STATEMENT OF BASIS

For the issuance of Draft Air Permit # 0598-AOP-R17 AFIN: 31-00010

1. PERMITTING AUTHORITY:

Division of Environmental Quality
5301 Northshore Drive
North Little Rock, Arkansas 72118-5317

2. APPLICANT:

CertainTeed Gypsum Manufacturing, Inc.
794 Highway 369 North
Nashville, Arkansas 71852

3. PERMIT WRITER:

Shai Sabaroche

4. NAICS DESCRIPTION AND CODE:

NAICS Description: Gypsum Product Manufacturing
NAICS Code: 327420

5. ALL SUBMITTALS:

The following is a list of ALL permit applications included in this permit revision.

Date of Application	Type of Application (New, Renewal, Modification, Deminimis/Minor Mod, or Administrative Amendment)	Short Description of Any Changes That Would Be Considered New or Modified Emissions
11/25/2025	Minor Modification	Adjust CAM for SN-53 and SN-60 to remove daily inspection requirements

6. REVIEWER'S NOTES:

This permitting action is necessary to remove the compliance assurance monitoring requirement of daily inspection of fabric filters at SN-53 and SN-60. In instances of excursion/exceedance of permitted opacity or differential pressure limits, physical inspection of filters and corrective action are required.

7. COMPLIANCE STATUS:

The following summarizes the current compliance of the facility including active/pending enforcement actions and recent compliance activities and issues.

A CAO was issued May 15, 2025 (CAO LIS: 25-044).

This CAP pertains to reporting requirements as required by § 8-4-217(a)(3) as referenced by Ark. Code Ann. § 8-4-304. Within 30 calendar days of this CAO, the permittee shall submit 12-month rolling total records for the period of November 2023 to July 2024 using the revised spreadsheets for SN-08, SN-66, SN-67, SN-70, and Wallboard Production to demonstrate compliance with Specific Conditions# 46, 74, 75, and Plantwide Condition# 9 of air Permit No. 0598-AOP-R14.

This CAO was closed June 27, 2025.

8. PSD/GHG APPLICABILITY:

a) Did the facility undergo PSD review in this permit (i.e., BACT, Modeling, etc.)? N
If yes, were GHG emission increases significant? N

b) Is the facility categorized as a major source for PSD? N
- *Single pollutant ≥ 100 tpy and on the list of 28 or single pollutant ≥ 250 tpy and not on list*

9. SOURCE AND POLLUTANT SPECIFIC REGULATORY APPLICABILITY:

Source	Pollutant	Regulation (NSPS, NESHAP or PSD)
SN-06, SN-41, SN-42, SN-42a, SN-64, SN-65, SN-71, SN-72	PM	NSPS Subpart OOO
SN-39	PM	NSPS Subpart UUU
SN-53, 60	PM	40 CFR Part 64, CAM
SN-08	-	NESHAP CCCCCC

10. UNCONSTRUCTED SOURCES:

Unconstructed Source	Permit Approval Date	Extension Requested Date	Extension Approval Date	If Greater than 18 Months without Approval, List Reason for Continued Inclusion in Permit
N/A				

11. PERMIT SHIELD – TITLE V PERMITS ONLY:

Did the facility request a permit shield in this application? N

(Note - permit shields are not allowed to be added, but existing ones can remain, for minor modification applications or any 8 CAR pt. 40 requirement.)

The facility requested that the existing permit shield remain with this minor modification.

For any requested inapplicable regulation in the permit shield, explain the reason why it is not applicable in the table below.

Source	Inapplicable Regulation	Reason
N/A		

12. COMPLIANCE ASSURANCE MONITORING (CAM) – TITLE V PERMITS ONLY:

List sources potentially subject to CAM because they use a control device to achieve compliance and have pre-control emissions of at least 100 percent of the major source level. List the pollutant of concern and a brief summary of the CAM plan (temperature monitoring, CEMs, opacity monitoring, etc.) and frequency requirements of § 64.

Source	Pollutant Controlled	Cite Exemption or CAM Plan Monitoring and Frequency
53	Particulate	Daily opacity monitoring and continuous pressure drop readings
60	Particulate	

13. EMISSION CHANGES AND FEE CALCULATION:

See emission change and fee calculation spreadsheet in Appendix A.

14. AMBIENT AIR EVALUATIONS:

The following are results for ambient air evaluations or modeling.

a) NAAQS

A NAAQS evaluation is not required under the Arkansas State Implementation Plan, National Ambient Air Quality Standards, Infrastructure SIPs and NAAQS SIP per Ark. Code Ann. § 8-4-318, dated March 2017 and the DEQ Air Permit Screening Modeling Instructions.

b) Non-Criteria Pollutants:

The non-criteria pollutants listed below were evaluated. Based on Division of Environmental Quality procedures for review of non-criteria pollutants, emissions of all other non-criteria pollutants are below thresholds of concern.

1st Tier Screening (PAER)

Estimated hourly emissions from the following sources were compared to the Presumptively Acceptable Emission Rate (PAER) for each compound. The Division of Environmental Quality has deemed the PAER to be the product, in lb/hr, of 0.11 and the Threshold Limit Value (mg/m^3), as listed by the American Conference of Governmental Industrial Hygienists (ACGIH).

Pollutant	TLV (mg/m^3)	PAER (lb/hr) = 0.11 × TLV	Proposed lb/hr	Pass?
Arsenic	0.01	0.0011	5.02E-05	Y
Benzene	0.0639	0.007	2.26E-01	N
Beryllium	0.00005	5.50E-06	3.01E-06	Y
Cadmium	0.002	0.00022	2.76E-04	N
Chromium	0.5	0.055	3.51E-04	Y
Cobalt	0.02	0.0022	2.11E-05	Y
Formaldehyde	1.5	0.0405	2.04	Y
Lead	0.05	0.0055	1.26E-04	Y
Manganese	0.1	0.011	9.54E-05	Y
Mercury	0.01	0.0011	6.53E-05	Y
Selenium	0.2	0.022	6.02E-06	Y

2nd Tier Screening (PAIL)

AERMOD air dispersion modeling was performed on the estimated hourly emissions from the following sources, in order to predict ambient concentrations beyond the property boundary. The Presumptively Acceptable Impact Level (PAIL) for each compound has been deemed by the Division of Environmental Quality to be one one-hundredth of the Threshold Limit Value as listed by the ACGIH.

Pollutant	PAIL ($\mu g/m^3$) = 1/100 of Threshold Limit Value	Modeled Concentration ($\mu g/m^3$)	Pass?
Benzene	0.639	9.53656	N*
Cadmium	0.02	0.00005	Y

*New modeling was performed for Benzene with prior permit revision, 0598-AOP-R16. The Benzene TLV was reduced since benzene was last modeled from 1.957 mg/m^3 to

0.0639 mg/m^3. A 3rd tier screening was conducted using AEGL-1 and AEGL-2 values to ensure benzene emissions do not cause a condition of pollution.

3rd Tier Screening (AEGL-1 and AEGL-2)

A Tier III screening level human health risk assessment was performed to demonstrate that permitted benzene emissions do not result in unacceptable impacts to human health. For this analysis, modeled impacts are compared to the Level 1 and Level 2 Acute Exposure Guideline Levels (AEGL-1 and AEGL-2) as an alternative to PAIL screening levels.

AEGL-1 is the airborne concentration of a substance below which it is not expected that the general population, including susceptible individuals, would experience notable discomfort, irritation, or certain asymptomatic, nonsensory effects.

AEGL-2 is the airborne concentration of a substance below which it is not expected that the general population, including susceptible individuals, would experience irreversible or other serious, long lasting adverse health effects or an impaired ability to escape.

Ambient air concentrations of benzene used to assess risk were predicted using air dispersion modeling. The latest version of the AERMOD modeling system (AERMOD View 12.0.0) was used to estimate maximum ground-level concentrations of benzene for 1-hour, 4-hour, and 8-hour averaging periods. Meteorological data for 2012 through 2016 measured at Little Rock, AR was used in the model. To determine both the 10-minute and 30-minute average concentration, the equation below was used:

$Cp = Cm\ (t_m/t_p)^{0.2}$ where

Cp = 10-minute or 30-minute average concentration as appropriate
Cm = 1-hour average concentration
t_m = 60 minutes
t_p = 10 minutes or 30 minutes as appropriate

The table below compares the predicted concentrations with the AEGL-1 and AEGL-2 thresholds.

Averaging Period	1st High Modeled Impact (µg/m^3)	AEGL-1 Value (µg/m^3)	Percent of AEGL-1	AEGL-2 Value (µg/m^3)	Percent of AEGL-2
10-minute	131.0910775	415308.7935	0.0316%	6389366.053	0.00205%
30-minute	105.2322563	233211.8609	0.0451%	3514151.329	0.00299%
1-hour	91.61	166123.5174	0.0551%	2555746.421	0.00358%
4-hour	65.376	57504.29448	0.1137%	1277873.211	0.00512%

8-hour	32.869	28752.14724	0.1143%	638936.6053	0.00514%

Predicted concentrations at (and beyond) the facility property line are well below AEGL-1 and AEGL-2 thresholds for all averaging periods. A condition of pollution is not expected from short-term exposure to benzene emissions.

c) H_2S Modeling:

A.C.A. §8-3-103 requires hydrogen sulfide emissions to meet specific ambient standards. Many sources are exempt from this regulation, refer to the Arkansas Code for details.

Is the facility exempt from the H_2S Standards Y
If exempt, explain: No H_2S emissions.

15. CALCULATIONS:

SN	Emission Factor Source (AP-42, testing, etc.)	Emission Factor (lb/ton, lb/hr, etc.)	Control Equipment	Control Equipment Efficiency	Comments
06	AP-42, Table 11.19.2-2 factor for fine	Iron Giant Jaw Crusher PM/PM_{10}: 0.0024 lb/ton All other ops PM/PM_{10}: 0.011 lb/ton	Wetting and Foam Baghouse	90% 99.9%	Rock Crushing 600 tph
08	EPA Tanks 4.0	VOC: 1.3 tons/yr	N/A	N/A	Lb/hr emissions based on filling of tank at 200 gal/hr Total throughput 120,000 gal/yr
18	Testing	PM/PM_{10}: 0.001 gr/dscf @17,000 dscfm	Baghouse	95%	Control is included in emission factor.
39, 44, 53	AP-42 Table 1.4-1&2	PM/PM_{10}: 7.6 lb/MMscf SO_2: 0.6 lb/MMscf VOC: 5.5 lb/MMscf CO: 84 lb/MMscf NOx: 100 lb/MMscf	-	-	39: 65 MMBtu/hr 44: 188 MMBtu/hr 52-53: 3 MMBtu/hr

SN	Emission Factor Source (AP-42, testing, etc.)	Emission Factor (lb/ton, lb/hr, etc.)	Control Equipment	Control Equipment Efficiency	Comments
32	Testing	PM/PM_{10}: 0.001 gr/dscf @17,000 scfm	Baghouse	95%	Control is included in emission factor.
37A	<u>Blasting</u> AP-42, 11.19	PM: $0.000014(A)^{1.5}$ lb/blast PM_{10}: 0.52*PM	-	-	A = 20,000 sqft 2 blasts/day 260 days/yr
	<u>Overburden Removal</u> AP-42, 11.19	PM: 0.012 lb/ton PM_{10}: 0.75*PM	-	-	18,600 ton/day 4,836,000 tpy
	<u>Drilling</u> AP-42, 11.19	PM: 1.3 lb/hole PM_{10}: 0.75*PM	Filter	99%	300 holes/day 78,000 holes/yr
	<u>Ore Loading</u> AP-42, 11.19	*Conveyor Transfer* PM: 0.003 lb/ton PM_{10}: 0.0011 lb/ton	-	-	7,154 ton/day 1,860,000 tpy
	<u>Surface Miner</u> AP-42, 11.19	*Primary Crushing* PM: 0.0054 lb/ton PM_{10}: 0.0024 lb/ton *Conveyor Transfer* PM: 0.003 lb/ton PM_{10}: 0.0011 lb/ton	Water Sprays	90%	450 ton/hr 1,860,000 ton/yr
37B	EIIP Vol 2, Ch 14, App A (SCC 3-03-008-33 & 34)	*Unpaved Road* PM: 2.8 lb/VMT PM_{10}: 1.5 lb/VMT	Watering	80%	168 VMT/day 43,680 VMT/yr
37C	EIIP Vol 2, Ch 14, App A (SCC 3-03-008-33 & 34)	*Paved Road* PM: 0.78 lb/VMT PM_{10}: 0.44 lb/VMT	Sweeping	10%	220 VMT/day 57,200 VMT/yr
41	Testing	0.005 gr/dscf @42,400 scfm	Baghouse	99.9%	Control is included in emission factor.
42	Testing	0.001 gr/dscf @15,807 scfm	Baghouse	99.9%	Control is included in emission factor.

SN	Emission Factor Source (AP-42, testing, etc.)	Emission Factor (lb/ton, lb/hr, etc.)	Control Equipment	Control Equipment Efficiency	Comments
42a	Testing	0.001 gr/dscf @15,807 scfm	Baghouse	99.9%	Control is included in emission factor.
44	Mass Balance	Soap: 0.015 lb VOC/MSF Ink: 0.00015 lb VOC/MSF @96.0 Msf/hr	-	-	Soaps/Inks
	Testing	PM: 0.0074 lb/lb additive PM_{10}: 0.0096 lb/lb additive VOC: 0.0246 lb/lb additive Formaldehyde: 0.0021 lb/lb additive	-	-	Silicone Oil Additive Max Usage 10 lb/Msf. Limited to 2,000,000 lb/yr. PM_{10} emission factor used for both PM and PM_{10} calculations for conservatism
53	Testing	0.004 gr/dscf @5,984 scfm	Baghouse	99.9%	Control is included in emission factor
60	MSDS	0.0095 lb VOC/lb adhesive	-	-	680.4 lb/hr adhesive usage
	Grain Loading Factor	0.005 gr/scf	Baghouse	99.9%	Control is included in emission factor 22,000 cfm
64	AP-42, 11.12	PM: 9.9E-04 lb/ton PM_{10}: 3.4E-04 lb/ton	-	-	20 tph
65	Grain Loading Factor	0.01 gr/scf	Baghouse	-	1,000 scfm
66	<u>Material Handling</u> AP-42, 11.19	*Conveyor* PM: 0.003 lb/ton PM_{10}: 0.0011 *Crusher* PM: 0.0054 lb/ton PM_{10}: 0.0024 lb/ton	None	-	110,000 tpy 30 tph
	<u>Combustion</u> AP-42, 3.3	<u>In lb/HP-hr</u> SO_2: 2.05E-03	None	-	330 HP 242 kW

SN	Emission Factor Source (AP-42, testing, etc.)	Emission Factor (lb/ton, lb/hr, etc.)	Control Equipment	Control Equipment Efficiency	Comments
		VOC: 2.51E-03 NOx: 0.031 HAPs			2.31 MMBtu/hr 6000 hr/yr
	Combustion NSPS IIII	PM: 0.2 g/kW-hr PM_{10}: 0.2 g/kW-hr CO: 3.5 g/kW-hr	None	-	
67	Material Handling AP-42, 11.19	*Conveyor* PM: 0.003 lb/ton PM_{10}: 0.0011 *Screen* PM: 0.025 lb/ton PM_{10}: 0.0087 lb/ton	None	-	110,000 tpy 30 tph
	Combustion AP-42, 3.3	In lb/HP-hr PM: 2.20E-03 PM_{10}: 2.20E-03 SO_2: 2.05E-03 VOC: 2.51E-03 CO: 6.68E-03 NOx: 0.031 HAPs	None	-	94.45 HP 70 kW 0.66815 MMBtu/hr 6000 hr/yr
68	EPA Control of Open Fugitive Dust Source	PM: 10.26 lb/day/acre	None	-	75154 ft^2 1.725 acre 20% silt content
69	Material Handling AP-42, 11.19	*Conveyor* PM: 0.003 lb/ton PM_{10}: 0.0011	None	-	70 tph 110,000 tpy
70	Material Handling AP-42, 11.19	*Conveyor* PM: 0.003 lb/ton PM_{10}: 0.0011 *Crusher* PM: 0.0054 lb/ton PM_{10}: 0.0024 lb/ton *Screen* PM: 0.025 lb/ton PM_{10}: 0.0087 lb/ton	None	-	80 tph 110,000 tpy

SN	Emission Factor Source (AP-42, testing, etc.)	Emission Factor (lb/ton, lb/hr, etc.)	Control Equipment	Control Equipment Efficiency	Comments
	Combustion AP-42, 3.3	In lb/HP-hr SO_2: 2.05E-03 VOC: 2.51E-03 HAPs	None	-	630 HP 4.41 MMBtu/hr 6000 hr/yr
	Combustion Tier 4 Engine	PM/PM_{10}: 0.015 g/bhp-hr NOx: 0.3 g/bhp-hr	None	-	
	Combustion Vendor Spec	CO: 1.0 g/hr	None	-	
71	Dust Suppressant Mass Balance	VOC content: 0.1% Foam density: 9.34 lb/gal Foam application rate: 0.01 gal/ton rock	None	-	555 tph 1,860,000 tpy
	Material Handling AP-42, 11.19	*Conveyor* PM: 0.003 lb/ton PM_{10}: 0.0011 *Screen* PM: 0.025 lb/ton PM_{10}: 0.0087 lb/ton	Moisture	90%	
72	Dust Suppressant Mass Balance	VOC content: 0.1% Foam density: 9.34 lb/gal Foam application rate: 0.01 gal/ton rock	None	-	515 tph 1,860,000 tpy
	Material Handling AP-42, 11.19	*Conveyor* PM: 0.003 lb/ton PM_{10}: 0.0011 *Crusher* PM: 0.0054 lb/ton PM_{10}: 0.0024 lb/ton	Moisture	90%	

16. TESTING REQUIREMENTS:

The permit requires testing of the following sources.

SN	Pollutants	Test Method	Test Interval	Justification
06	Opacity	9	One time (test completed)	NSPS OOO
19	PM	5 or 17	One Time (test completed)	NSPS OOO
	Opacity	9		
39	PM	5 or 17	One Time (test completed)	NSPS UUU
	Opacity	9		
41,42	PM	5 or 17	One Time (test completed)	NSPS OOO
65	Opacity	9	One Time	§ 60.675
71, 72	Opacity	9	One Time	§ 60.675

17. MONITORING OR CEMS:

The permittee must monitor the following parameters with CEMS or other monitoring equipment (temperature, pressure differential, etc.)

SN	Parameter or Pollutant to be Monitored	Method (CEM, Pressure Gauge, etc.)	Frequency	Report (Y/N)
53	Pressure Drop	Pressure Gauge	Continuously	Y
60	Pressure Drop	Pressure Gauge	Continuously	Y

18. RECORDKEEPING REQUIREMENTS:

The following are items (such as throughput, fuel usage, VOC content, etc.) that must be tracked and recorded.

SN	Recorded Item	Permit Limit	Frequency	Report (Y/N)
06	Gypsum Rock	1,860,000 tpy	Monthly	Yes
08	Gasoline	120,000 gallons/yr 10,000 gallons/mo	Monthly	Yes
37B, 37C	Log of Watering and Sweeping	-	Monthly	No
Facility	Wall Board Produced	1,685,424,000 ft^2/yr	Monthly	Yes
60	Opacity observation,	5%, manufacturer recommended,	Daily	Yes

SN	Recorded Item	Permit Limit	Frequency	Report (Y/N)
	pressure differential	undamaged filter bags		
	MSDS records of all VOC-emitting materials, monthly VOC emission, and total VOC emission	28.4 tpy	Monthly	No
66, 67, 68, 69, 70	Waste Boards Throughput	110,000 tons per rolling 12 month period	Monthly	Yes
66, 67, 70	Hours of Operation	6,000 hours per calendar year per engine	Monthly	Yes
72	Tons of gypsum rock crushed	1,860,000 tons per rolling 12 month	Monthly	Yes
44	Silicone Additive	2,000,000 lb per rolling 12-month	Monthly	Yes
53	Opacity observation, pressure differential	5%, manufacturer recommended, undamaged filter bags	Daily	Yes

19. OPACITY:

SN	Opacity	Justification for limit	Compliance Mechanism
06	15%	NSPS OOO	Daily Observation
53	5%	Dept Guidance (Baghouse)	Daily Observation
39	10%	NSPS UUU	Weekly Observation
41, 42, 42a	7%	NSPS OOO	Weekly Observation
44	5%	Dept Guidance (Natural Gas)	Inspector Observation
18, 32	5%	Dept Guidance (Baghouse)	Inspector Observation
37 B, C	5%	Dept Guidance	Inspector Observation
60	5%	Dept Guidance (Baghouse)	Daily Observation

SN	Opacity	Justification for limit	Compliance Mechanism
64	7%	§ 60.672(f)	Quarterly Inspection
65	7%	§ 60.672(a)	Quarterly Inspection
66, 67, 68, 69, 70	20%	Dept Guidance	Weekly Observation
71, 72	12%	§ 60.672(b)	Weekly Observation

20. DELETED CONDITIONS:

Former SC	Justification for removal
N/A	

21. GROUP A INSIGNIFICANT ACTIVITIES:

The following is a list of Insignificant Activities including revisions by this permit.

Source Name	Group A Category	Emissions (tpy)						
		PM/ PM_{10}	SO_2	VOC	CO	NO_x	HAPs	
							Single	Total
Process Water Heater (5.0 MMbtu/hr)	A-1	0.163	0.013	0.118	1.804	2.147	0.039	0.041
Eleven (11) 200 gal compressor/motor oil storage tanks (CS-4, 6, & 7)	A-2			<0.01				
S-13 (200 gal Used Motor Oil)	A-2			<0.01				
AST-4 (8,000 gal Diesel)	A-3			<0.01				
AST-5 (8,000 gal Diesel)	A-3			<0.01				
AST-6 (4,000 gal Hydraulic)	A-3			<0.01				
AST-7 (4,000 gal Hydraulic)	A-3			<0.01				
AST-8 (4,000 gal Hydraulic)	A-3			<0.01				
AST-11 (5,500 gal Used Oil)	A-3			<0.01				
S-2 (425 gal Motor Oil)	A-3			<0.01				
S-20 (500 gal Motor Oil)	A-3			<0.01				

Source Name	Group A Category	Emissions (tpy)						
		PM/ PM_{10}	SO_2	VOC	CO	NO_x	HAPs	
							Single	Total
Total for Group A-3				0.011				
Vermiculite Silo	A-13	0.011						
Starch Silo	A-13	0.011						
Secondary Starch Silo	A-13	0.02						
Two (2) Dryer Seal Stack	A-13	Emissions accounted in SN-44						
Three (3) 12,000 gal diesel storage tank (AST 2, 3, &10)	A-13			0.024				
Total for Group A-13		0.0222		0.024				

22. VOIDED, SUPERSEDED, OR SUBSUMED PERMITS:

The following is a list of all active permits voided/superseded/subsumed by the issuance of this permit.

Permit #
0598-AOP-R16

APPENDIX A – EMISSION CHANGES AND FEE CALCULATION

Fee Calculation for Major Source

Revised 03-11-16

Facility Name: CertainTeed Gypsum Manufacturing, Inc.
Permit Number: 0598-AOP-R17
AFIN: 31-00010

$/ton factor	28.14	Annual Chargeable Emissions (tpy)	420.5
Permit Type	Minor Mod	Permit Fee $	500

Minor Modification Fee $	500
Minimum Modification Fee $	1000
Renewal with Minor Modification $	500
Check if Facility Holds an Active Minor Source or Minor Source General Permit	☐
If Hold Active Permit, Amt of Last Annual Air Permit Invoice $	0
Total Permit Fee Chargeable Emissions (tpy)	0
Initial Title V Permit Fee Chargeable Emissions (tpy)	

HAPs not included in VOC or PM: *Chlorine, Hydrazine, HCl, HF, Methyl Chloroform, Methylene Chloride, Phosphine, Tetrachloroethylene, Titanium Tetrachloride*

Air Contaminants: *All air contaminants are chargeable unless they are included in other totals (e.g., H2SO4 in condensible PM, H2S in TRS, etc.)*

Pollutant (tpy)	Check if Chargeable Emission	Old Permit	New Permit	Change in Emissions	Permit Fee Chargeable Emissions	Annual Chargeable Emissions
PM		180.4	180.4	0	0	180.4
PM_{10}		122.2	122.2	0		
$PM_{2.5}$		0	0	0		
SO_2		7.4	7.4	0	0	7.4
VOC		81.7	81.7	0	0	81.7
CO		100.2	100.2	0		
NO_X		151	151	0	0	151
Lead	☐	5.50E-04	0.00055	0		
Total HAPs	☐	4.76	4.76	0		