

Facility Name: **Ace Pole Acquisition, LLC**

City: Blackshear

County: Pierce

AIRS #: 04-13-229-00006

Application #: TV-783747

Date SIP Application Received: October 27, 2023

Date Title V Application Received: October 27, 2023

Permit No: 2491-229-0006-V-03-1

Program	Review Engineers	Review Managers
SSPP	Dawn Wu	Jeng-Hon Su
SSCP	Tara Jones	Tammy Hayes
ISMU	Ray Shen	Dan McCain
TOXICS	n/a	n/a
Permitting Program Manager		Steve Allison

## 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
2491-229-0006-V-03-0	August 23, 2023	Title V permit renewal

### B. Regulatory Status

#### 1. PSD/NSR/RACT

Ace Pole Acquisition, LLC (hereinafter “facility”) is located in Pierce County, which is in attainment for all criteria pollutants. The PSD major source threshold is 250 tons per year (tpy) because the site is not one of the listed 28 source categories under PSD/NSR regulations. The facility is a minor source under PSD regulations since the potential emissions of all PSD pollutants are less than their respective PSD major source thresholds. Note that the key pollutant is volatile organic compounds (VOC); VOC potential emissions are capped below 250 tons per year (tpy) with the annual throughput limit specified in existing Condition 3.2.1.

The facility is located in Pierce County which is an attainment area for all criteria pollutants. The NSR analysis is not needed.

Since Pierce County is not in the county list specified in GA Rules (tt) for VOC RACT and GA Rule (yy) for NO<sub>x</sub> RACT, the facility is not subject to any 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	✓			✓
PM <sub>10</sub>	✓			✓
PM <sub>2.5</sub>	✓			✓
SO <sub>2</sub>	✓			✓
VOC	✓	✓		
NO <sub>x</sub>	✓			✓
CO	✓	✓		
TRS	n/a			
H <sub>2</sub> S	n/a			

TITLE V SIGNIFICANT MODIFICATION (WITHOUT CONSTRUCTION) APPLICATION REVIEW

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
Individual HAP	✓			✓
Total HAPs	✓			✓
Total GHG	✓			✓

Please note that, after the proposed modification, the facility-wide single and combined HAP emissions will continue to be capped below 10 and 25 tpy, respectively, with the revised annual throughput limit in Condition 3.2.1. The facility-wide VOC emissions will also be capped below 250 tpy after modification.

VOC Emissions from the Entire Facility after the Modification = 173.6 tpy VOC

Single HAP Emissions with the Highest Rate from the Entire Facility after the Modification = 9.97 tpy methanol

NCASI EF

Methanol Emission Factors for Steam Heated Kiln = 0.236 lb/Mbf

Combined HAP EF for Steam Heated Kiln = 0.273 lb/MMbf

Proposed New Throughput Limit = 84,500,000 bf/yr = 84,500 Mbf/yr

Methanol PTE = (0.236 lb/Mbf) \* (84,500 Mbf/yr) \* (1 ton/2,000 lbs) = 9.97 tpy Methanol

Combined HAP Emissions from the Entire Facility after the Modification = 20.0 tpy HAPs

AP-42 EF

Wood Fired Boiler Combined HAP EF = 3.50E-02 lb/MMBtu

NG Fired Boiler Combined HAP EF = 1.89 lb/MMcf NG

NG Heat Content = 1,020 MMBtu/MMcf

Facility-wide Combined HAP PTE

= PTE from Kilns + PTE from Wood Fired B1 + PTE from NG Fired B2

= [(0.273 lb/Mbf) \* (84,500 Mbf/yr) + (0.035 lb/MMBtu) \* (53.84 MMBtu/hr) \* (8,760 hrs/yr) + (1.89 lb / MMcf NG) \* (25.2 MMBtu/hr) \* (1 MMcf NG / 1,020 MMBtu) \* (8,760 hrs/yr) ] \* (1 ton/2,000 lbs)

= 20.0 tpy

## II. Proposed Modification

### A. Description of Modification

This modification is to increase permitted wood drying rate from 71,700,000 board feet per year (bf/year) to 84,500,000 bf/year. After the modification, the site will remain a minor source of HAPs; the facility will continue to be a PSD minor source because potential emissions of volatile organic compounds will remain below 250 tons per year. This modification also includes information on changes included in an off permit change submitted on October 17, 2023, which involved adding an additional multiclone set to control device MC, the installation of an intake air preheater and wood feed improvements on Wood Boiler B1.

### B. Emissions Change

**Table 3: Emissions Change Due to Modification**

<b>Pollutant</b>	<b>Is the Pollutant Emitted?</b>	<b>Net Actual Emissions Increase (Decrease) (tpy)</b>	<b>Net Potential Emissions Increase (Decrease) (tpy)</b>
PM	✓	<0.9	0.9
PM <sub>10</sub>	✓	<0.7	0.7
PM <sub>2.5</sub>	✓	<0.6	0.6
SO <sub>2</sub>	✓	0	0
VOC	✓	<25.6	25.6
NO <sub>x</sub>	✓	0	0
CO	✓	0	0
TRS	n/a	--	--
H <sub>2</sub> S	n/a	--	--
Individual HAP	✓	<1.5	1.5
Total HAPs	✓	<1.7	1.7
Total GHG	✓	0	0

### C. PSD/NSR Applicability

Ace Pole Acquisition, LLC is located in Pierce County, which is in attainment for all criteria pollutants. The PSD major source threshold is 250 tons per year (tpy) because the site is not one of the listed 28 source categories under PSD/NSR regulations. The facility is a minor source under PSD regulations since the potential emissions of all PSD pollutants are less than their respective PSD major source thresholds. This modification will continue to keep potential emissions of each criteria pollutant less than the associated PSD major source thresholds. Therefore, this modification will not trigger the PSD review.

**III. Facility Wide Requirements****A. Emission and Operating Caps:**

None applicable.

**B. Applicable Rules and Regulations**

Unchanged.

**C. Compliance Status**

The facility is operating in compliance with all the rules and regulations.

**D. Permit Conditions**

None applicable.

**E. Georgia Toxic Guidelines**

The facility performed a toxic impact assessment (TIA) to demonstrate compliance with Georgia Air Toxic Guidelines. TAP emissions from all emission sources at the facility, including wood burning and natural gas combustion were evaluated. Emissions from the batch kilns are exhausted mostly through the roof vents with the remainder exhausted through the doors. All are modeled as volume sources. A TIA was conducted by the facility for acetaldehyde, acrolein, formaldehyde, and methanol using AERMOD. The results were verified by the Division.

**TAP MGLC Assessment**

TAP	Averaging Period	AAC ( $\mu\text{g}/\text{m}^3$ )	Max Modeled Conc. ( $\mu\text{g}/\text{m}^3$ )	Receptor UTM Zone: 17	
				Easting (m)	Northing (m)
Acetaldehyde	15-min	4,500	1.84288	376,646.40	3,458,324.50
	Annual	4.55	0.03526	377,151.90	3,458,733.70
Acrolein	15-min	23	1.53699	376,646.40	3,458,324.50
	Annual	0.35*	0.03847	377,118.50	3,458,845.00
Formaldehyde	15-min	245	5.08508	376,646.40	3,458,324.50
	Annual	1.1	0.10352	377,118.50	3,458,845.00
Methanol	15-min	32,800	80.50577	376,646.40	3,458,324.50
	Annual	20,000	1.45746	377,151.90	3,458,733.70

\* EPD approved the applicant's case-by-case request to use a revised annual acceptable ambient concentration (AAC) of  $0.35 \mu\text{g}/\text{m}^3$  for acrolein.

According to the above table, the facility will continue to comply with Georgia Air Toxics Guidelines after the proposed modification.

#### IV. Regulated Equipment Requirements

##### A. Brief Process Description

The facility operations include receiving the pine timber, which is first sent to be debarked in one of the two debarkers. The debarked pine logs are sent to one of the two peelers, which further smooths the logs. The smooth logs are treated for mold prevention by spraying mold preventive chemicals on the logs. The treated logs then get transported by rail mounted cradles to one of the five kilns for drying. The kilns are heated by steam generated by the wood fired Boiler B1 or natural gas fired Boiler B2. After drying, the logs are staged in the yard to be prepared for their end use. Pressure treating takes place in the on-site treatment building where the poles are transported by rail into the two pressure cylinders. In the cylinders the poles are treated with chromated copper arsenate (CCA). Once treated, the poles are ready to be shipped to the customer.

Wood preservation treatment process is the pressure or thermal impregnation of chemicals into wood to provide effective long-term resistance to attack by fungi, bacteria, insects, and marine borers. The facility's treating plant consists of 2 pressure cylinders (retorts), drip pad and bulk liquid tanks for the storage of the waterborne inorganic arsenical wood preservative (Chromated Copper Arsenate). Initially a vacuum process is used to remove air from the wood. Then, the pressure fill of the chemicals is done.

##### B. Updated Equipment List for the Process

Emission Units		Applicable Requirements/Standards	Air Pollution Control Devices	
ID No.	Description		ID No.	Description
B1	Union Iron Works Wood-fired Boiler 53.84 MMBtu/hr	40 CFR 63 Subpart A 40 CFR 63 Subpart JJJJJ 391-3-1-.02(2)(b) 391-3-1-.02(2)(d) 391-3-1-.02(2)(g)2.	MC	Multiclones
B2	Industrial Boiler Co. Natural Gas-fired Boiler 25.2 MMBtu/hr	40 CFR 60 Subpart A 40 CFR 60 Subpart Dc 391-3-1-.02(2)(d) 391-3-1-.02(2)(g)2.	n/a	n/a
KLN1	Kiln 1 Batch and Steam Heated	391-3-1-.02(2)(b)1. 391-3-1-.02(2)(e)1.(i)	n/a	n/a
KLN2	Kiln 2 Batch and Steam Heated	391-3-1-.02(2)(b)1. 391-3-1-.02(2)(e)1.(i)	n/a	n/a
KLN3	Kiln 3 Batch and Steam Heated	391-3-1-.02(2)(b)1. 391-3-1-.02(2)(e)1.(i)	n/a	n/a
KLN4	Kiln 4 Batch and Steam Heated	391-3-1-.02(2)(b)1. 391-3-1-.02(2)(e)1.(i)	n/a	n/a
KLN5	Kiln 5 Batch and Steam Heated	391-3-1-.02(2)(b)1. 391-3-1-.02(2)(e)1.(i)	n/a	n/a
WP1	CCA Pressure Treatment Process	40 CFR 63 Subpart A 40 CFR 63 Subpart QQQQQ 391-3-1-.02(2)(b)1. 391-3-1-.02(2)(e)1.(i)	n/a	n/a
WP2	Fugitive emissions from mold treatment	391-3-1-.02(2)(n)	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.

C. Equipment & Rule Applicability

**Emission and Operating Caps –**

This permit modification limits lumber processing rate from 71.7 MMBf per year to 84.5 MMBf per year, which will result in potential VOC emissions of 173.6 tons per year from the entire facility. The facility-wide VOC PTE will therefore be capped below 250 tpy, and the facility is minor under PSD regulations.

**Applicable Rules and Regulations**

Unchanged.

D. Permit Conditions

Condition 3.2.1 has been modified to limit lumber processing rate from 71.7 MMBf per year to 84.5 MMBf per year.

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

Conditions 5.2.1 and 5.2.2 have been modified to replace multicloning with multicloning since the facility added an additional multicloning in October 2023.



**VII. Other Record Keeping and Reporting Requirements**

Condition 6.1.7.b.i. has been modified to reflect the lumber processing rate limit change from 71.7 MMBf per year to 84.5 MMBf per year.

Condition 6.1.7c.iii. has been modified to replace multiclone with multiclones since the facility added an additional multiclone in October 2023.

Conditions 6.2.7 and 6.2.8 have been modified to reflect the lumber processing rate limit from 71.7 MMBf per year to 84.5 MMBf per year in Condition 3.2.1.

**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.//