : Point Source Stack Parameters

Facility/Stack	Stack Base Elevation (m)	Stack Height (m)	GEP Stack Height (m)	Stack Diameter (m)	UTM Easting NAD83 (km)	UTM Northing NAD83 (km)
CURRENT/PROPOSED						
IN Madison						
• Boiler Stack	79.30	36.58	48.91	1.83	429.918	4959.830
Madison Paper Industries						
• Boiler Stack	76.20	65.00	65.00	2.05	429.953	4960.863
1987 BASELINE						
IN Madison						
IN Madison had no emissions sources in the 1987 baseline year, no credit to be taken.						
Madison Paper Industries						
• Boiler Stack	76.20	65.00	65.00	2.05	429.953	4960.863
1977 BASELINE						
IN Madison						
IN Madison had no emissions sources in the 1977 baseline year, no credit to be taken.						

Emission parameters for MAAQS, NAAQS and increment modeling are listed in Table III-2. The emission parameters for IN Madison are based on the maximum license allowed (worst-case) operating configuration. For the purposes of determining PM_{10}, all PM emissions were conservatively assumed to convert to PM_{10}. For the purposes of determining NO_2 impacts, the Ambient Ratio Method (ARM) was applied. The ARM is the second-tier screening approach for

calculating NO_x emissions and assumes that 75 percent of NO_x is converted to NO_2. USEPA has established a national default ARM value of 0.75.

TABLE III-2 : Stack Emission Parameters

Facility/Stack	Averaging Periods	SO_2 (g/s)	PM_{10} (g/s)	NO_2 (g/s)	CO (g/s)	Stack Temp (K)	Stack Velocity (m/s)
MAXIMUM LICENSE ALLOWED							
IN Madison							
• Boiler Stack	All	0.71	0.43	4.59	10.21	449.82	6.19
Madison Paper Industries							
• Boiler Stack	All	nm	nm	18.28	nm	449.82	14.51
BASELINE – 1987							
IN Madison							
IN Madison had no emissions sources in the 1987 baseline year, no credit to be taken.							
Madison Paper Industries							
• Boiler Stack	All	nm	nm	7.09	nm	449.82	8.78
BASELINE – 1977							
IN Madison							
IN Madison had no emissions sources in the 1977 baseline year, no credit to be taken.							

C. Single Source Modeling Impacts

AERMOD-PRIME refined modeling, using five years of sequential meteorological data, was performed for a total of three operating scenarios that represented maximum, typical and minimum operations.

The modeling results for IN Madison alone are shown in Tables III-3. Maximum predicted impacts that exceed their respective significance level are indicated in boldface type. No further modeling was required for pollutants that did not exceed their respective significance levels. In addition, predicted impacts for all pollutants are less than their respective de minimis levels, therefore, no pre-construction monitoring will be required.

TABLE III-3 : Maximum AERMOD-PRIME Impacts from IN Madison Alone

Pollutant	Averaging Period	Max Impact ($\mu g/m^3$)	Receptor UTM E (km)	Receptor UTM N (km)	Receptor Elevation (m)	De Minimis Level ($\mu g/m^3$)	Class II Significance Level ($\mu g/m^3$)
SO_2	1-hour	9.81[1]	429.925	4959.575	85.59	-	**10[2]**
	3-hour	6.70	429.900	4959.550	80.77	-	**25**
	24-hour	3.19	430.000	4959.350	85.83	**13**	**5**
	Annual	0.21	429.950	4959.400	80.17	-	**1**
PM_{10}	24-hour	1.90	430.000	4959.350	85.83	**10**	**5**
	Annual	0.13	429.950	4959.400	80.17	-	**1**
NO_2	1-hour	**63.05[3]**	-	-	-	-	**10[4]**
	Annual	**1.32**	429.950	4959.400	80.17	**14**	**1**
CO	1-hour	187.40	429.925	4959.575	85.59	-	**2000**
	8-hour	67.93	429.900	4959.550	80.77	**575**	**500**

[1] Average of H1H (high-1st-high) concentrations for each of the five years of meteorological data
[2] Interim Significant Impact Level (SIL) adopted by Maine
[3] Average of maximum predicted concentrations for each of the five years of meteorological data
[4] Interim Significant Impact Level (SIL) adopted by NESCAUM states

While $PM_{2.5}$ modeling was not explicitly addressed as part of the AERMOD modeling analysis, USEPA determined that IN Madison should demonstrate that they will not cause or contribute to violations of the $PM_{2.5}$ NAAQS. Results from the ambient air quality analysis for PM_{10} demonstrate that the maximum 24-hour and annual predicted impacts were 1.9 ug/m^3 and 0.13 ug/m^3, respectively. Based on the very conservative assumption that all PM_{10} emissions are converted to $PM_{2.5}$, these results, when coupled with representative background values of 17 ug/m^3 and 4.1 ug/m^3 (24-hour and annual background values, respectively), indicate that IN Madison will not only meet the 24-hour and annual PM_{10} NAAQS, but will also meet 24-hour and annual $PM_{2.5}$ NAAQS of 35 ug/m^3 and 15 ug/m^3.

D. Combined Source Modeling Impacts

For predicted modeled impacts from IN Madison alone that exceeded significance levels, as indicated in boldface type in Table III-3, other sources not explicitly included in the modeling analysis must be accounted for by using representative background concentrations for the area.

Background concentrations, listed in Table III-4, are derived from representative rural background data for use in the Central Maine region.

TABLE III-4 : Background Concentrations

Pollutant	Averaging Period	Background Concentration ($\mu g/m^3$)	Date
NO_2	1-hour	47	2007 – 2009 [1]
	Annual	11	

[1] MicMac Site - Presque Isle

MEDEP examined other area sources whose impacts would be significant in or near IN Madison's significant impact area. Due to the applicant's location, extent of the significant impact area and nearby source's emissions, MEDEP has determined that only one other source would need to be included in combined-source modeling: Madison Paper Industries.

For pollutant averaging periods that exceeded significance levels, the maximum modeled impacts for all sources were added with conservative rural background concentrations to demonstrate compliance with MAAQS and NAAQS, as shown in Table III-5. Because impacts for all pollutants using this method meet MAAQS and NAAQS, no further modeling analyses need to be performed.

TABLE III-5 : Maximum AERMOD-PRIME Combined Source Impacts

Pollutant	Averaging Period	Max Impact ($\mu g/m^3$)	Receptor UTM E (km)	Receptor UTM N (km)	Receptor Elevation (m)	Back-Ground ($\mu g/m^3$)	Max Total Impact ($\mu g/m^3$)	MAAQS ($\mu g/m^3$)
NO_2	1-hour	**132.33**[1]	-	-	-	47	**179.33**	**188**
	Annual	**9.43**	429.950	4960.725	72.76	**11**	**20.43**	**100**

[1] Average of H8H (high-8th-high) concentrations for each of the five years of meteorological data

E. Increment

The AERMOD-PRIME refined model was used to predict IN Madison's maximum Class II increment impacts in all areas.

Results of the combined-source Class II increment analysis are shown in Tables III-6. All maximum predicted increment impacts were below increment standards. Because all predicted impacts were either insignificant or met increment standards, no further Class II SO_2, PM_{10} and NO_2 increment modeling for IN Madison needed to be performed.

TABLE III-6 : Class II Increment Consumption – IN Madison Alone

Pollutant	Averaging Period	Max Impact ($\mu g/m^3$)	Receptor UTM E (km)	Receptor UTM N (km)	Receptor Elevation (m)	Class II Increment ($\mu g/m^3$)
NO_2	Annual	**3.73**	429.950	4960.725	72.76	**25**

Federal regulations and 06-096 CMR 115 require that any new major source provide additional analyses of impacts that would occur as a direct result of the general, residential, commercial, industrial and mobile-source growth associated with the construction and operation of that source.

GENERAL GROWTH: Some increases in local emissions due to construction related activities are expected to occur for approximately 15 months, with the majority of emissions due to truck traffic (site preparation, concrete pouring, delivery of building materials, etc). Increases in potential emissions of NO_x due to commuting by construction workers will be temporary and short-lived. Fugitive particulate emissions of dust from construction-related activities will be minimized by the use of "Best Management Practices" for on-site construction.

RESIDENTIAL GROWTH: Population growth in the impact area of the proposed source can typically be used as a surrogate factor for the growth in emissions from residential combustion sources. It is expected that there will likely be a short-term increase of population due to construction-related activities, however, the support personnel required for the actual operation of the facility will more than likely be available from the local area. It is expected that no new significant residential growth will follow from this source.

COMMERCIAL AND INDUSTRIAL GROWTH: IN Madison will be constructed for the generation of steam only. No commercial or industrial growth is expected to occur as a result of this project.

MOBILE SOURCE AND AREA SOURCE GROWTH: Since area and mobile sources are considered minor sources of NO_2, their contribution to increment has to be evaluated. Technical guidance from the Environmental Protection Agency points out that screening procedures can be used to determine whether additional detailed analyses of minor source emissions are required. Compiling a minor source inventory may not be required if it can be shown that little or no growth has taken place in the impact area of the proposed source since the baseline date (February 8, 1988) was established. Emissions during the calendar year 1987 are used to determine baseline emissions. The population in Somerset County has increased approximately 1-2% since the minor source baseline date was established; therefore, no further assessment of additional area source growth of NO_2 increment is needed.

Any emissions associated with the minimal increases in vehicle miles traveled have been more than offset by decreases in NO_x emissions in terms of reduced average grams-per-vehicle-mile emission rates since the minor source baseline date was established. Therefore, no increase in actual NO_x emissions from mobile

sources is expected. No further detailed analyses of mobile NO_2 emissions are needed.

F. Class I Impacts

Based upon the distance from IN Madison to the nearest Class I area (121 kilometers) and the magnitude of emissions, the affected Federal Land Managers (FLMs) and MEDEP-BAQ have determined that an assessment of Class I increment standards and Air Quality Related Values (AQRVs) is not required.

G. Summary

In summary, it has been demonstrated that IN Madison in its proposed configuration will not cause or contribute to a violation of any MAAQS or NAAQS for SO_2, PM_{10}, NO_2 or CO; or any SO_2, PM_{10} or NO_2 averaging period Class II increment standards.

ORDER

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

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

The Department hereby grants Air Emission License A-1042-71-A-N subject to the following conditions.

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

STANDARD CONDITIONS

(1) Employees and authorized representatives of the Department shall be allowed access to the licensee's premises during business hours, or any time during which any emissions units are in operation, and at such other times as the Department deems necessary for the purpose of performing tests, collecting samples, conducting inspections, or examining and copying records relating to emissions (38 M.R.S.A. §347-C).

(2) The licensee shall acquire a new or amended air emission license prior to commencing construction of a modification, unless specifically provided for in Chapter 115. [06-096 CMR 115]

(3) Approval to construct shall become invalid if the source has not commenced construction within eighteen (18) months after receipt of such approval or if construction is discontinued for a period of eighteen (18) months or more. The Department may extend this time period upon a satisfactory showing that an extension is justified, but may condition such extension upon a review of either the control technology analysis or the ambient air quality standards analysis, or both. [06-096 CMR 115]

(4) The licensee shall establish and maintain a continuing program of best management practices for suppression of fugitive particulate matter during any period of construction, reconstruction, or operation which may result in fugitive dust, and shall submit a description of the program to the Department upon request. [06-096 CMR 115]

(5) The licensee shall pay the annual air emission license fee to the Department, calculated pursuant to Title 38 M.R.S.A. §353. [06-096 CMR 115]

(6) The license does not convey any property rights of any sort, or any exclusive privilege. [06-096 CMR 115]

(7) The licensee shall maintain and operate all emission units and air pollution systems required by the air emission license in a manner consistent with good air pollution control practice for minimizing emissions. [06-096 CMR 115]

(8) The licensee shall maintain sufficient records to accurately document compliance with emission standards and license conditions and shall maintain such records for a minimum of six (6) years. The records shall be submitted to the Department upon written request. [06-096 CMR 115]

(9) The licensee shall comply with all terms and conditions of the air emission license. The filing of an appeal by the licensee, the notification of planned changes or anticipated noncompliance by the licensee, or the filing of an

application by the licensee for a renewal of a license or amendment shall not stay any condition of the license. [06-096 CMR 115]

(10) The licensee may not use as a defense in an enforcement action that the disruption, cessation, or reduction of licensed operations would have been necessary in order to maintain compliance with the conditions of the air emission license. [06-096 CMR 115]

(11) In accordance with the Department's air emission compliance test protocol and 40 CFR Part 60 or other method approved or required by the Department, the licensee shall:

A. perform stack testing to demonstrate compliance with the applicable emission standards under circumstances representative of the facility's normal process and operating conditions:
   1. within sixty (60) calendar days of receipt of a notification to test from the Department or EPA, if visible emissions, equipment operating parameters, staff inspection, air monitoring or other cause indicate to the Department that equipment may be operating out of compliance with emission standards or license conditions; or
   2. pursuant to any other requirement of this license to perform stack testing.

B. install or make provisions to install test ports that meet the criteria of 40 CFR Part 60, Appendix A, and test platforms, if necessary, and other accommodations necessary to allow emission testing; and

C. submit a written report to the Department within thirty (30) days from date of test completion.

[06-096 CMR 115]

(12) If the results of a stack test performed under circumstances representative of the facility's normal process and operating conditions indicate emissions in excess of the applicable standards, then:

A. within thirty (30) days following receipt of such test results, the licensee shall re-test the non-complying emission source under circumstances representative of the facility's normal process and operating conditions and in accordance with the Department's air emission compliance test protocol and 40 CFR Part 60 or other method approved or required by the Department; and

B. the days of violation shall be presumed to include the date of stack test and each and every day of operation thereafter until compliance is demonstrated under normal and representative process and operating conditions, except to the extent that the facility can prove to the satisfaction of the Department that there were intervening days during which no violation occurred or that the violation was not continuing in nature; and

C. the licensee may, upon the approval of the Department following the successful demonstration of compliance at alternative load conditions, operate under such alternative load conditions on an interim basis prior to a

demonstration of compliance under normal and representative process and operating conditions.
[06-096 CMR 115]

(13) Notwithstanding any other provisions in the State Implementation Plan approved by the EPA or Section 114(a) of the CAA, any credible evidence may be used for the purpose of establishing whether a person has violated or is in violation of any statute, regulation, or Part 70 license requirement. [06-096 CMR 115]

(14) The licensee shall maintain records of malfunctions, failures, downtime, and any other similar change in operation of air pollution control systems or the emissions unit itself that would affect emission and that is not consistent with the terms and conditions of the air emission license. The licensee shall notify the Department within two (2) days or the next state working day, whichever is later, of such occasions where such changes result in an increase of emissions. The licensee shall report all excess emissions in the units of the applicable emission limitation. [06-096 CMR 115]

(15) Upon written request from the Department, the licensee shall establish and maintain such records, make such reports, install, use and maintain such monitoring equipment, sample such emissions (in accordance with such methods, at such locations, at such intervals, and in such a manner as the Department shall prescribe), and provide other information as the Department may reasonably require to determine the licensee's compliance status. [06-096 CMR 115]

SPECIFIC CONDITIONS

(16) **Boiler 1** (135 MMBtu/hr)

A. Fuel and Steam

1. IN Madison may install and operate Boiler 1. The boiler shall fire a blend of wet bark and clean wood residuals. The fuel shall be limited to clean wood sources including bark, wood chips, untreated wood residuals, hogged fuel, slash, and processed clean pallets.
2. Fuel records shall be kept on a monthly and 12 month rolling total basis.
   a. IN Madison shall submit a fuel measurement plan to the Department for approval within 270 days from initial startup.
   b. The fuel records shall be kept in accordance with IN Madison's fuel measurement plan.
3. IN Madison shall keep records of steam production on a 24 hour basis.

[06-096 CMR 115, BACT]

B. New Source Performance Standards

1. The boiler is subject to 40 CFR Part 60, Subparts A and Db and shall meet all applicable requirements, including notifications, maintenance of records, and submittal of reports as required by the Subparts.
2. 40 CFR Part 60 Subpart Db requires maintaining records of the amount of fuels combusted each day and calculation of annual capacity factor for each calendar quarter. This requirement was directed toward multi-fuel boilers to determine the annual capacity firing fossil fuel. EPA Region I determined this requirement is not meant to apply to 100% wood fired systems. However, IN Madison shall maintain monthly fuel use records and determine an annual capacity factor on a 12 month rolling average basis with the new annual capacity calculated at the end of each month and submitted annually.

[40 CFR, Part 60, Subparts A and Db]

C. Particulate Matter Control

Particulate matter emissions from the boiler shall be controlled by the operation and maintenance of a multicyclone separator followed by an electrostatic precipitator (ESP). IN Madison shall operate all ESP fields during normal operations of the boiler. ESP secondary current and secondary voltage shall be recorded once per day when the facility is in operation.

Upon written notification to the Department, and in accordance with the Bureau of Air Quality's Air Emission Compliance Test Protocol, IN Madison may perform additional particulate emission testing to demonstrate compliance with alternative operating scenarios for the ESP and upon such successful demonstration, operate in accordance with the alternative operating scenarios. Under no circumstances shall IN Madison be relieved of its obligation to meet its licensed emission limits.

[06-096 CMR 115, BACT]

D. Emission Limits

Emissions from the boiler shall not exceed the following [06-096 CMR 115, BACT]:

Pollutant	lb/MMBtu	Averaging Time	Compliance Method
PM	0.025	-	40 CFR Part 60, Appendix A
PM_{10}	0.025	-	40 CFR Part 60, Appendix A; 40 CFR Part 51, Appendix M
NO_X	0.27	24 hr block ave [a]	Initial stack test then alternative compliance demonstration
CO	0.6	30 day rolling ave [a]	Initial stack test then alternative compliance demonstration

[a] The initial compliance test for both NO_X and CO lb/MMBtu shall be based on a 1 hour average. The subsequent alternative compliance demonstration may be based on the averaging times listed above.

Pollutant	lb/hr	Compliance Method
PM	3.38	40 CFR Part 60, Appendix A
PM_{10}	3.38	40 CFR Part 60, Appendix A; 40 CFR Part 51, Appendix M
SO_2	5.67	Fuel Use Recordkeeping or 40 CFR Part 60, Appendix A
NO_X	36.45	40 CFR Part 60, Appendix A
CO	81.0	40 CFR Part 60, Appendix A
VOC	6.75	40 CFR Part 60, Appendix A Method 25 or 25A
Lead	0.01	40 CFR Part 60, Appendix A

E. Opacity Limit

1. Visible emissions from the boiler shall not exceed 20% opacity on a 6 (six)-minute average except for one 6-minute period per hour of not more than 27% opacity. This opacity standard shall apply at all times, except during periods of startups and shutdown. [40 CFR Part 60, Subpart Db]

2. IN Madison shall use an indicator set point of 9% opacity at which level an inspection of the particulate control parameters of the multiclone and ESP will be initiated when an opacity reading of 9% for ten consecutive six-minute block average periods is reached. An opacity reading of 9% for ten consecutive six-minute block average periods will be considered an excursion that shall be reported in the quarterly report, along with corrective action taken.

F. Emission Limit Compliance Demonstration

1. IN Madison shall conduct PM emission testing to demonstrate compliance at least once every five calendar years on the boiler.

   IN Madison shall perform two $PM_{2.5}$ stack tests within a 16 month period after startup of the boiler. The stack tests shall be performed in accordance with the appropriate EPA method or other method as approved by EPA and the Department. IN Madison shall submit an amendment application to the Department which shall include a proposed $PM_{2.5}$ limit for the boiler within 6 month of the last test date.

2. Compliance with the NO_X lb/MMBtu emission limit shall be on a 24-hour block average basis following the initial stack test which will be on a 1 hour basis. IN Madison's submitted alternative compliance demonstration shall be used thereafter. The NO_X lb/hr limit shall be demonstrated in accordance with an approved 40 CFR Part 60 Appendix A method(s) upon request.
3. Compliance with CO lb/MMBtu emission limit shall be on a 30-day rolling average following the initial stack test which will be on a 1 hour basis. IN Madison's submitted alternative compliance demonstration shall be used thereafter. The CO lb/hr limit shall be demonstrated in accordance with an approved 40 CFR Part 60 Appendix A method(s) upon request.
4. Compliance with the SO_2 lb/hr limits shall be demonstrated by either recordkeeping documenting the sulfur content of the fuels in conjunction with firing rates (ie – using a representative fuel sample test result), or in accordance with an approved 40 CFR Part 60, Appendix A method(s) or other approved method(s).
5. Compliance with the VOC lb/hr limits shall be demonstrated by testing in accordance with 40 CFR Part 60, Appendix A, method 25 or 25A upon request.
6. Compliance with the opacity limit shall be demonstrated by means of a continuous opacity monitoring system (COM) operated in accordance with 06-096 CMR 117 and 40 CFR Part 60. IN Madison shall meet the monitoring requirements of 40 CFR Part 60.13 with regard to the sampling frequency of the COM.
7. Compliance with the lead lb/hr limits shall be demonstrated by testing in accordance with 40 CFR Part 60, Appendix A methods or other approved method(s) upon request.

[06-096 CMR 115, BACT]

G. COM Requirements

1. The COM required by this license shall meet the sampling and performance criteria specified in 40 CFR Part 51 Appendix P, and shall be operated in accordance with the appropriate requirements of 40 CFR Part 60 Appendix F, and 06-096 CMR 117, including.
   a. Conducting Relative Accuracy Testing (RATA) and/or Performance Audits in accordance with 06-096 CMR 117, and
   b. Developing and maintaining an updated quality assurance plan for the COM in accordance with 40 CFR Part 60, Appendix F and 06-096 CMR 117.

[06-096 CMR 117 and 40 CFR Part 60]

2. For the continuous opacity monitor (COM) required by this license, the licensee shall maintain records of the most current six year period and the records shall include:
   a. Documentation which shows monitor operational status during all source operating time, including specifics for calibration and audits; [06-096 CMR 117]
   b. Documentation that the COM is continuously accurate, reliable and operated in accordance with 06-096 CMR 117, 40 CFR Part 51, Appendix P, and 40 CFR Part 60, Appendices B and F; [06-096 CMR 117 and 40 CFR Part 60]
   c. Records of all measurements, performance evaluations, calibration checks, and maintenance or adjustments for the COM as required by 40 CFR Part 51 Appendix P. [06-096 CMR 117 and 40 CFR Part 51]

H. Installation of SNCR Piping

IN Madison shall install the injection ports and piping allowances for SNCR control during construction of the boiler, however IN Madison will not be required to operate SNCR at this time. [06-096 CMR 115, BACT]

I. HAPs

IN Madison shall be limited to 10 tons/year of any single HAP and 25 tons/year of total HAPs from the boiler. Records shall be maintained on a 12 month rolling total basis. [06-096 CMR 115, BACT]

J. Stack

Emissions from the boiler shall exhaust through a stack which shall be at least 120 feet (36.58 m) above ground level. [06-096 CMR 115, BACT]

K. Startup Definition Submittal

Within 270 days from initial startup, IN Madison shall submit an air emission license amendment application to the Department defining startup for the boiler, including startup timeframes and any startup operating set points (ie temperature). [06-096 CMR 115, BACT]

L. NO_X and CO Alternative Compliance Demonstration Submittal

Within 270 days from initial startup, IN Madison shall submit an air emission license amendment application to the Department defining an alternative compliance demonstration for NO_X and CO.

M. National Emission Standards for Hazardous Air Pollutants

IN Madison shall meet any applicable standards of 40 CFR Part 63, Subpart DDDDD and 40 CFR Part 63, Subpart JJJJJJ once the regulations are promulgated.

(17) **Emergency Generator 1** (400 kW)

A. The emergency generator shall fire only diesel fuel with a maximum sulfur content not to exceed 15 ppm. [40 CFR 60.4207(b)]

B. Compliance with the sulfur content limits shall be based on fuel records from the supplier showing the type of fuel delivered and the sulfur content of the fuel. [06-096 CMR 115, BACT]

C. The emergency generator shall be limited to 100 hr/yr of operation for maintenance checks and readiness testing. The emergency generator shall be limited to 500 hours per year of total operation. Both of these limits are based on a 12 month rolling total. Compliance shall be demonstrated by a written log of all generator operating hours including the reason(s) for operation. [40 CFR 60.4211(E) and 06-096 CMR 115, BACT]

D. The emergency generator shall be equipped with a non-resettable hour meter. [40 CFR 60.4209(a)]

E. Emissions from the emergency generator shall not exceed the following [06-096 CMR 115, BPT]:

Emission Unit	PM (lb/hr)	PM_{10} (lb/hr)	SO_2 (lb/hr)	NO_x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Emergency Gen.	0.04	0.04	0.0067	4.12	0.41	0.047

F. The emergency generator is subject to PM, CO, and NO_x + VOC emission requirements set forth in 40 CFR 60, Subpart IIII. Compliance with these emission requirements shall be demonstrated by certification from the manufacturer that this engine class meets the appropriate Tier standards. [40 CFR 60, Subpart IIII]

G. Visible emissions from the emergency generator shall not exceed 20% opacity on a six (6) minute block average, except for no more than two (2) six (6) minute block averages in a continuous 3-hour period. [06-096 CMR 101]

H. IN Madison shall operate and maintain the emergency generator in accordance with the manufacturer's written instructions. IN Madison shall not change settings that are not approved in writing by the manufacturer. [40 CFR 60.4211(a)]

I. IN Madison shall meet all applicable requirements of 40 CFR Part 60, Subpart IIII and 40 CFR Part 63, Subpart ZZZZ.

(18) **Fugitive Emissions**

Visible emissions from a fugitive emission source (including stockpiles, fuel and ash handling, and roadways) shall not exceed an opacity of 20%, except for no more than five (5) minutes in any 1-hour period. Compliance shall be determined by an aggregate of the individual fifteen (15)-second opacity observations which exceed 20% in any one (1) hour. [06-096 CMR 101]

(19) **General Process Sources**

Visible emissions from any general process source shall not exceed an opacity of 20% on a six (6) minute block average basis, except for no more than one (1) six (6) minute block average in a 1-hour period. [06-096 CMR 101]

(20) **Quarterly Reporting**

IN Madison shall submit a Quarterly Report to the Bureau of Air Quality within 30 days after the end of each calendar quarter, detailing the following for the control equipment, parameter monitors, and Continuous Opacity Monitoring Systems (COMS) required by this license:

A. All control equipment downtimes and malfunctions;
B. All COMS downtimes and malfunctions;
C. All parameter monitor downtimes and malfunctions;
D. All events of excess emissions and operational limitations set by this Order, Statute, state or federal regulations, as appropriate. The following information shall be reported for each excess emissions event;
    1. Standard exceeded;
    2. Date, time, and duration of excess emissions event;
    3. Amount of air contaminant emitted in excess of the applicable emission standard expressed in the units of the standard;
    4. A description of what caused the excess emissions event;
    5. The strategy employed to minimize the excess emissions event; and
    6. The strategy employed to prevent reoccurrence.
E. A report certifying there were no excess emissions, if that is the case.

[06-096 CMR 117]

(21) **Annual Emission Statement**
In accordance with *Emission Statements*, 06-096 CMR 137 (as amended), the licensee shall annually report to the Department the information necessary to accurately update the State's emission inventory by means of:

1) A computer program and accompanying instructions supplied by the Department; or
2) A written emission statement containing the information required in 06-096 CMR 137.

The emission statement must be submitted as specified by the date in 06-096 CMR 137.

(22) IN Madison shall notify the Department within 48 hours and submit a report to the Department on a quarterly basis if a malfunction or breakdown in any component causes a violation of any emission standard (38 M.R.S.A. §605).

(23) IN Madison shall apply for a Part 70 license within 12 months of commencing operation as provided in 40 CFR Part 70.5. [06-096 CMR 140]

DONE AND DATED IN AUGUSTA, MAINE THIS 15th DAY OF December, 2010.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: James P. Brooks for
BETH NAGUSKY, ACTING 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: July 6, 2010
Date of application acceptance: July 19, 2010

Date filed with the Board of Environmental Protection:

This Order prepared by Kathleen E. Tarbuck, Bureau of Air Quality.

FILED
DEC 17 2010
BOARD OF ENVIRONMENTAL PROT.
STATE OF MAINE