

STATEMENT OF BASIS

For the issuance of Draft Air Permit # 0598-AOP-R10 AFIN: 31-00010

1. PERMITTING AUTHORITY:

Arkansas Department 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<br>(New, Renewal, Modification,<br>Deminimis/Minor Mod, or<br>Administrative Amendment) | Short Description of Any Changes<br>That Would Be Considered New or<br>Modified Emissions |
|---------------------|---|---|
| 11/21/2019          | Renewal   | Increased blasting area for SN-37A  |

6. REVIEWER'S NOTES:

This is a Title V renewal for this facility. With this renewal, the facility is increasing the blasting area for SN-37A to 20,000 square feet, removing SN-38, SN-45, SN-49, SN-50, and SN-51 from the permit, and adding three 12,000 gal diesel storage tanks as insignificant activities. The facility's permitted annual emissions are decreasing by 0.5 tpy PM, 3.8 tpy PM<sub>10</sub>, 0.9 tpy SO<sub>2</sub>, 30.0 tpy VOC, 72.6 tpy CO, 86.8 tpy NO<sub>x</sub>, 4.35E-04 tpy lead, and 1.67 tpy total HAPs.

7. COMPLIANCE STATUS:

As of November 21, 2019, there are no compliance issues with the facility.

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<br>(NSPS, NESHAP or PSD)    |
|---|------------------|--|
| SN-06, SN-19, SN-41, SN-42,<br>SN-42a, SN-61, SN-63 | PM               | NSPS Subpart OOO                       |
| SN-39   | PM               | NSPS Subpart UUU                       |
| SN-38, SN-52, and SN-53                             | PM               | 40 CFR Part 64, CAM                    |
| SN-08   | -                | NESHAP CCCCC                           |
| SN-62   | HAPs<br>Criteria | MACT Subpart ZZZZ<br>NSPS Subpart IIII |

10. PERMIT SHIELD – TITLE V PERMITS ONLY:

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

(Note - permit shields are not allowed to be added, but existing ones can remain, for minor modification applications or any Regulation 18 requirement.)

If yes, are applicable requirements included and specifically identified in the permit?

If not, explain why. Y

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    |                         |        |

11. EMISSION CHANGES AND FEE CALCULATION:

See emission change and fee calculation spreadsheet in Appendix A.

12. 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 ADEQ 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) H<sub>2</sub>S Modeling:

The facility does not have H<sub>2</sub>S emissions.

13. 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 <sub>10</sub> : 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<br>PM/PM <sub>10</sub> : 0.0024 lb/ton<br><br>All other ops<br>PM/PM <sub>10</sub> : 0.011 lb/ton | Wetting and Foam<br><br>Baghouse | 90%<br><br>99.9%             | Rock Crushing<br>600 tph                            |
| 07 | AP-42 Table 11.19.2-2 factor for fine         | JCI Screen #1<br>PM/PM <sub>10</sub> : 0.0087 lb/ton<br><br>All other ops<br>PM/PM <sub>10</sub> : 0.0011                | Wetting and Foam<br><br>Baghouse | 90%<br><br>99.9%             | Screening<br>400 tph                                |
| 08 | EPA Tanks                                     | VOC: 1.3 tons/yr   | N/A                              | N/A                          | Lb/hr emissions                                     |

| SN             | Emission Factor Source (AP-42, testing, etc.) | Emission Factor (lb/ton, lb/hr, etc.)  | Control Equipment            | Control Equipment Efficiency | Comments  |
|----------------|---|--|------------------------------|------------------------------|---|
|                | 4.0   |  |                              |                              | based on filling of tank at 200 gal/hr<br>Total throughput 120,000 gal/yr |
| 18             | Testing                                       | PM/PM <sub>10</sub> : 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<br>Baghouse | 90%<br>99.9%                 | Secondary Crushing<br>160 tph   |
| 39, 44, 52, 53 | AP-42 Table 1.4-1&2                           | PM/PM <sub>10</sub> : 7.6 lb/MMscf<br>SO <sub>2</sub> : 0.6 lb/MMscf<br>VOC: 5.5 lb/MMscf<br>CO: 84 lb/MMscf<br>NO <sub>x</sub> : 100 lb/MMscf                       | -                            | -                            | 39: 65 MMBtu/hr<br>44: 188 MMBtu/hr<br>52-53: 3 MMBtu/hr                  |
| 32             | Testing                                       | PM/PM <sub>10</sub> : 0.001 gr/dscf @ 17,000 scfm  | Baghouse                     | 95%                          | Control is included in emission factor.                                   |
| 37A            | <u>Blasting</u><br>AP-42, 11.19               | PM: 0.000014(A) <sup>1.5</sup> lb/blast<br>PM <sub>10</sub> : 0.52*PM  | -                            | -                            | A = 20,000 sqft<br>2 blasts/day<br>260 days/yr                            |
|                | <u>Overburden Removal</u><br>AP-42, 11.19     | PM: 0.012 lb/ton<br>PM <sub>10</sub> : 0.75*PM   | -                            | -                            | 18,600 ton/day<br>4,836,000 tpy   |
|                | <u>Drilling</u><br>AP-42, 11.19               | PM: 1.3 lb/hole<br>PM <sub>10</sub> : 0.75*PM  | Filter                       | 99%                          | 300 holes/day<br>78,000 holes/yr  |
|                | <u>Ore Loading</u><br>AP-42, 11.19            | <i>Conveyor Transfer</i><br>PM: 0.003 lb/ton<br>PM <sub>10</sub> : 0.0011 lb/ton   | -                            | -                            | 7,154 ton/day<br>1,860,000 tpy  |
|                | <u>Surface Miner</u><br>AP-42, 11.19          | <i>Primary Crushing</i><br>PM: 0.0054 lb/ton<br>PM <sub>10</sub> : 0.0024 lb/ton<br><i>Conveyor Transfer</i><br>PM: 0.003 lb/ton<br>PM <sub>10</sub> : 0.0011 lb/ton | Water Sprays                 | 90%                          | 450 ton/hr<br>1,860,000 ton/yr  |
| 37B            | EIIP Vol 2, Ch 14, App A (SCC 3-              | <i>Unpaved Road</i><br>PM: 14 lb/VMT<br>PM <sub>10</sub> : 7.6 lb/VMT  | Watering                     | 80%                          | 168 VMT/day<br>43,680 VMT/yr  |

| SN    | Emission Factor Source (AP-42, testing, etc.)   | Emission Factor (lb/ton, lb/hr, etc.)                                  | Control Equipment | Control Equipment Efficiency | Comments   |
|-------|---|--|-------------------|------------------------------|--|
|       | 03-008-33 & 34)                                 |  |                   |                              |  |
| 37C   | EIIP Vol 2, Ch 14, App A (SCC 3-03-008-33 & 34) | <i>Paved Road</i><br>PM: 0.78 lb/VMT<br>PM <sub>10</sub> : 0.44 lb/VMT | Sweeping          | 10%                          | 220 VMT/day<br>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   |
| 52-53 | 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<br>22,000 cfm |
| 61    | AP-42, 11.19                                    | various  | Foam Moisture     | 90%                          | 400 tph<br>1,860,000 tpy                             |
| 62    | AP-42 or NSPS Limits                            | Varied   | None              |                              |  |
| 63    | AP-42, 11.19                                    | various  | Wet Supression    | 90%                          | 400 tph<br>1,860,000 tpy                             |

## 14. 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           |                           |               |

| SN    | Pollutants | Test Method | Test Interval                | Justification |
|-------|------------|-------------|------------------------------|---------------|
| 39    | PM         | 5 or 17     | One Time<br>(test completed) | NSPS UUU      |
|       | Opacity    | 9           |                              |               |
| 41,42 | PM         | 5 or 17     | One Time<br>(test completed) | NSPS OOO      |
| 61    | Opacity    | 9           | One Time                     | NSPS OOO      |
| 63    | Opacity    | 9           | One Time                     | NSPS UUU      |

15. 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 |  |                                    |           |              |

16. 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<br>10,000 gallons/mo | Monthly   | Yes          |
| 37B, 37C | Log of Watering and Sweeping   | -                                       | Monthly   | No           |
| Facility | Wall Board Produced  | 1,685,424,000 ft <sup>2</sup> /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           |
| 61       | Tons of gypsum   | 1,860,000 tons                          | Monthly   | Yes          |

| SN | Recorded Item      | Permit Limit  | Frequency | Report (Y/N) |
|----|--------------------|---|-----------|--------------|
|    | rock crushed       | per consec. 12 month  |           |              |
| 62 | Hours of Operation | 500 total hours per calendar year<br>100 hours per calendar year for maintenance checks and readiness testing | Monthly   | Yes          |

17. 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    |
| 52, 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    |
| 61          | 12%     | NSPS OOO                    | Weekly Observation    |
| 62          | 20%     | Department Guidance         | Inspector Observation |
| 63          | 12%     | NSPS OOO                    | Weekly Observation    |

18. DELETED CONDITIONS:

| Former SC      | Justification for removal               |
|----------------|---|
| 19, 20, and 21 | SN-38 is being removed from the permit. |

## 19. 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/<br>PM <sub>10</sub>      | SO <sub>2</sub> | VOC   | CO   | NO <sub>x</sub> | HAPs   |       |
|   |                  |                              |                 |       |      |                 | Single | Total |
| Process Water Heater<br>(5.0 MMbtu/hr)                                      | A-1              | 0.16                         | 0.01            | 0.12  | 1.80 | 2.15            | <0.02  | <0.02 |
| Eleven (11) 200 gal<br>compressor/motor oil storage<br>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 |      |                 |        |       |
| 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<br>storage tank (AST 2, 3, & 10)                | A-13             |                              |                 | 0.024 |      |                 |        |       |
| Total for Group A-13  |                  | 0.06                         |                 |       |      |                 |        |       |



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20. 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-R9 |



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-R10  
 AFIN: 31-00010

|               |              |                                   |       |
|---------------|--------------|-----------------------------------|-------|
| \$/ton factor | 23.93        | Annual Chargeable Emissions (tpy) | 372.5 |
| Permit Type   | Modification | Permit Fee \$                     | 1000  |

|   |                          |
|---|--------------------------|
| 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)                                   | -118.2                   |
| 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                |                              | 199        | 198.5      | -0.5                | -0.5                            | 198.5                       |
| PM <sub>10</sub>  |                              | 128.7      | 124.9      | -3.8                |                                 |                             |
| PM <sub>2.5</sub> |                              | 0          | 0          | 0                   |                                 |                             |
| SO <sub>2</sub>   |                              | 2.1        | 1.2        | -0.9                | -0.9                            | 1.2                         |
| VOC               |                              | 91.5       | 61.5       | -30                 | -30                             | 61.5                        |
| CO                |                              | 166.4      | 93.8       | -72.6               |                                 |                             |
| NO <sub>x</sub>   |                              | 198.1      | 111.3      | -86.8               | -86.8                           | 111.3                       |
| Lead              | <input type="checkbox"/>     | 9.91E-04   | 5.56E-04   | -0.000435           |                                 |                             |

