Facility Name: **HAZLEHURST WOOD PELLETS, LLC**
City: Hazlehurst
County: Jeff Davis
AIRS #: 04-13-161-00023 Application #: 948907

Date SIP Application Received: 29-Aug-2025
Date Title V Application Received: 29-Aug-2025
Permit No: 2499-161-0023-V-03-3

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Introduction

This narrative is being provided to assist the reader in understanding the content of the referenced SIP permit to construct and draft operating permit amendment. Complex issues and unusual items are explained in simpler terms and/or greater detail than is sometimes possible in the actual permit. This permit is being issued pursuant to: (1) Sections 391-3-1-.03(1) and 391-3-1-.03(10) of the Georgia Rules for Air Quality Control, (2) Part 70 of Chapter I of Title 40 of the Code of Federal Regulations, and (3) Title V of the Clean Air Act Amendments of 1990. The following narrative is designed to accompany the draft permit and is presented in the same general order as the permit. This narrative is intended only as an adjunct for the reviewer and has no legal standing. Any revisions made to the permit in response to comments received during the public comment period and EPA review process will be described in an addendum to this narrative.

I. Facility Description

A. Existing Permits

Table 1 below lists the current Title V permit, and all administrative amendments, minor and significant modifications to that permit, and 502(b)(10) attachments.

Table 1: Current Title V Permit and Amendments

Permit/Amendment Number	Date of Issuance	Description
2499-161-0023-V-03-0	May 2, 2022	Title V Renewal (TVR)
2499-161-0023-V-03-2	July 3, 2024	Significant Modification with Construction (SAW) for two green hammermills, one dry hammermill, and revising the annual production limit.

B. Regulatory Status

1. PSD/NSR/RACT

Hazlehurst Wood Pellets, LLC (hereinafter “facility”) is in Jeff Davis County, an attainment area for all criteria air pollutants. The facility is not one of the 28 named source categories under Prevention of Significant Deterioration (PSD) regulations. To remain as a "minor" source under the PSD regulation, the permit contains facility wide PSD minor limits of 249 tons per year (tpy) on carbon monoxide (CO), nitrogen oxides (NOx), volatile organic compounds (VOC), and particulate matter (PM). The proposed changes will not affect these limits.

Jeff Davis County is an attainment area for all criteria pollutants, therefore Non-Attainment Area New Source Review (NAA NSR) is not applicable to the facility.

Jeff Davis County is not listed in GA Rule (tt) or GA Rule (yy). Therefore, the facility is not subject to any Reasonably Available Control Technology (RACT) requirements.

2. Title V Major Source Status by Pollutant

Table 2: Title V Major Source Status

Pollutant	Is the Pollutant Emitted?	If emitted, what is the facility's Title V status for the Pollutant?		
		Major Source Status	Major Source Requesting SM Status	Non-Major Source Status
PM	Yes	✓		
PM_{10}	Yes	✓		
$PM_{2.5}$	Yes	✓		
SO_2	Yes			✓
VOC	Yes	✓		
NO_x	Yes	✓		
CO	Yes	✓		
TRS	Yes			✓
H_2S	Yes			✓
Individual HAP	Yes		✓	
Total HAPs	Yes		✓	
Total GHGs	Yes			✓

II. Proposed Modification

A. Description of Modification

The facility seeks to update the emission factors in Section 6.2 with recently tested results, in addition to revising and clarifying certain conditions in the current Title V Operating Permit, including lowering the dryer (ID No. DRY) production limit (output from dryer) in Condition 2.1.6 from 750,000 (ODT/yr) to **570,000** (ODT/yr) based on the most recent source testing and the resultant emission factors. This production limit is intended to ensure compliance with GA Air Toxics Guidelines. Oven-Dried Tons (ODT) is defined as the weight of wood in short tons calculated at 11% moisture.

The Division recently updated the policy for all pellet mills in order to align with the emission calculation methodology for all other industry types. All pellet mills are now allowed to use the most recent (agency approved) performance test results for emissions calculations, regardless of whether the new emission factors are higher or lower than previous emission factors (previously required to be updated in the permit if the test results are higher). Therefore, the requirements of the existing Condition 4.2.4 are no longer necessary and have been removed from the permit.

The facility also seeks to replace all fifteen (15) pellet mills at the source, but the total potential production is not to increase. Emissions from the new pellet mills will be controlled by the same baghouses that controlled emissions from the decommissioning pellet mills.

The CAM requirements for the baghouses will be modified based on site-specific conditions; the BLDS (bag leak detection system) will be used as an action indicator (instead of 20% opacity visible emissions), because the baghouse exhaust does not vent directly to the atmosphere.

B. Emissions Change

The facility wide emission limits are unchanged (Condition 2.1-2.5); emissions will not increase.

Table 3: Emissions Change Due to Modification

Pollutant	Is the Pollutant Emitted?	Net Actual Emissions Increase (Decrease) (tpy)	Net Potential Emissions Increase (Decrease) (tpy)
PM	Yes	0	0
PM_{10}	Yes	0	0
$PM_{2.5}$	Yes	0	0
SO_2	Yes	0	0
VOC	Yes	0	0
NO_x	Yes	0	0
CO	Yes	0	0
TRS	Yes	0	0
H_2S	Yes	0	0
Individual HAP	Yes	0	0
Total HAPs	Yes	0	0

C. PSD/NSR Applicability

NAA NSR is not applicable since Jeff Davis County is in an attainment area for all regulated pollutants.

As discussed in Section I.B.1, the facility maintains a facility-wide PSD synthetic minor (SM) limit of 249 tpy on CO, NOx, VOC, and PM emissions and the current modification will not change the limits. The facility will remain a minor source under PSD regulations after the proposed modification. The modification will not trigger a PSD review.

III. Facility Wide Requirements

A. Emission and Operating Caps:

The proposed modification will cause no change to the current facility-wide PSD synthetic minor limits of 249 tpy for CO, NOx, VOC, and PM emissions.

In Application No. 948907, the facility requested to lower the annual dryer throughput limit (output from dryer) in existing Condition 2.1.6. The throughput limit will be adjusted from 750,000 ODT/yr to **570,000 ODT/yr** for continued compliance with GA Air Toxics Guidelines.

The Division verified the toxic impact assessment (TIA) using the most recent, ISMU-approved emission factors for PTE. The TIA demonstrated compliance with the Georgia Air Toxics Guidelines. Therefore, the new dryer throughput limit of **570,000 ODT/yr** has been approved by the Division.

B. Applicable Rules and Regulations

The proposed modification will change the potential emissions of toxic air pollutants (TAPs), due to the updated emission factors derived from recent source testing. The facility evaluated the following six main TAPs: acetaldehyde, acrolein, formaldehyde, methanol, phenol, and propionaldehyde. The potential emissions of these compounds are presented in the table below:

Table 4: PTE vs MER Comparison for Air Toxics

Chemical Name	CAS No.	Minimum Emission Rate MER (lb/yr)	Facility-wide Potential to Emit PTE (lb/yr)	PTE > MER (modeling required)
Acetaldehyde	75-07-0	1107	8010	TRUE
Acrolein	10-70-28	85.1	18952	TRUE
Formaldehyde	50-00-0	22.1	3367	TRUE
Methanol	67-56-1	483000	2599	FALSE
Phenol	10-89-52	2200	9939	TRUE
Propionaldehyde	12-33-86	1947	925	FALSE

As demonstrated in the table above, potential emissions of acetaldehyde, acrolein, formaldehyde, and phenol exceed the Minimum Emissions Rates (MERs). Therefore, modeling was conducted using Screen3 to ensure that the Maximum Ground Level Concentrations (MGLC) of these pollutants remain below the associated long-term and short-term Acceptable Ambient Concentration (AAC). The results of this assessment are presented in the following table. The Division has reviewed the emission calculations, conducted the Screen3 modeling, and confirmed that the revised TIA has demonstrated compliance with the revised dryer throughput limit (**570,000 ODT/yr**).

Table 5: Screen3 Modeling Results

Chemical Name	Long-Term			Short-Term		
	Averaging Period	MGLC (µg/m3)	AAC (µg/m3)	Averaging Period	MGLC (µg/m3)	AAC (µg/m3)
Acetaldehyde	annual	0.026	4.55	15-min	0.43	4500
Formaldehyde	annual	0.062	0.0909	15-min	1.02	245
Acrolein	annual	0.008	0.35	15-min	0.14	23

Phenol	24-hr	0.161	45.2	15-min	0.53	6000

C. Compliance Status

There is one open enforcement case:

Case #2937, discovered in June of 2023 ("operating new hammermill without permit, broken bags/cages in unpermitted fines baghouse, bypass of WESP/RTO")

Public Advisory Comments:

Public Advisory comments from SELC (Part I.) raised concerns about "omissions, inconsistencies, and inaccurate emissions calculations" in multiple sections of the application.

EPD Response:
In the application dated August 2025, the facility requested a throughput limit of **445,000 ODT/yr**. In the updated applicated dated November 2025, the facility requested a throughput limit of 570,000 ODT/yr using new emission factors based on new test results. Some of these new test results were determined by ISMU to be indeterminate (VOC, Acetaldehyde, Formaldehyde, Methanol).Using the ISMU approved test results, the facility will not be able to process750,000 ODT (the annual throughput limit in Condition 2.1.6 of Title V Permit Amendment 2499-161-0023-V-03-2) out of the dryer without tripping the PSD limit of 249 tpy VOC. In the final draft we are reducing the throughput limit to **570,000 ODT/yr** for compliance with GA Air Toxics Guidelines. Note that this limit is not for PSD avoidance; 570,000 ODT/yr has been used to produce more conservative modeling results for the Toxic Impact Assessment.

The other inconsistencies and typos raised do not affect the facility emissions. The emission factors and the facility throughput allow us to estimate emissions, and SSPP has verified the emission factors and verified that the **570,000 ODT/yr** production throughput limit will keep the facility compliant with GA Air Toxics Guidelines. Additionally, the facility is not required to add criteria pollutants for fugitive sources for facility-wide emissions calculations because the facility is not one of the 28 named PSD source categories.

The Division maintains that green hammermills (GHMs) are fugitive sources because several points are open to the atmosphere (see images on the next page). The Division acknowledges that green hammermills may emit small amounts of VOC and HAP emissions, and the facility has included HAP emissions from the GHMs in the facility-wide PTE calculations. Hazlehurst will assume 0.05 lb/ton VOC emissions (fugitive). By applying the ratio between the HAPs and VOC in the Enviva Wiggin's test to their assumed 0.05-lb/ton VOC emission rate, the Division had calculated the HAP emission rate from the green hammermill as the following. This was discussed in the narrative addendum for the V-03-2 permit amendment.

Emission Point	VOC	Methanol	Formaldehyde	Acetaldehyde	Other HAP
Green Hammermill (Fugitive)	-	0.000640 lb/ton	0.000877 lb/ton	0.00145 lb/ton	0.0257 lb/ton

VOC and PM emissions from the silos are included in the tracking equations, and are therefore included in the facility-wide PTE. Note that, in general, the facility is not required to include fugitive sources of PM (such as log storage/handling, debarking/screening, chipper, truck dump, and pellet handling/storage) in the emission calculations.

Public Advisory comments from SELC (Part II.) raised concerns about the updated EPD policy for pellet mills, i.e., using the most recent agency-approved test results for emissions calculations.

EPD Response:
The Division position is that the policy allows for more accurate emissions tracking, because this policy requires the facility to use the most recently tested emission rates, which represent the emission units' current performance and associated emission profile, in emissions calculations, retroactive to the test date. All facilities in other industries also follow the same policy of using the most recent test results. The Division will apply the same standard to the pellet mills.

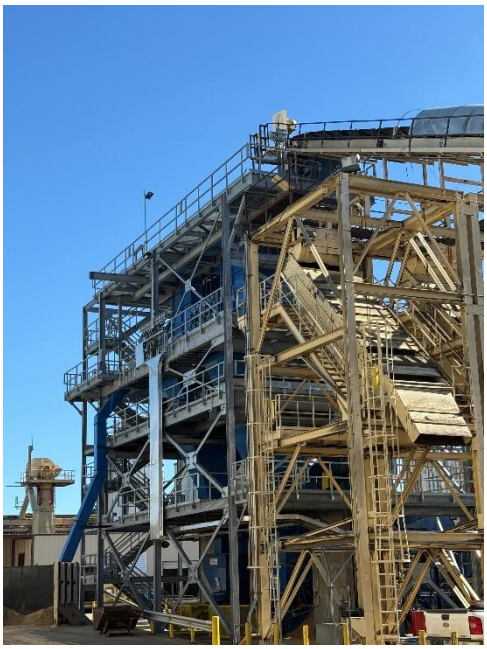
Public Advisory comments from SELC (Part III.) raised concerns about revising the CAM (Compliance Assurance Monitoring) performance criteria for PM control devices.

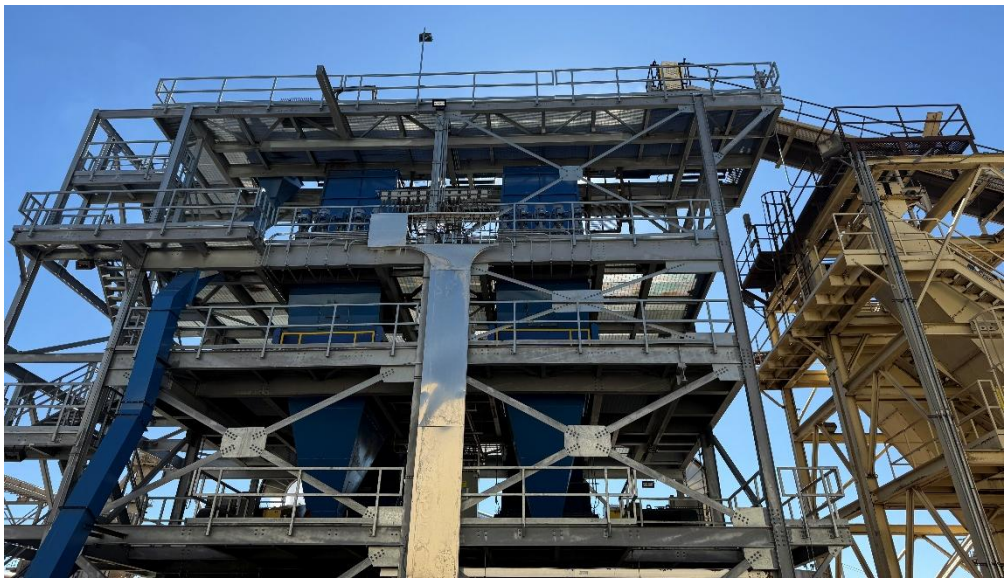
EPD Response:
The Division acknowledges that too low a pressure drop in a baghouse might indicate a leak. To review the facility's request for extending the lower end of the pressure drop range, we have examined the facility's past PM performance test results and the recorded pressure drop during the PM performance tests. As long as the baghouse meets the standards or the low PM emission factors to avoid being a PSD major source for PM, the recorded pressure drop would be acceptable to the Division as a proper set point or range.

Thus, for the current permit modification, the Division has revised the lower limit of pressure drop across the following control devices: Baghouse 1, Baghouse 3, and Cyclofilter 8. This modification is based upon ISMU-approved PM testing with concurrent pressure drop readings, indicating low pressure drops (lower than 1" water column) across these control devices along with acceptable PM emissions. The average of the pressure drop readings (three runs, five readings per run) for each control device has been applied as the new lower limit for pressure drop for that control device.

In addition, the facility has proposed to use the bag leak detection system as the primary CAM parameter. The Division agrees with this proposal as the Bag Leak Detection System is a continuous monitoring device while the pressure drop reading is made once per day. The pressure drop monitoring has become the secondary CAM parameter.

Images of Green Hammermill at Hazlehurst





D. Permit Conditions

Since the facility demonstrated compliance with the Georgia Air Toxics Guidelines with the new annual dryer throughput rate and new emission factors, **Condition 2.1.6 has been updated** with the new throughput limit (**570,000 ODT** of wood during any twelve consecutive months). The citation has been changed from "Avoidance of 40 CFR 52.21" to "GA Air Toxic Guideline."

IV. Regulated Equipment Requirements

The equipment at the facility will not be changed or affected by the current modification except the 15 pellet mills will be replaced with similar or identical units.

Emission Units		Applicable Requirements/Standards	Air Pollution Control Devices	
ID No.	Description		ID No.	Description
P1	Log storage/handling (E1-E3) Debarking/screening (E4-E5) Chipper E6 Chip piles Truck Dump 1-2	391-3-1-.02(2)(n)	n/a	n/a
P2	Green Hammermills (GHM1, GHM2, GHM3, and GHM4)	391-3-1-.02(2)(n)	n/a	n/a
P3	Wood fired furnace. 190 MMBTU/hr (E9-E10)	391-3-1-.02(2)(g) 391-3-1-.02(2)(b) 391-3-1-.02(2)(e)	WESP	Wet Electrostatic Precipitator
DRY	Pellet Dryer 91 ODT/hr.	391-3-1-.02(2)(b) 391-3-1-.02(2)(e)	RTO	Regenerative Thermal Oxidizer
P4	Dry Hammermills (8) (DHM1 through DHM7, and DHM8)	391-3-1-.02(2)(b) 391-3-1-.02(2)(e)	CYFL1-7 CYFL8 RCO	Cyclofilters 1-7 Cyclofilter 8 Fines Baghouse Regenerative Catalytic Oxidizer
PEL1-5	**Line 1 Presses (5)** **(E18-E22)**	391-3-1-.02(2)(b) 391-3-1-.02(2)(e)	BH1	Baghouse 1
COOL1	Line 1 Cooler (E23)	391-3-1-.02(2)(b) 391-3-1-.02(2)(e)	RCO	Regenerative Catalytic Oxidizer
PEL6-10	**Line 2 Presses (5)** **(E24-28)**	391-3-1-.02(2)(b) 391-3-1-.02(2)(e)	BH2	Baghouse 2
COOL2	Line 2 Cooler (E29)	391-3-1-.02(2)(b) 391-3-1-.02(2)(e)	RCO	Regenerative Catalytic Oxidizer
PEL11-15	**Line 3 Presses (5)** **(E30-34)**	391-3-1-.02(2)(b) 391-3-1-.02(2)(e)	BH3	Baghouse 3
COOL3	Line 3 Cooler (E35)	391-3-1-.02(2)(b) 391-3-1-.02(2)(e)	RCO	Regenerative Catalytic Oxidizer
HAND	Dry Chip Silo E36 Pellet Handling/storage/ Loadout/silos 1-4 (E37-E40)	391-3-1-.02(2)(b) 391-3-1-.02(2)(e)	n/a	n/a

* Generally applicable requirements contained in this permit may also apply to emission units listed above. The lists of applicable requirements/standards are intended as a compliance tool and may not be definitive.

** New emission units are in bold.

V. Testing Requirements (with Associated Record Keeping and Reporting)

Note that the new pellet mills are not combustion sources, the replacement of the pellet mills are not expected to have any impact on the NOx and CO emissions from the RCO stack (S2). However, the new pellet mills may have an impact on the emission factors of PM, VOC, and HAPs. When the new pellet mills start operation, a new performance test for each of PM, VOC, and HAPs will be required to obtain the after-modification emission factors. Condition 4.2.2 has been modified in a way that the performance tests are required within 180 days after the initial startup of all 15 new pellet mills; this test will re-start the 4-yr repeating testing schedule.

The previous Condition 4.2.4 was removed because Section 6 has been revised to have the facility use the most current tested emission rates to calculate their actual emissions (starting on the test dates). Removal of this condition reflects the Division's updated policy for emission factors at pellet mills, which is the standard policy the Division has been applying to all other industries.

The initial performance tests specified in existing Condition 4.2.6 were conducted on August 26, 2025. Therefore, Condition 4.2.6 has been modified to remove the initial testing requirements.

Please note, for the RCO stack (S2), the repeated testing requirements for PM, VOC, and HAPs are included in revised Condition 4.2.2, and the repeated testing requirements for NOx and CO are included in revised Condition 4.2.6.

VI. Monitoring Requirements (with Associated Record Keeping and Reporting)

Condition 5.2.16 has been modified; as discussed previously, the bag-leak detection system (BLDS) has replaced the daily VE check as the primary CAM parameter. The daily pressure drop monitoring has remained the secondary CAM parameter. Exceptions have been added for three control devices for the lowest allowable pressure drop based on data collected during ISMU-approved PM testing (May 2025). For all other control devices, the 1" to 10" water column range still applies. According to the facility, the baghouses are oversized for the process, so pressure drop lower than one inch water column may be expected in some instances. Note that the Division has applied lower end pressure drop that is different to what the facility proposed; what the Division applied was straight from the Division's ISMU test reports.

VII. Other Record Keeping and Reporting Requirements

Condition 6.1.7.b.iii has been revised to read:
"Any consecutive twelve month total dryer production that exceeds **570,000 ODT**…."

Condition 6.1.7.c.ii has been removed (reporting requirement for RTO/RCO temperature excursions) because temperature excursions are already accounted for in Condition 6.2.5 (multiplying the emission factor used in the tracking equation by 20 in the case of temperature excursion) If the RTO or RCO is not working properly, the associated emission units would have their emissions uncontrolled, which would result in a higher actual emissions; however, it does not directly violate any short term emission limits.

Condition 6.2.3 was edited to allow the facility use the most recent (agency approved) stack test results in all NOx and CO emission calculations. The condition will no longer list the numeric emission factors as they are expected to change in every performance test. In addition, all references to Condition 4.2.4 have been deleted. The following table contains the most recent test results.

Emission Point	NOx emission factor	CO emission factor
RTO (March 2025)	0.179 lb/ODT	0.286 lb/ODT
RCO (August 2025)	0.0147 lb/ODT	0.404 lb/ODT

Similarly, Condition 6.2.4 was edited to allow the use of the most recent PM performance test results. The condition will no longer list the numeric emission factors as they are expected to change in every performance test. In addition, all references to Condition 4.2.4 have been deleted. The following table contains the most recent test results.

Emission Point	Total PM emission factor
RTO (March 2025)	0.0877 lb/ODT
RCO (May 2025)	0.0697 lb/ODT

Condition 6.2.5 has also been modified to allow the facility to use the most recent performance test results to calculate actual VOC and HAP emissions from the RTO and RCO. The condition will no longer list the numeric emission factors for the RTO and RCO as they are expected to change in every performance test. The following table contains the most recent test results, in pound pollutant per ODT.

Emission Point	VOC	Methanol	Formaldehyde	Acetaldehyde	Other HAPs	Acrolein	Phenol	Propionaldehyde
RTO (March 2025)	0.0968	0.00084	0.00644	0.00252	ND	0.000434	0.00084	0.00056

RCO (May or August 2025, depending on whether test results are determinate)*	0.629	0.0115	0.0266	0.00934	ND	0.000762	0.0184	0.000904

* The August 2025 tests for VOC, methanol, formaldehyde, and acetaldehyde were indeterminate; therefore, the Division used their May 2025 test results.

The following changes have also been made to Condition 6.2.5:

- The green hammermill (GHM) HAP emission factors in Condition 6.2.5 have been corrected (based on 0.05 lb/ton VOC assumed emission factor and Enviva Wiggins Mississippi HAP/VOC ratios).

- Acetaldehyde has been removed from the WPP1 equation for VOC (this was mistakenly previously included).

Condition 6.2.6 has been amended to include acrolein, phenol, propionaldehyde and total PM for 12-month rolling total calculations.

The new Condition 6.2.7 requires a notification within 15 days of the startup of any new pellet mill.

Addendum to Narrative

The 30-day public review started on month day, year and ended on month day, year. Comments were/were not received by the Division.

//If comments were received, state the commenter, the date the comments were received in the above paragraph. All explanations of any changes should be addressed below.//