



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

Player Holdings, LLC
Aroostook County
Ashland, Maine
A-1155-71-E-A

Departmental
Findings of Fact and Order
Air Emission License
Amendment #3

Findings of Fact

After review of the air emission 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

Player Holdings, LLC (MaineFlame) was issued Air Emission License A-1155-71-A-N on February 25, 2021, for the operation of emission sources associated with their extruded log manufacturing facility. The license was subsequently amended as follows:

Amendment #	Date Issued	Brief Description
A-1155-71-B-M	October 28, 2022	Clarification of stack testing timing.
A-1155-71-D-M	September 2, 2025	Notate the addition of a pellet extruder machine.

MaineFlame has requested an amendment to their license in order to make the following changes:

1. Add a new Rotating Indirect Autoclave (RIDA);
2. Add a 29.0 MMBtu/hr propane boiler to provide steam to the new process;
3. Increase the height of Stack #1 to 100 feet above ground level (AGL).

This license completes the processing of applications with the following submission number(s) as assigned by the Department: 594294 (accepted 03/08/2023).

The equipment addressed in this license amendment is located at 86 Clark Siding Road, Ashland, Maine.

B. Emission Equipment

The following equipment is addressed in this air emission license amendment:

Boilers

Equipment	Max. Capacity (MMBtu/hr)	Maximum Firing Rate	Fuel Type	Date of Manuf.	Date of Install.	Stack #
Boiler #1	29.0	315.2 gal/hr	propane	2023	2023	Stack #2

Process Equipment

Equipment	Production Rate	Pollution Control Equipment	Stack #
RIDA	8.1 tons/hr	Wet Scrubber	Stack #1

C. Application Classification

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

The modification of a minor source is considered a major or minor modification based on whether or not expected emission increases exceed the "Significant Emissions" levels as defined in the Department's *Definitions Regulation*, 06-096 Code of Maine Rules (C.M.R.) ch. 100. The emission increases are determined by subtracting the current licensed annual emissions preceding the modification from the maximum future licensed annual emissions, as follows:

Pollutant	Current License (tpy)	Future License (tpy)	Net Change (tpy)	Significant Emissions Levels
PM	26.3	29.2	2.9	100
PM ₁₀	26.3	29.9	3.6	100
PM _{2.5}	9.9	13.7	3.8	100
SO ₂	1.0	1.1	0.1	100
NO _x	11.3	18.0	6.7	100
CO	18.0	28.5	10.5	100
VOC	22.8	24.2	1.4	100

This modification is determined to be a minor modification and has been processed as such.

D. Facility Classification

The facility is licensed as follows:

- As a natural minor source of criteria pollutants, because no license restrictions are necessary to keep facility emissions below major source thresholds for criteria pollutants; and
- As an area source of hazardous air pollutants (HAP), because the licensed emissions are below the major source thresholds for HAP.

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 C.M.R. ch. 100. Separate control requirement categories exist for new and existing equipment.

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

B. Boiler #1

MaineFlame installed Boiler #1 in 2023 with the approval of the Department for limited temporary operation to produce process steam in support of trial operation of the proposed RIDA in accordance with 06-096 C.M.R. 115, Appendix B, Section A(114). MaineFlame has proposed the permanent installation of the RIDA system along with Boiler #1. Boiler #1 fires propane and is rated at 29.0 MMBtu/hr exhausting through its own stack.

1. BACT Findings

MaineFlame submitted a BACT analysis for control of emissions from Boiler #1.

a. Particulate Matter (PM, PM₁₀, PM_{2.5})

MaineFlame has proposed to burn only low-ash content fuel (propane) in Boiler #1 and to optimize combustion conditions using an oxygen trim system. An oxygen (O₂) trim system monitors the O₂ content in the exhaust gas and automatically adjusts the fuel valve or air damper to optimize the air-to-fuel ratio. Additional add-on pollution controls are not economically feasible.

BACT for PM/PM₁₀/PM_{2.5} emissions from Boiler #1 is the use of an oxygen trim system, firing propane, and the emission limits listed in the tables below.

b. Sulfur Dioxide (SO₂)

MaineFlame has proposed to fire only propane in Boiler #1. The use of this fuel results in minimal emissions of SO₂, and additional add-on pollution controls are not economically feasible.

BACT for SO₂ emissions from Boiler #1 is the use of propane and the emission limits listed in the tables below.

c. Nitrogen Oxides (NO_x)

MaineFlame considered several control strategies for the control of NO_x including Selective Catalytic Reduction (SCR), Selective Non-Catalytic Reduction (SNCR), water/steam injection, flue gas recirculation (FGR), low-NO_x burners, and use of oxygen trim systems.

Both SCR and SNCR are technically feasible control technologies for minimizing NO_x. Both methods include injection of a NO_x reducing agent, typically ammonia or urea, into the boiler combustion gases, where the reagent reacts with NO_x to form nitrogen and water. Each technology is effective within a specific temperature range, 500 – 1,200 °F for SCR and 1,400 – 1,600 °F for SNCR. However, both SCR and SNCR have the negative environmental impact of emissions of unreacted ammonia. In addition, due to the initial capital cost and the annual operating costs, these systems are typically only considered cost effective for units larger than Boiler #1.

Water/steam injection and FGR can attain similar NO_x reduction efficiencies through lowering burner flame temperature and thereby reducing thermal NO_x formation. However, both control strategies reduce the boiler's fuel efficiency, approximately 5% from water/steam injection but a lesser percentage from FGR.

Low NO_x burners are not available on this model of boiler. However, the NO_x emission rates provided by the manufacturer for Boiler #1 equipped with FGR and an oxygen trim system are less than half the uncontrolled emissions of NO_x for propane boilers listed in AP-42, Table 1.5-1, making this control strategy equivalent to operation of low-NO_x burners.

MaineFlame has proposed the use of FGR and an oxygen trim system on Boiler #1 as part of the BACT strategy.

BACT for NO_x emissions from Boiler #1 is determined to be the use of FGR, an oxygen trim system, and the emission limits listed in the tables below.

d. Carbon Monoxide (CO) and Volatile Organic Compounds (VOC)

MaineFlame considered several control strategies for the control of CO and VOC including oxidation catalysts, thermal oxidizers, and use of an oxygen trim system.

Oxidation catalysts and thermal oxidizers both have high capital, maintenance, and operational costs considering the size of the boiler in question. These controls were determined to be economically infeasible.

The use of an oxygen trim system has been determined to be feasible and has been selected as part of the BACT strategy for Boiler #1.

BACT for CO and VOC emissions from Boiler #1 is the use of an oxygen trim system and the emission limits listed in the tables below.

e. Emission Limits

The BACT emission limits for Boiler #1 were based on the following:

Propane

PM	– 0.2 lb/1,000 gal from AP-42 Table 1.5-1 dated 5/25
PM ₁₀ /PM _{2.5}	– 0.7 lb/1,000 gal from AP-42 Table 1.5-1 dated 5/25
SO ₂	– 0.7 lb/1,000 gal from AP-42 Table 1.5-1 dated 5/25
NO _x	– 0.053 lb/MMBtu based on manufacturer's guarantee
CO	– 7.5 lb/1,000 gal from AP-42 Table 1.5-1 dated 5/25
VOC	– 1.0 lb/1,000 gal from AP-42 Table 1.5-1 dated 5/25
Visible Emissions	– 06-096 C.M.R. ch. 115, BACT

The BACT emission limits for Boiler #1 are the following:

Unit	Pollutant	lb/MMBtu
Boiler #1	PM	0.002

Unit	PM (lb/hr)	PM ₁₀ (lb/hr)	PM _{2.5} (lb/hr)	SO ₂ (lb/hr)	NO _x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Boiler #1	0.06	0.22	0.22	0.02	1.52	2.38	0.32

2. Visible Emissions

Visible emissions from Boiler #1 shall not exceed 10% opacity on a six-minute block average basis.

3. New Source Performance Standards (NSPS): 40 C.F.R. Part 60, Subpart Dc

Due to its size, Boiler #1 is subject to *Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units* 40 C.F.R. Part 60, Subpart Dc for units greater than 10 MMBtu/hr manufactured after June 9, 1989. [40 C.F.R. § 60.40c]

MaineFlame shall comply with all requirements of 40 C.F.R. Part 60, Subpart Dc applicable to Boiler #1 including, but not limited to, the following:

a. Notifications

MaineFlame shall submit notification to EPA and the Department of the date of construction, anticipated start-up, and actual start-up. This notification shall include the design heat input capacity of the boiler and the type of fuel to be combusted. [40 C.F.R. § 60.48c(a)] MaineFlame submitted this Notification to EPA on April 24, 2024.

b. Reporting and Recordkeeping

(1) MaineFlame shall maintain records of the amounts of fuel combusted during each month. [40 C.F.R. § 60.48c(g)]

(2) The following address for EPA shall be used for any reports or notifications required to be copied to them:

U.S. Environmental Protection Agency, Region I
5 Post Office Square, Suite 100 (OES04-2)
Boston, MA 02109-3912
Attn: Air Compliance Clerk

(3) MaineFlame shall maintain records required by Subpart Dc for a period of two years following the date of the record. [40 C.F.R. § 60.48c(i)]

Note: Standard Condition (8) of this license requires all records be retained for six years; therefore, the two-year record retention requirement of Subpart Dc is satisfied by compliance with the more stringent six-year requirement.

4. National Emission Standards for Hazardous Air Pollutants (NESHAP):
40 C.F.R. Part 63, Subpart JJJJJJ

Boiler #1 is not subject to the National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources, 40 C.F.R. Part 63, Subpart JJJJJJ. Propane-fired units are exempt from the requirements of this regulation. [40 C.F.R. §§ 63.11195(e)]

C. Rotating Indirect Autoclave (RIDA)

On March 8, 2023, MaineFlame submitted an application for an air emission license minor modification for the construction and operation of a steam-fractured pellet manufacturing process at its existing facility. This equipment includes Boiler #1, addressed above, as well as the RIDA pressure vessel with associated wet scrubber. In the RIDA, raw biomass material will be subjected to high pressure and temperature steam for a short period of time, after which the steam is released and vented through a wet scrubber before being exhausted through Stack #1. The wet scrubber is a horizontal spray chamber, where the process steam from the RIDA is condensed and collected by being exposed to a continuous spray of atomized water. This serves to both cool and condense the RIDA exhaust before it is vented through Stack #1, and serves as a control for both condensable and filterable PM. This steam-processed biomass will be processed in the RIDA in batches and stored due to the disparity in processing rates between the RIDA and Dryer #1. When enough material has been produced by the RIDA, it will be dried in the existing Dryer #1 and then processed into pellets in a mechanical pelletizer.

A trial operation was authorized by the Department on May 22, 2023, for MaineFlame to operate the RIDA and supporting equipment for the purpose of gathering emissions data to support assumptions made in the application's emissions calculations. Stack tests performed in October 2024 and February 2025 showed that processing of biomass material in the RIDA prior to the material being dried in the existing dryer yielded PM, PM₁₀, PM_{2.5}, NO_x, and CO emissions from Stack #1 that were much higher than originally calculated. However, emissions solely from the RIDA were found to have a minimal contribution to overall stack emissions. Thus, the unexpected higher emissions appear to come from the dryer.

MaineFlame has proposed to reconfigure the order of the process by passing the raw biomass material through Dryer #1 first before processing it through the RIDA and finally pelletizing the resulting material.

In the BACT analysis performed by MaineFlame, which was supported by the October 2024 stack testing results, it was determined that operation of the RIDA coupled with the wet scrubber would increase emissions from Stack #1 by 0.6 lb/hr each of PM, PM₁₀ and PM_{2.5}. Therefore, the proposed configuration of the RIDA

will be such that the only material processed through it will be biomass which has been dried by Dryer #1.

1. BACT Emission limits

Unit	PM (lb/hr)	PM ₁₀ (lb/hr)	PM _{2.5} (lb/hr)	SO ₂ (lb/hr)	NO _x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
RIDA	0.6	0.6	0.6	Neg.	Neg.	Neg.	Neg.

Emissions from the RIDA and Dryer #1 both exhaust through Stack #1. When both are in operation at the same time, the total emissions limit will be the sum of both processes. When either unit is operating alone, the emissions limit from Stack #1 will revert to the respective limits for each process.

2. The addition of the RIDA and wet scrubber will not change the visible emissions requirements of Stack #1 addressed in Air Emission License A-1155-71-A-N.
3. MaineFlame shall demonstrate compliance with the above emission limits within 30 days from the commencement of operation of the RIDA. Such demonstration may be performed alone or in combination with the operation of Dryer #1.

D. Stack Height Increase

MaineFlame provided a revised ambient air quality impact modeling analysis with the amendment application. It demonstrated that an increase in the height of the stack would be required to avoid violating National Ambient Air Quality Standards due to the stack velocity recorded during emissions testing being substantially lower than what included in the previous modeling analysis conducted in November 2020. The revised height requirement for Stack #1 is 100 ft above ground level. MaineFlame completed the installation of the additional stack sections in 2024 in accordance with the trial operation of the RIDA and associated equipment.

E. Emissions Statements

MaineFlame is subject to emissions inventory requirements contained in *Emission Statements*, 06-096 C.M.R. ch. 137. MaineFlame shall maintain the following records in order to comply with this rule:

1. Hours of operation of Burner #1 and Dryer #1 on a monthly and 12-month rolling total basis;
2. Gallons of propane fired in Boiler #1;

3. Tons of wood dried (ODT) through Dryer #1 on a monthly and calendar year basis; and
4. Tons of wood processed through the RIDA on a monthly and calendar year basis.

Every third year, or as requested by the Department, MaineFlame shall report to the Department emissions of hazardous air pollutants as required pursuant to 06-096 C.M.R. ch. 137, § (3)(C). The next report is due no later than May 15, 2027, for emissions occurring in calendar year 2026. The Department will use these reports to calculate and invoice for the applicable annual air quality surcharge for the subsequent three billing periods. MaineFlame shall pay the annual air quality surcharge, calculated by the Department based on these reported emissions of hazardous air pollutants, by the date required in Title 38 M.R.S. § 353-A(3). [38 M.R.S. § 353-A(1-A)]

F. 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 and establishing the facility's potential to emit (PTE). Only licensed equipment is included, i.e., emissions from insignificant activities are excluded. Similarly, unquantifiable fugitive particulate matter emissions are not included except when required by state or federal regulations. Maximum potential emissions were calculated based on the following assumptions:

- Operating Burner #1 and Dryer #1 for 5,000 hr/yr;
- Operating Boiler #1 for 8,760 hr/yr; and
- Operating the RIDA for 8,760 hr/yr.

This information does not 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	PM _{2.5}	SO ₂	NO _x	CO	VOC
Stack #1 Total	28.9	28.9	12.7	1.0	11.3	18.0	22.8
Boiler #1	0.3	1.0	1.0	0.1	6.7	10.5	1.4
Total TPY	29.2	29.9	13.7	1.1	18.0	28.5	24.2

Pollutant	Tons/year
Single HAP	7.9
Total HAP	19.9

III. Ambient Air Quality Analysis

A. Overview

A refined modeling analysis was performed to show that emissions from MaineFlame, in conjunction with other sources, will not cause or contribute to violations of National Ambient Air Quality Standards (NAAQS) for SO₂, PM₁₀, PM_{2.5}, NO₂, or CO or to Class II increments for SO₂, PM₁₀, PM_{2.5}, or NO₂.

Since MaineFlame is a minor source undergoing a minor modification, it has been determined that an assessment of Class I Air Quality Related Values (AQRVs) is not required.

B. Model Inputs

The AERMOD dispersion model was used to address NAAQS and increment impacts 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 Department and the United States Environmental Protection Agency (USEPA). The regulatory version of the AERMOD model and its associated processors were used to conduct the analyses.

A valid five-year, hourly, off-site, meteorological database was used in the refined modeling analysis. Five years of wind data (2003-2007) were collected at a height of 10 meters at the Department's meteorological monitoring site located at the Presque Isle Regional Office. Surface data, collected at the Caribou National Weather Service (NWS) site, were substituted for missing Presque Isle wind data. All other missing data were interpolated or coded as missing, pursuant to USEPA guidance.

In addition, hourly Caribou NWS data, from the same time period, were used to supplement the primary surface dataset for the required AERMET variables that were not explicitly collected for the primary meteorological dataset.

Presque Isle/Caribou surface meteorological data were combined with concurrent hourly cloud cover and upper-air data also obtained from the Caribou NWS. Missing cloud cover and/or upper-air data values were interpolated or coded as missing, pursuant to USEPA guidance.

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

Point-source stack parameters used in the modeling for MaineFlame are listed in Table III-1.

C. TABLE III-1: Point Source Stack Parameters

Stack	Stack Base Elevation (m)	Stack Height (m)	GEP Stack Height (m)	Stack Diameter (m)	UTM Easting NAD83 (m)	UTM Northing NAD83 (m)
CURRENT/PROPOSED						
Load Case 1						
• Stack #1 (Dryer & RIDA)	188.73	30.48	20.40	0.76	544,597	5,163,287
• Stack #2 (Boiler #1)	188.73	15.24	20.40	0.76	544,593	5,163,321
2012 BASELINE (PM_{2.5} INCREMENT)						
• MaineFlame did not exist during the 2012 baseline year, no PM _{2.5} credits to be taken.						
1987 BASELINE (NO₂ INCREMENT)						
• MaineFlame did not exist during the 1987 baseline year, no NO ₂ credits to be taken.						
1977 BASELINE (SO₂/PM₁₀ INCREMENT)						
• MaineFlame did not exist during the 1977 baseline year, no SO ₂ /PM ₁₀ credits to be taken.						

Emission and other stack parameters used in the modeling for MaineFlame are listed in Table III-2.

For the purpose of determining predicted impacts, the following assumptions were used:

- all NO_x emissions were conservatively assumed to convert to NO₂;
- all particulate emissions were conservatively assumed to convert to PM₁₀; and
- all PM_{2.5} emissions were explicitly modeled as PM_{2.5}.

D. TABLE III-2 : Emission and Stack Parameters

Stack	SO ₂ (g/s)	PM ₁₀ (g/s)	PM _{2.5} (g/s)	NO _x (g/s)	CO (g/s)	Stack Temp (K)	Stack Velocity (m/s)
MAXIMUM LICENSE ALLOWED							
Load Case 1							
• Stack #1 (Dryer 100% & RIDA 100%)	0.045	1.403	0.584	0.567	0.907	382.0	19.78
• Stack #2 (Boiler 100%)	0.001	0.028	0.028	0.192	0.298	425.9	6.30
Load Case 2							
• Stack #1 (Dryer AT & RIDA 100%)	0.045	0.676	0.575	0.165	0.329	382.0	14.33
• Stack #2 (Boiler 40%)	0.0004	0.011	0.011	0.077	0.119	425.9	2.52
Load Case 3							
• Stack #1 (Dryer 75%)	0.034	0.993	0.378	0.425	0.680	382.0	14.71
2012 BASELINE (PM_{2.5} INCREMENT)							
• MaineFlame did not exist during the 2012 baseline year, no PM _{2.5} credits to be taken.							
1987 BASELINE (NO₂ INCREMENT)							
• MaineFlame did not exist during the 1987 baseline year, no NO ₂ credits to be taken.							
1977 BASELINE (SO₂/PM₁₀ INCREMENT)							
• MaineFlame did not exist during the 1977 baseline year, no SO ₂ /PM ₁₀ credits to be taken.							

E. Single Source Modeling Impacts

The significant impact model results for MaineFlame alone are shown in Table III-3. Maximum predicted impacts that exceed their respective significance level are indicated in boldface type. For comparison to the Class II significance levels, the impacts for 24-hour and annual PM_{2.5}, 1-hour NO₂, and 1-hour SO₂ were conservatively based on the maximum High-1st-High predicted values, averaged over five years of meteorological data. All other pollutants/averaging periods were conservatively based on their maximum High-1st-High predicted values. No additional refined NAAQS or increment modeling was required for pollutants that did not exceed their respective significance levels.

F. TABLE III-3 : Maximum AERMOD-PRIME Significant Impact Results

Pollutant	Averaging Period	Max Impact ($\mu\text{g}/\text{m}^3$)	Receptor UTM E (m)	Receptor UTM N (m)	Receptor Elevation (m)	Class II Significance Level ($\mu\text{g}/\text{m}^3$)	Load Case
SO ₂	1-hour	4.79	545,062	5,162,616	241.16	7.9	2
SO ₂	3-hour	3.27	545,112	5,162,666	236.11	25	2
SO ₂	24-hour	0.79	545,262	5,163,216	231.27	5	2
SO ₂	Annual	0.05	544,962	5,162,616	235.54	1	2
PM ₁₀	24-hour	18.68	545,412	5,162,216	235.36	5	1
PM ₁₀	Annual	1.38	545,012	5,162,616	238.78	1	1
PM _{2.5}	24-hour	6.75	544,061	5,162,716	233.12	1.2	2
PM _{2.5}	Annual	0.74	544,571	5,163,346	188.25	0.2	1
NO ₂	1-hour	70.49	544,592	5,163,376	188.94	7.5	1
NO ₂	Annual	5.02	544,572	5,163,346	188.25	1	1
CO	1-hour	200.30	544,582	5,163,316	188.51	2,000	1
CO	8-hour	88.97	544,552	5,163,366	187.37	500	1

G. Combined Source Modeling Impacts

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 Northern Maine region.

TABLE III-4 : Background Concentrations

Pollutant	Averaging Period	Background Concentration ($\mu\text{g}/\text{m}^3$)	Monitoring Site
PM ₁₀	24-hour	58	Presque Isle
PM _{2.5}	24-hour	12	Presque Isle
PM _{2.5}	Annual	4	Presque Isle
NO ₂	1-Hour	40	Presque Isle
NO ₂	Annual	4	Presque Isle

The Department examined other nearby sources to determine if any impacts would be significant in or near the MaineFlame significant impact area. Due to the location of the MaineFlame facility, extent of the predicted significant impact area,

and other nearby sources' emissions, the Department has determined that no other sources would be included in combined-source refined modeling.

The maximum modeled impacts, which were explicitly normalized to the form of their respective NAAQS, were added with conservative rural background concentrations to demonstrate compliance with NAAQS, as shown in Table III-5.

Because all significant pollutant/averaging period impacts using this method meet NAAQS, no further NAAQS modeling analyses need to be performed.

TABLE III-5 : Maximum Combined Source Impacts ($\mu\text{g}/\text{m}^3$)

Pollutant	Averaging Period	Max Impact ($\mu\text{g}/\text{m}^3$)	Receptor UTM E (m)	Receptor UTM N (m)	Receptor Elevation (m)	Back-ground ($\mu\text{g}/\text{m}^3$)	Total Impact ($\mu\text{g}/\text{m}^3$)	NAAQS ($\mu\text{g}/\text{m}^3$)
PM ₁₀	24-hour	18.14	545,412	5,163,216	235.36	58	76.14	150
PM _{2.5}	24-hour	3.67	545,012	5,162,666	235.15	12	15.67	35
PM _{2.5}	Annual	0.64	544,572	5,163,346	188.25	4	4.64	9
NO ₂	1-Hour	63.44	544,592	5,163,376	188.94	40	103.44	188
NO ₂	Annual	5.02	544,572	5,163,346	188.25	4	9.02	100

H. Class II Increment

Results of the Class II increment analysis are shown in Tables III-6. All modeled maximum increment impacts were below all increment standards. Because all predicted increment impacts meet increment standards, no additional Class II increment modeling needed to be performed.

TABLE III-6 : Class II Increment Impacts ($\mu\text{g}/\text{m}^3$)

Pollutant	Averaging Period	Max Impact ($\mu\text{g}/\text{m}^3$)	Receptor UTM E (m)	Receptor UTM N (m)	Receptor Elevation (m)	Class II Increment ($\mu\text{g}/\text{m}^3$)
PM ₁₀	24-hour	18.14	544,412	5,163,216	235.36	30
PM ₁₀	Annual	1.38	545,012	5,162,616	238.78	17
PM _{2.5}	24-hour	8.65	545,412	5,163,216	235.36	9
PM _{2.5}	Annual	0.74	544,782	5,163,116	201.65	4
NO ₂	Annual	5.02	544,572	5,163,346	188.25	25

Federal guidance and 06-096 CMR 115 require that any major new source or major source undergoing a major modification provide additional analyses of impacts that would occur as a direct result of the general, commercial, residential, industrial,

and mobile-source growth associated with the construction and operation of that source.

Since MaineFlame is a minor source undergoing a minor modification, these additional analyses were not required.

I. Summary

In summary, it has been demonstrated that MaineFlame will not cause or contribute to a violation of any SO₂, PM₁₀, PM_{2.5}, NO₂, or CO NAAQS or to Class II increments for SO₂, PM₁₀, PM_{2.5}, or NO₂.

Order

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

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

The Department hereby grants Air Emission License Amendment A-1155-71-E-A subject to the conditions found in Air Emission License A-1155-71-A-N, in amendments A-1155-71-B-A and A-1155-71-D-A, and the following conditions.

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

Conditions (17)(F), (J) and (O) of Air Emission License A-1155-71-A-N are deleted.

The following shall replace Condition (23) of Air Emission License A-1155-71-A-N:

(23) Annual Emissions Statements

- A. In accordance with *Emission Statements*, 06-096 C.M.R. ch. 137, MaineFlame shall annually report to the Department, in a format prescribed by the Department, the information necessary to accurately update the State's emission inventory. The emission statement shall be submitted as specified by the date in 06-096 C.M.R. ch. 137.
- B. MaineFlame shall keep the following records in order to comply with 06-096 C.M.R. ch. 137:
 - 1. Hours of operation of Burner #1 and Dryer #1 on a monthly and 12-month rolling total basis;
 - 2. Gallons of propane fired in Boiler #1;
 - 3. Tons of wood dried (ODT) through Dryer #1 on a monthly and calendar year basis; and
 - 4. Tons of wood processed through the RIDA on a monthly and calendar year basis.[06-096 C.M.R. ch. 137]
- C. Every third year, or as requested by the Department, MaineFlame shall report to the Department emissions of hazardous air pollutants as required pursuant to 06-096 C.M.R. ch. 137, § (3)(C). The next report is due no later than May 15, 2027, for emissions occurring in calendar year 2026. MaineFlame shall pay the annual air quality surcharge, calculated by the Department based on these reported emissions of hazardous air pollutants, by the date required in Title 38 M.R.S. § 353-A(3). [38 M.R.S. § 353-A(1-A)]

The following are new conditions:

(26) **Boiler #1**

- A. Boiler #1 is licensed to fire propane. [06-096 C.M.R. ch. 115, BACT]
- B. MaineFlame shall use an oxygen trim system and Flue Gas Recirculation when operating Boiler #1. [06-096 C.M.R. ch. 115, BACT]
- C. Emissions shall not exceed the following:

Emission Unit	Pollutant	lb/MMBtu	Origin and Authority
Boiler #1	PM	0.002	06-096 C.M.R. ch. 115, BACT

- D. Emissions shall not exceed the following [06-096 C.M.R. ch. 115, BACT]:

Emission Unit	PM (lb/hr)	PM ₁₀ (lb/hr)	PM _{2.5} (lb/hr)	SO ₂ (lb/hr)	NO _x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Boiler #1	0.06	0.22	0.22	0.02	1.52	2.38	0.32

- E. Visible emissions from Boiler #1 shall not exceed 10% opacity on a six-minute block average basis. [06-096 C.M.R. ch. 101, § 4(A)(3)]
- F. MaineFlame shall maintain records of the amounts of propane combusted on a monthly basis. [40 C.F.R. § 60.48c(g)]

(27) **RIDA**

- A. The RIDA shall be equipped with a wet scrubber and not be operated when the wet scrubber is not in operation. [06-096 C.M.R. ch. 115, BACT]
- B. The RIDA will only process biomass material which has been previously dried by Dryer #1. [06-096 C.M.R. ch. 115, BACT]

(28) **Stack #1**

A. Emissions shall not exceed the following [06-096 C.M.R. ch. 115, BPT]:

Emission Unit	PM (lb/hr)	PM₁₀ (lb/hr)	PM_{2.5} (lb/hr)	SO₂ (lb/hr)	NO_x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Burner #1 and Dryer #1	10.50	10.50	4.00	0.40	4.50	7.20	9.10

B. Emissions shall not exceed the following [06-096 C.M.R. ch. 115, BACT]:

Unit	PM (lb/hr)	PM₁₀ (lb/hr)	PM_{2.5} (lb/hr)	SO₂ (lb/hr)	NO_x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
RIDA	0.6	0.6	0.6	Neg.	Neg.	Neg.	Neg.

C. Emissions from the RIDA and Dryer #1 both exhaust through Stack #1. When both are in operation at the same time, the total emissions limit will be the sum of both processes. When either is operating alone, the emissions limit from Stack #1 will revert to the respective limits for each process.
[06-096 C.M.R. ch. 115, BPT]

D. Stack #1 will have an inside diameter of 2.5 feet and exhaust 100 feet above ground level (AGL). [06-096 C.M.R. ch. 115, BACT]

E. Performance Testing

1. MaineFlame shall demonstrate compliance with the emission limits for the RIDA within 30 days from the commencement of operation of the RIDA. Such demonstration may be performed alone or in combination with the operation of Dryer #1.
2. Within 180 days of initial startup of Burner #1 and Dryer #1, MaineFlame shall conduct performance tests on Stack #1 for PM, PM₁₀, PM_{2.5}, NO_x, CO, VOC, and visible emissions to demonstrate compliance with the licensed emission limits (lb/hr and percent opacity, as appropriate) using EPA stack test methods specified in the table below or other methods approved by the Department.

Pollutant	EPA Test Method
PM	Method 5
PM ₁₀	Method 201 or 201A and Method 202
PM _{2.5}	Method 201A and Method 202
NO _x	Method 7E
CO	Method 10

Pollutant	EPA Test Method
VOC	Method 25A
Visible Emissions	Method 9

3. Performance testing shall be conducted under normal operating conditions. MaineFlame shall measure and record the amount of biomass fired (i.e., tons and moisture content) in Burner #1 during each test run for all pollutants. MaineFlame shall record the amount of wood dried (i.e., tons of dry wood produced) during each test run for PM, PM₁₀, PM_{2.5}, and VOC.
4. For those pollutants testing at or below 75% of its limit for both Burner #1 and Dryer #1, and the RIDA, MaineFlame shall conduct performance tests on Stack #1 for PM, PM₁₀, PM_{2.5}, NO_x, CO, VOC, and visible emissions after a period of 5 years from the initial performance test and every 5 years thereafter. Testing methods shall be the same as the methods prescribed for the initial performance tests.
5. For any regulated pollutant that tests above 75% of its emission limit for both Burner #1 and Dryer #1, and the RIDA, as defined in this air emission license, MaineFlame shall repeat testing for that pollutant within a period not to exceed 1 year. If the facility is not operating when the 1-year period concludes, then testing shall be completed within 60 days after the facility re-starts. In subsequent testing, any regulated pollutant that tests at or below 75% of its emission limit will be retested on the 5-year schedule.

[06-096 C.M.R. ch. 115, BACT and BPT]

Player Holdings, LLC
Aroostook County
Ashland, Maine
A-1155-71-E-A

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**Departmental
Findings of Fact and Order
Air Emission License
Amendment #3**

(29) Additional Information

If the Department determines that any parameter value pertaining to construction and operation of the emissions units, including but not limited to stack size, configuration, flow rate, emission rates, nearby structures, etc., deviates from what was submitted in the application or ambient air quality impact analysis for this air emission license, MaineFlame may be required to submit additional information. Upon written request from the Department, MaineFlame shall provide information necessary to demonstrate AAQS will not be exceeded, potentially including submission of an ambient air quality impact analysis or an application to amend this air emission license to resolve any deficiencies and ensure compliance with AAQS. Submission of this information is due within 60 days of the Department's written request unless otherwise stated in the Department's letter. [06-096 C.M.R. ch. 115, § 2(O)]

Done and Dated in Augusta, Maine this 7th day of OCTOBER, 2026.

Department of Environmental Protection

BY: 
for Melanie Loyzim, Commissioner

The term of this license amendment shall be ten (10) years from the issuance of Air Emission License A-1155-71-A-N (issued 2/25/2021).

[Note: If a renewal application, determined as complete by the Department, is submitted prior to expiration of this license, then pursuant to Title 5 M.R.S. § 10002, all terms and conditions of the license shall remain in effect until the Department takes final action on the license renewal application.]

Please note attached sheet for guidance on appeal procedures.

Date of initial receipt of application: 3/8/23

Date of application acceptance: 3/8/23

This Order prepared by Chris Ham, Bureau of Air Quality.