Commonwealth of Kentucky
Division for Air Quality

STATEMENT OF BASIS / SUMMARY

Conditional Major, Operating
Permit: F-24-055
Commonwealth Cooperage
201 Rodney Hitch Blvd
Morehead, KY 40351
October 8, 2024
Dakota Ross, Reviewer

SOURCE ID:	21-205-00068
AGENCY INTEREST:	161081
ACTIVITY:	APE20240001

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SECTION 1 – SOURCE DESCRIPTION

SIC Code and description: 2429, Wood Products, NEC (Cooperage Stock)

Single Source Det. ☐ Yes ☒ No If Yes, Affiliated Source AI:

Source-wide Limit ☒ Yes ☐ No If Yes, See Section 4, Table A

28 Source Category ☐ Yes ☒ No If Yes, Category:

County: Rowan
Nonattainment Area ☒ N/A ☐ PM_{10} ☐ $PM_{2.5}$ ☐ CO ☐ NO_X ☐ SO_2 ☐ Ozone ☐ Lead

PTE* greater than 100 tpy for any criteria air pollutant ☒ Yes ☐ No
If yes, for what pollutant(s)?
☒ PM_{10} ☒ $PM_{2.5}$ ☐ CO ☐ NO_X ☐ SO_2 ☐ VOC

PTE* greater than 250 tpy for any criteria air pollutant ☒ Yes ☐ No
If yes, for what pollutant(s)?
☒ PM_{10} ☒ $PM_{2.5}$ ☐ CO ☐ NO_X ☐ SO_2 ☐ VOC

PTE* greater than 10 tpy for any single hazardous air pollutant (HAP) ☐ Yes ☒ No
If yes, list which pollutant(s): N/A

PTE* greater than 25 tpy for combined HAP ☐ Yes ☒ No

*PTE does not include self-imposed emission limitations.

Description of Facility:
The facility manufactures barrels for the bourbon, whiskey, and wine industries.

The facility has a wood/biomass-fired indirect heat exchanger, stave and head woodworking operations (kilns, saws, planers, jointers, sanders, steam tunnel and dryer), barrel dryers, head and stave charring operations, and two wood waste silos. The wood waste is used to fuel the indirect heat exchanger. The indirect heat exchanger is used for production as well as steam heating the kilns.

SECTION 2 – CURRENT APPLICATION AND EMISSION SUMMARY FORM

Permit Number: F-24-055 Activity: APE20240001

Application Received: July 30, 2024 Application Complete Date(s): September 10, 2024

Permit Action: ☐ Initial ☒ Renewal ☐ Significant Rev ☐ Minor Rev ☐ Administrative
Construction/Modification Requested? ☐Yes ☒No

Previous 502(b)(10) or Off-Permit Changes incorporated with this permit action ☐Yes ☒No

Description of Action:
Renewal of Operating Permit.

F-24-055 Emission Summary		
Pollutant	2017 Actual (tpy)	PTE F-24-055 (tpy)
CO	14.90	78.75*
NOx	15.21	84.01
PT	16.33	Uncontrolled: 2,009 Controlled: 57.65*
PM_{10}	8.61	Uncontrolled: 1,009 Controlled: 43.93*
$PM_{2.5}$	8.00	Uncontrolled: 402.6 Controlled: 47.26*
SO_2	0.75	4.12
VOC	1.93	6.39
Greenhouse Gases (GHGs)		
Carbon Dioxide	5,751	28,911
Methane	0.50	3.14
Nitrous Oxide	0.11	1.77
CO_2 Equivalent (CO_2e)	5,796	29,518
Hazardous Air Pollutants (HAPs)		
Combined HAPs:	1.15	6.36
Benzene	0.05	0.69
Formaldehyde	0.13	0.72
Hydrochloric Acid	0.57	3.12

* Note: Emissions are limited by federally-enforceable emission limitations to ensure the source remains below major source thresholds

SECTION 3 – EMISSIONS, LIMITATIONS AND BASIS

Emission Unit #1: (EP-20 & EP-30) – Two 9.229 MMBtu/hr (each) Wood-fired Indirect Heat Exchangers				
Pollutant	**Emission Limit or Standard**	**Regulatory Basis for Emission Limit or Standard**	**Emission Factor Used and Basis**	**Compliance Method**
PM	**EP-20:** 0.56 lb/MMBtu **EP-30:** 0.48 lb/MMBtu	**EP-20:** 401 KAR 59:015, Section 4(1)(a) **EP-30:** 401 KAR 59:015, Section 4(1)(c)	0.4 lb/MMBTU (6.76 lb/ton of wood @ 16.91 MMBtu/ton) uncontrolled (85% control from multicyclone) [AP-42 1.6-1]	Assumed based on proper operation of the multicyclone control device
	20% opacity, except for: 40% for 6 minutes in any 60 minutes during fire box cleaning or soot blowing; and from building a new fire	401 KAR 59:015, Section 4(2)	N/A	Qualitative visual observations and U.S. EPA Reference 9 readings on a daily basis.
SO_2	**EP-20:** 5.0 lb/MMBtu **EP-30:** 3.81 lb/MMBtu	**EP-20:** 401 KAR 59:015, Section 5(1)(a)2. **EP-30:** 401 KAR 59:015, Section 5(1)(c)3.	0.025 lb/MMBtu (0.42 lb/ton of wood @ 16.91 MMBtu/ton) [AP-42 1.6-2]	Compliance is assumed

Initial Construction Date: 9/2019 (EP-20), 2/2024 (EP-30)

Applicable Regulation
401 KAR 59:015, New indirect heat exchangers, applicable to units having a heat input capacity greater than 1 million BTU per hour (MMBtu/hr) and commenced on or after April 9, 1972.

401 KAR 63:002, Section 2(4)(jjjjj) 40 CFR 63.11193 through 63.11237, Tables 1 through 8 (**Subpart JJJJJJ**), National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources.

Comments:
Compliance with the 401 KAR 59:015 PM standard is assumed based on proper operation of the multicyclone control devices. Compliance with the 401 KAR 59:015 opacity and 40 CFR 63, Subpart JJJJJJ opacity requirements are demonstrated by daily visual monitoring and U.S EPA reference 9 readings. There are boiler tune-up requirements. Compliance with 401 KAR 59:015 SO_2 standard is assumed based on the AP-42 Table 1.6 emission factor of 0.025 lb/MMBtu. The facility must conduct biennial tune-ups on the units. The facility must monitor and maintain records of wood combusted (tons) from each unit on a monthly basis. There are PM and opacity emission limitations from 401 KAR 59:015. Emission factors were

Emission Unit #1: (EP-20 & EP-30) – Two 9.229 MMBtu/hr (each) Wood-fired Indirect Heat Exchangers
calculated by taking the emission factor provided in AP-42 1.6 and multiplying by the higher heating value of the fuel (16.91 MMBtu/ton)

Emission Unit #2: Dry Fired (EP-06), Char Fired (EP-07), Head Char (EP-14)				
Pollutant	**Emission Limit or Standard**	**Regulatory Basis for Emission Limit or Standard**	**Emission Factor Used and Basis**	**Compliance Method**
CO	Source wide 90 tpy	To preclude 401 KAR 52:020	**EP-06:** 84 lb/MMBtu [AP-42 1.4-3] **EP-07:** 0.013 lb/barrel (8.176 lb/ton wood burned)[2023 Testing] **EP-14:** 0.0016 lb/head (2.58 lb/ton wood burned) [2023 Testing]	Compliance is assumed
PM	E=2.34 lb/hr, P≤0.50 $E=3.59P^{0.62}$, 0.50<P≤30 $E=17.31P^{0.16}$, P>30 P = operating rate in tons per hour (see comments)	401 KAR 59:010, Section 3(2)	**EP-06:** 7.6 lb/MMBtu [AP-42 1.4-3] **EP-07 &14** 6.76 lb/ton wood burned [AP-42, Section 1.6-1]	Compliance is assumed based on AP-42 emission factors
	20% opacity	401 KAR 59:010, Section 3(1)(a)	N/A	Qualitative visual observations and U.S. EPA Reference 9 readings on a weekly basis or immediate corrective action which results in no visible emissions.

Process Description:

Emission Point:	Description:	Operating Rate:		Construction Commenced:
EP-06	Dry Fired	2.00 MMBtu/hr		9/2019
EP-07	Char Fired	5.13 MMBtu/hr	356 bbl/hr 0.57 tons/hr (wood burned from barrels)	9/2019 Modified: 1/2024

Emission Unit #2: Dry Fired (EP-06), Char Fired (EP-07), Head Char (EP-14)					
	EP-14	Head Char	Five burners at 0.25 MMBtu/hr (each)	712 heads/hr 0.44 tons/hr (wood burned from heads)	9/2019 Modified: 12/2021 & 1/2024

Average Barrel Weight: 77 lbs
Average Head Weight: 9.5 lbs

Applicable Regulation:
401 KAR 59:010, New process operations

Comments:
Emission occurs from the burning of natural gas and from the charring of the wood. Natural-gas factors come from AP-42, Chapter 1.4, while wood factors come from AP-42, Chapter 1.6, with the exception for CO. Emission factor for CO is based on a recent performance test conducted at the facility CMN20230001) for barrel and head charring. Based on the performance test emission factor, the source would exceed 100 tons per year potential emissions for CO. The permittee has requested a conditional major permit based on their calculations for PM_{10}. The Division has determined that uncontrolled unlimited potential emissions of PT, $PM_{2.5}$, and CO will also exceed 100 tons per year.

The 401 KAR 59:010 allowable PM emissions rate is determined for EP-07 & EP-14 using a processing rate equal to the total weight of barrels or heads processed per hour multiplied by the average weight of the barrels and heads.

The APE20230006 application, which seeks to update CO emission factors based on the results of the CMN20230001 performance testing that resulted in CO emission factors in terms of lb/barrel and lb/head. These emission factors will be used for Section D source wide CO emission limitations. However, for emission inventory purposes, the emission factor needs to be in terms of the SCC code for the units, lbs/ton wood burned from barrels. The lbs wood burned from each barrel or head can be calculated as follows:

$$\frac{0.57\,\frac{tons\ wood\ burned\ from\ bbls}{hr}}{356\,\frac{bbls}{hr}} \sim \frac{0.0016\ tons\ wood\ burned}{head}$$

$$\frac{0.44\,\frac{tons\ wood\ burned\ from\ heads}{hr}}{712\,\frac{heads}{hr}} \sim \frac{0.0006\ tons\ wood\ burned}{head}$$

These rates can then be used along with the CMN20230001 test results to establish emission factors in terms of lb/ton wood burned as follows:

$$\frac{0.013\,\frac{lb}{bbl}}{0.0016\,\frac{tons\ wood\ burned}{bbl}} \sim 8.13\,\frac{lb}{ton\ wood\ burned}$$

$$\frac{0.0016\,\frac{lb}{bbl}}{0.0006\,\frac{tons\ wood\ burned}{head}} \sim 2.67\,\frac{lb}{ton\ wood\ burned}$$

Emission Unit #2: Dry Fired (EP-06), Char Fired (EP-07), Head Char (EP-14)
In the APE20230001 application, the facility calculated CO emissions using 0.34 lb/ton for barrels and 0.18 lb/ton for heads along with processing rates of 0.57 tons/hr and 0.44 tons/hr respectively. However, the testing report states these factors are for pre-charred weights, the facility had applied them as lb/ton wood burned rates in the original application. On March 21, 2024, the facility supplied corrected emission factors and an updated 7007N form. Additionally, the APE20230001application sought to update the weight per barrel and weight per head to 77 lbs and 9.5 lbs respectfully Previously a barrel weight of 110 lb/bbl had been used. The SCC code of the POC was changed to be in terms of lb/ton wood burned to match the Kentucky Emission Inventory System.

Emission Unit #4: Non-Fugitive Woodworking Operations (EP-02, EP-03, EP-04, EP-05, EP-08, EP-09, EP-10, EP-11, EP-13, EP-15, EP-16, EP-17, EP-19, EP-21, EP-22, EP-23)				
Pollutant	**Emission Limit or Standard**	**Regulatory Basis for Emission Limit or Standard**	**Emission Factor Used and Basis**	**Compliance Method**
PM	2.34 lb/hr for $P \leq 0.5$ $3.59P^{0.62}$ lb/hr for $0.5 < P \leq 30$ $17.31P^{0.16}$ for $P > 30$ (P in tons/hr)	401 KAR 59:010, Section 3(2)	**EPs 02, 03, 04, 05, 08, 09, 10, 11, 13, 15, 16, 17, 21, 22, & 23:**4.3 lb/ton [SC DHEC -Wood Processing EFs] **EP- 19:** 2.0 lb/ton [SC DHEC -Wood Processing EFs]	Compliance with the PM standard is assumed based on proper operation of the control devices.
	20% opacity	401 KAR 59:010, Section 3(1)(a)	N/A	Qualitative visual observations on a weekly basis. If visible emissions are seen an inspection shall be initiated and corrective action taken. If visible emissions are still present the process shall be shut down and shall not operate again until repairs that result in no visible emissions have been made or U.S. EPA Reference 9 readings to determine compliance.

Process Description:

Emission Point:	Description:	Operating Rate:	Control Equipment:	Construction Commenced:
EP-02	Stave Equalizer	19.35 tons/hr	Baghouses:	9/2019**

Emission Unit #4: Non-Fugitive Woodworking Operations (EP-02, EP-03, EP-04, EP-05, EP-08, EP-09, EP-10, EP-11, EP-13, EP-15, EP-16, EP-17, EP-19, EP-21, EP-22, EP-23)

EP-03	Stave Planer	18.86 tons/hr	PT – 99% PM_{10} – 99%, $PM_{2.5}$ – 95%	9/2019**
EP-04	G5 Machines	16.84 tons/hr		9/2019**
EP-05	Rip Saw & Cutoff Saw	0.9 tons/hr		9/2019**
EP-08	Crozer	11.76 tons/hr		9/2019**
EP-09	Heading Planer	3.67 tons/hr		9/2019**
EP-10	Heading Jointers	3.38 tons/hr		9/2019**
EP-11	Rip Saws & Jointers	0.76 tons/hr		9/2019**
EP-13	Rounder	2.90 tons/hr		9/2019**
EP-15	Head Repair – Jointer, T&G, & Planer	0.42 tons/hr		9/2019*
EP-16	Bung Bore	14.36 tons/hr		9/2019**
EP-17	Copy Saw	0.2 tons/hr		9/2019**
EP-19	Wood Waste Silo	4.70 tons/hr		9/2019**
EP-21	Wood Waste Truck Loadout	4.33 tons/hr		9/2019*
EP-22	Weima Grinder (Stave)	1.04 tons/hr		9/2019**
EP-23	Weima Grinder (Heading)	1.15 tons/hr		9/2019**

*Modified 2022
** Modified 2024

Non-fugitive woodworking equipment for fabricating staves and headings

Applicable Regulation:
401 KAR 59:010, New process operations

Comments:
Each unit has a pneumatic hood where the saw dust is captured in the wood waste silo via fabric filters (Baghouse 1 CD1 & Baghouse 2 CD5). Wood waste is used to fuel the wood-fired indirect heat exchangers (EU01). Emissions are calculated based on conservative emission factors provided by South Carolina Department of Health and Environmental Conservation.

Compliance with the 401 KAR 59:010 PM standard is assumed based on operation of the control devices; compliance with the 401 KAR 59:010 opacity standard is demonstrated with weekly qualitative visual observations. If visible emissions from the stacks are seen (not including condensed water in the plume), then an inspection of process/control equipment shall be initiated and corrective action taken. If visible emissions are present after the corrective action, the process shall be shut down and shall not operate again until repairs have been made that result in no visible emissions from the process during operation. In lieu of shutting the process down, the permittee may determine the opacity using Reference Method 9. If the opacity limit is not exceeded, the process may continue to operate. The facility must monitor and maintain records of the amount of wood (tons) processed through each emission unit on a monthly basis.

Emission Unit #5: Fugitive Emissions Haul Roads (T1A, T1B, T2, T4, T5, & T7)

Emission Point:	Description:	Round Trip Distance (feet)	Maximum VMT/year	Construction Commenced:
T1A	Paved Roads – Semi Trailer dried materials into the plant	1600	1,715.5	6/2019
T1B	Paved Roads – Semi trailer stave and headings into the plant	1600	116.80	6/2019
T2	Paved Roads – Semi trailer finished product out of the plant	1800	1,069.45	6/2019
T4	Unpaved Roads – Forklift material to kilns	1500	678.90	6/2019
T5	Paved Roads – Semi trailer wood waste out of plant	1300	405.15	6/2019
T7	Paved roads – Ash to Dumpster in (loaded) 47ft, out (unloaded) 47ft	500	0.73	6/2019

Process Description:
Paved haul roads used to haul materials in and out of the property

Applicable Regulation:
401 KAR 63:010, Fugitive emissions

Comments:
Emissions are calculated based on emission factors in AP-42 Chapter 13.2. Inherent precipitation mitigation control is included in the emission factors at 8.22% for paved roads and 32.88% for unpaved roads.

Insignificant Activities: Six Steam Heated Kilns (EP-01, EP-24, EP-25, EP-26, EP-27, EP-28)

Initial Construction Date:
09/2019 (EP-01), 3/2021 (EP-24), 2/2023 (EP-25 & EP-26), 11/2023 (EP727 & EP-28)

Process Description:
Dry's green staves and headings to reduce moisture content utilizing steam generated by EU01. Each kiln has a process rate of 0.57 Thousand-board feet/hr per kiln.

Applicable Regulation:
401 KAR 59:010, New process operation

401 KAR 63:020, Potentially hazardous air matter and toxic substances

Comments:
VOC emission factor source:
Beakler, et al. (2007). Quantification of the VOCs released during kiln-drying red oak and white oak lumber. *Forest Product Journal.*

Acetaldehyde emission factor: Virginia DEQ Memo APG-573 Table 1

Insignificant Activities: Toasting Operations

Initial Construction Date:
11/2023

Process Description:
Toasting of barrels occurs after the toasting operations and before the char fired operations. Toasting is accomplished via 72 electric burners.

Toasting Fraction: 1%
Mass per barrel: 77.00 lb/bbl
Maximum throughput: 275 bbl/hr

Applicable Regulation:
401 KAR 59:010, New process operation

401 KAR 63:020, Potentially hazardous air matter and toxic substances

Comments:
A 1% toasting factor is assumed, meaning during the process only 1% of the weight of the wood barrel is combusted. The hourly processing rate can be calculated by: $Toasting\ fraction \times \frac{\frac{mass}{bbl} \times throughput}{2000\ lb/ton}$.
Emission factors are based on AP-42 chapter 1.6 for Wood-fired boilers except CO which was conservatively assumed to be equivalent to the CO factor established during CMN2023001 for barrel charring.

SECTION 3 – EMISSIONS, LIMITATIONS AND BASIS (CONTINUED)

Testing Requirements\Results:

Emission Unit(s)	Control Device	Parameter	Regulatory Basis	Frequency	Test Method	Permit Limit	Test Result	Thruput and Operating Parameter(s) Established During Test	Activity Graybar	Date of last Compliance Testing
EP-07	N/A	CO	401 KAR 50:045 & 401 KAR 59:005, Section 2	---	U.S. EPA Reference Method 10	90 tpy source-wide	0.0131 lb/bbl	Emission Factor – 8.176 lb/ton wood burned	CMN20230001	9/19/2023
EP-14	N/A	CO	401 KAR 50:045 & 401 KAR 59:005, Section 2	---	U.S. EPA Reference Method 10	90 tpy source-wide	0.0016 lb/bbl	Emission Factor 2.581 lb/ton wood burned	CMN20230001	9/19/2023

SECTION 4 – SOURCE INFORMATION AND REQUIREMENTS

Table A - Group Requirements:

Emission and Operating Limit	Regulation	Emission Unit
90 tpy of CO emissions	To preclude the applicability of 401 KAR 52:020, *Title V Permits*	Source-wide
90 tpy of PT emissions 90 tpy of PM_{10} emissions 90 tpy of $PM_{2.5}$ emissions	To preclude the applicability of 401 KAR 51:017, *Prevention of Significant Deterioration of Air Quality* and 401 KAR 52:020, *Title V Permits*	Source-wide

Table B - Summary of Applicable Regulations:

Applicable Regulations	Emission Unit
401 KAR 59:010, New process operations	EU02, EU04
401 KAR 59:015, New indirect heat exchangers	EU01
401 KAR 63:010, Fugitive emissions	EU05
401 KAR 63:020, Potentially hazardous matter or toxic substances	EU02
401 KAR 63:002, Section (2)(4)(jjjjj) 40 CFR 63.11193 through 63.11237, Tables 1 through 8 (Subpart JJJJJJ), National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources	EU01

Table C - Summary of Precluded Regulations:

Precluded Regulations	Emission Unit
401 KAR 52:020, Title V permits	Source-Wide
401 KAR 51:017, Prevention of significant deterioration of air quality.	Source-Wide

Table D - Summary of Non Applicable Regulations:
N/A

Air Toxic Analysis
401 KAR 63:020, *Potentially Hazardous Matter or Toxic Substances*
The Division for Air Quality (Division) has performed SCREEN View on October 17, 2024 of potentially hazardous matter or toxic substances that may be emitted by the facility based upon the process rates, material formulations, stack heights and other pertinent information provided by the applicant. Based upon this information, the Division has determined that the conditions outlined in this permit will assure compliance with the requirements of 401 KAR 63:020.

Single Source Determination
N/A

SECTION 5 – PERMITTING HISTORY

Permit	Permit Type	Activity#	Complete Date	Issuance Date	Summary of Action	PSD/Syn Minor
F-19-021	Initial	APE20190001	6/10/2019	9/30/2019	Initial Construction Permit	Synthetic Minor
F-19-021 R1	Minor Revisions	APE20210002, APE20220001, & APE20220002	2/25/2022 & 3/2/2022	8/5/2022	Addition of Three Steam Heated Kilns; Changes to operating rates and addition of control devices; Changes to plant roadway traffic; Corrections to permit language	Synthetic Minor
F-19-021 R2	Minor Revision	APE20230002 & APE20230003	10/5/2023	11/2/2023	Addition of 2 new lumber drying kilns, moved lumber drying kilns to Insignificant Activities, addition of toasting operations to Insignificant Activities	Synthetic Minor
F-19-021 R3	Minor Revision	APE20230006	1/2/2024	3/29/2024	Increased capacity for non-fugitive woodworking equipment (EU04), addition of a barrel charring line EU-02; EP-07); increased throughput of head charring (EU02; EP-14). Emission factor change to reflect performance testing (EU02; EP-07& EP-14), Addition of a new wood	Synthetic Minor

					fired boiler (EU01, EP-30), Revision of emission calculations for toasting operations (IA), Revision of emission calculations for the haul roads (EU05), Installation of an additional baghouse (EU04; Baghouse #2 CD5). Updated emission factors for the Weima grinders (EU04; EP-22 & EP-23)	

SECTION 6 – PERMIT APPLICATION HISTORY

None

APPENDIX A – ABBREVIATIONS AND ACRONYMS

AAQS – Ambient Air Quality Standards
BACT – Best Available Control Technology
Bbl – Barrel
Btu – British thermal unit
CAM – Compliance Assurance Monitoring
CO – Carbon Monoxide
Division – Kentucky Division for Air Quality
ESP – Electrostatic Precipitator
GHG – Greenhouse Gas
HAP – Hazardous Air Pollutant
HF – Hydrogen Fluoride (Gaseous)
MSDS – Material Safety Data Sheets
mmHg – Millimeter of mercury column height
NAAQS – National Ambient Air Quality Standards
NESHAP – National Emissions Standards for Hazardous Air Pollutants
NO_x – Nitrogen Oxides
NSR – New Source Review
PM – Particulate Matter
PM_{10} – Particulate Matter equal to or smaller than 10 micrometers
$PM_{2.5}$ – Particulate Matter equal to or smaller than 2.5 micrometers
PSD – Prevention of Significant Deterioration
PTE – Potential to Emit
SO_2 – Sulfur Dioxide
TF – Total Fluoride (Particulate & Gaseous)
VOC – Volatile Organic Compounds

APPENDIX B – INDIRECT HEAT EXCHANGER EMISSIONS LIMITATIONS

Summary of All Affected Facilities Used to Determine 401 KAR 59:015 Emission Limits								
EU	Fuel(s)	Capacity (MMBtu/hr)	Constructed	Basis for PM Limit	Total Heat Input Capacity for PM Limit (MMBtu/hr)	Basis for SO_2 Limit	Total Heat Input Capacity for SO_2 Limit (MMBtu/hr)	Notes
EU 01 EP-20	Wood Waste	9.229	9/2019	Section 4 (1)(a)	9.229	Section 5(1)(a)(2)	9.229	
EU 01 EP-30	Wood Waste	9.229	2/2024	Section 4 (1)(c)	18.458	Section 5(1)(c)(3)	18.458	

PM limit $E_P = 0.9634 (T^{-0.2356})$ where T is the total heat input capacity
SO_2 limit $E_S = 7.7223 (T^{-0.4106})$ where T is the total heat input capacity