

STATEMENT OF BASIS

For the issuance of Air Permit # 0598-AOP-R14 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:

Alexander Sudibjo

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
9/5/2023	Minor Mod	New Terex Screen (SN-71) and Telsmith Cone Crusher (SN-72)

6. REVIEWER'S NOTES:

With this minor modification, the facility is installing a new Terex Screen (SN-71) and Telsmith Cone Crusher (SN-72). The facility is removing the Mobile Crusher (SN-61) and its associated emergency generator (SN-62). The facility's permitted annual emissions are decreasing by 0.3 tpy PM, 0.1 tpy PM₁₀, 0.3 tpy SO₂, 0.3 tpy VOC, 0.7 tpy CO, 0.1 tpy NO_x, and 0.01 tpy total HAPs.

7. COMPLIANCE STATUS:

As of September 5, 2023, there are no compliance issues with the facility. ECHO (<https://echo.epa.gov/detailed-facility-report?fid=110006035762>) shows no air violations identified as of June 30, 2022.

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?

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*

If yes for 8(b), explain why this permit modification is not PSD.

9. SOURCE AND POLLUTANT SPECIFIC REGULATORY APPLICABILITY:

Source	Pollutant	Regulation (NSPS, NESHAP or PSD)
SN-06, SN-19, SN-41, SN-42, SN-42a, SN-71, SN-72	PM	NSPS Subpart OOO
SN-39	PM	NSPS Subpart UUU
SN-38 and SN-53	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
SN-70	8/15/2023	N/A	N/A	N/A
SN-71	Issuance of R14 permit	N/A	N/A	N/A
SN-72		N/A	N/A	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 Rule 18 requirement.)

If yes, are applicable requirements included and specifically identified in the permit?
If not, explain why.

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
N/A		

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:

Based on Department procedures for review of non-criteria pollutants, emissions of non-criteria pollutants are below thresholds of concern.

c) H₂S 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 H₂S Standards Y

If exempt, explain: the facility does not have H₂S emissions.

15. CALCULATIONS:

SN	Emission Factor Source (AP-42, testing, etc.)	Emission Factor (lb/ton, lb/hr, etc.)	Control Equipment	Control Equipment Efficiency	Comments
04	Testing	PM/PM ₁₀ : 0.005 gr/dscf @47016dscfm	Baghouse	99.9%	Transfer Point Control is included emission factor.
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
07	AP-42 Table 11.19.2-2 factor for fine	JCI Screen #1 PM/PM ₁₀ : 0.0087 lb/ton All other ops PM/PM ₁₀ : 0.0011	Wetting and Foam Baghouse	90% 99.9%	Screening 400 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.
19	AP-42, Table 11.19.2-2 factor for fine	0.015 lb/ton	Wetting and Foam Baghouse	90% 99.9%	Secondary Crushing 160 tph
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 NO _x : 100 lb/MMscf	-	-	39: 65 MMBtu/hr 44: 188 MMBtu/hr 52-53: 3 MMBtu/hr
32	Testing	PM/PM ₁₀ : 0.001 gr/dscf @17,000 scfm	Baghouse	95%	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
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	<i>Conveyor Transfer</i> 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	<i>Primary Crushing</i> PM: 0.0054 lb/ton PM ₁₀ : 0.0024 lb/ton <i>Conveyor Transfer</i> 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)	<i>Unpaved Road</i> PM: 14 lb/VMT PM ₁₀ : 7.6 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)	<i>Paved Road</i> 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.
42a	Testing	0.001 gr/dscf @15,807 scfm	Baghouse	99.9%	Control is included in emission factor.
44	Mass Balance	VOC: 0.035 lb/Msf @192.4 Msf/hr	-	-	Soaps/Inks

SN	Emission Factor Source (AP-42, testing, etc.)	Emission Factor (lb/ton, lb/hr, etc.)	Control Equipment	Control Equipment Efficiency	Comments
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	<i>Conveyor</i> PM: 0.003 lb/ton PM ₁₀ : 0.0011 <i>Crusher</i> 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 VOC: 2.51E-03 NO _x : 0.031 HAPs	None	-	330 HP 242 kW 2.31 MMBtu/hr 6000 hr/yr
	<u>Combustion</u> NSPS III	PM: 0.2 g/kW-hr PM ₁₀ : 0.2 g/kW-hr CO: 3.5 g/kW-hr	None	-	
67	<u>Material Handling</u> AP-42, 11.19	<i>Conveyor</i> PM: 0.003 lb/ton PM ₁₀ : 0.0011 <i>Screen</i> PM: 0.025 lb/ton PM ₁₀ : 0.0087 lb/ton	None	-	110,000 tpy 30 tph
	<u>Combustion</u> AP-42, 3.3	<u>In lb/HP-hr</u> PM: 2.20E-03 PM ₁₀ : 2.20E-03 SO ₂ : 2.05E-03 VOC: 2.51E-03 CO: 6.68E-03	None	-	94.45 HP 70 kW 0.66815 MMBtu/hr 6000 hr/yr

SN	Emission Factor Source (AP-42, testing, etc.)	Emission Factor (lb/ton, lb/hr, etc.)	Control Equipment	Control Equipment Efficiency	Comments
		NOx: 0.031 HAPs			
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	<u>Material Handling</u> AP-42, 11.19	<i>Conveyor</i> PM: 0.003 lb/ton PM ₁₀ : 0.0011	None	-	70 tph 110,000 tpy
70	<u>Material Handling</u> AP-42, 11.19	<i>Conveyor</i> PM: 0.003 lb/ton PM ₁₀ : 0.0011 <i>Crusher</i> PM: 0.0054 lb/ton PM ₁₀ : 0.0024 lb/ton <i>Screen</i> PM: 0.025 lb/ton PM ₁₀ : 0.0087 lb/ton	None	-	80 tph 110,000 tpy
	<u>Combustion</u> AP-42, 3.3	<u>In lb/HP-hr</u> SO ₂ : 2.05E-03 VOC: 2.51E-03 HAPs	None	-	630 HP 4.41 MMBtu/hr 6000 hr/yr
	<u>Combustion</u> Tier 4 Engine	PM/PM ₁₀ : 0.015 g/bhp-hr NOx: 0.3 g/bhp-hr	None	-	
	<u>Combustion</u> Vendor Spec	CO: 1.0 g/hr	None	-	
71	<u>Dust Suppressant</u> 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
	<u>Material Handling</u> AP-42, 11.19	<i>Conveyor</i> PM: 0.003 lb/ton PM ₁₀ : 0.0011 <i>Screen</i> PM: 0.025 lb/ton PM ₁₀ : 0.0087 lb/ton	Moisture	90%	
72	<u>Dust Suppressant</u>	VOC content: 0.1%	None	-	515 tph 1,860,000 tpy

SN	Emission Factor Source (AP-42, testing, etc.)	Emission Factor (lb/ton, lb/hr, etc.)	Control Equipment	Control Equipment Efficiency	Comments
	Mass Balance	Foam density: 9.34 lb/gal Foam application rate: 0.01 gal/ton rock			
	<u>Material Handling</u> AP-42, 11.19	<i>Conveyor</i> PM: 0.003 lb/ton PM ₁₀ : 0.0011 <i>Crusher</i> 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)
N/A				

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
19	Gypsum Rock	1,681,920 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%	Weekly	No
	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

19. OPACITY:

SN	Opacity	Justification for limit	Compliance Mechanism
06	15%	NSPS OOO	Daily Observation
07	20%	Dept Guidance	Daily Observation
19	15%	NSPS OOO	Weekly Observation

SN	Opacity	Justification for limit	Compliance Mechanism
53	5%	Dept Guidance (Baghouse)	Weekly Observation
39	10%	NSPS UUU	Weekly Observation
04	5%	Dept Guidance (Baghouse)	Inspector 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)	Weekly Observation
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	0.16	0.01	0.12	1.80	2.15	<0.02	<0.02
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				

Source Name	Group A Category	Emissions (tpy)						
		PM/ PM ₁₀	SO ₂	VOC	CO	NO _x	HAPs	
							Single	Total
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				
S-21 (750 gal Motor Oil)	A-3			<0.01				
Total for Group A-3				0.011				
Vermiculite Silo	A-13	0.01						
Potash Silo	A-13	0.01						
Boric Acid Silo	A-13	0.01						
Starch Silo	A-13	0.01						
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		0.06						

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-R13

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-R14
AFIN: 31-00010

\$/ton factor	27.27	Annual Chargeable Emissions (tpy)	411.4
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	<input type="checkbox"/>
If Hold Active Permit, Amt of Last Annual Air Permit Invoice \$	0
Total Permit Fee Chargeable Emissions (tpy)	-1
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 condensable 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		184.3	184	-0.3	-0.3	184
PM ₁₀		123.1	123	-0.1		
PM _{2.5}		0	0	0		
SO ₂		7.7	7.4	-0.3	-0.3	7.4
VOC		69.5	69.2	-0.3	-0.3	69.2
CO		100.4	99.7	-0.7		
NO _x		150.9	150.8	-0.1	-0.1	150.8

