West Virginia Department of Environmental Protection
Division of Air Quality

Fact Sheet

For Final Renewal Permitting Action Under 45CSR30 and Title V of the Clean Air Act

Permit Number: **R30-05100113-2020**
Application Received: **November 20, 2019**
Plant Identification Number: **03-054-05100113**
Permittee: **CertainTeed Gypsum WV, Inc.**
Facility Name: **Moundsville**
Mailing Address: **9622 Energy Road, Proctor, WV 26055**

Physical Location:	Moundsville, Marshall County, West Virginia
UTM Coordinates:	516 km Easting • 4,408 km Northing • Zone 17
Directions:	The plant is located approximately 5 miles south of Moundsville on State Highway 2.

Facility Description

This is a gypsum wallboard forming facility. SIC code – 3275. Operations of the gypsum wallboard forming facility consist of receiving raw materials (primarily synthetic gypsum with some natural gypsum and additives), drying, grinding, and calcining the gypsum, followed by mixing with wet and dry additives to form slurry. The slurry is placed between two layers of paper to form the wallboard. The wallboard is dried, cut, and stacked for delivery.

Emissions Summary

Plantwide Emissions Summary [Tons per Year]

Regulated Pollutants	Potential Emissions	2019 Actual Emissions
Carbon Monoxide (CO)	342.77	51.48
Nitrogen Oxides (NO_X)	121	39.20
Particulate Matter ($PM_{2.5}$)	129	60.98
Particulate Matter (PM_{10})	163	78.23
Total Particulate Matter (TSP)	214	82.78
Sulfur Dioxide (SO_2)	1	0.35
Volatile Organic Compounds (VOC)	79.1	7.53

PM_{10} is a component of TSP.

Hazardous Air Pollutants	Potential Emissions	2019 Actual Emissions
Total HAP	2.15	1.06

Some of the above HAPs may be counted as PM or VOCs.

Title V Program Applicability Basis

This facility has the potential to emit 342.77 tpy of CO; 121 tpy of NO_x, and 163 tpy of PM_{10}. Due to this facility's potential to emit over 100 tons per year of criteria pollutant, CertainTeed Gypsum's Moundsville facility is required to have an operating permit pursuant to Title V of the Federal Clean Air Act as amended and 45CSR30.

Legal and Factual Basis for Permit Conditions

The State and Federally-enforceable conditions of the Title V Operating Permits are based upon the requirements of the State of West Virginia Operating Permit Rule 45CSR30 for the purposes of Title V of the Federal Clean Air Act and the underlying applicable requirements in other state and federal rules.

This facility has been found to be subject to the following applicable rules:

Federal and State:	45CSR6	Open burning prohibited.
	45CSR7	Control of PM from Manufacturing Sources
	45CSR10	Control of Sulfur Oxide Emissions
	45CSR11	Standby plans for emergency episodes.
	45CSR13	Permits for Construction & Modification
	45CSR16	New Source Performance Standards
	WV Code § 22-5-4 (a) (14)	The Secretary can request any pertinent information such as annual emission inventory reporting.
	45CSR30	Operating permit requirement.
	45CSR34	Emission Standards For Hazardous Air Pollutants

	40 C.F.R. Part 60 Subpart OOO	NSPS for Mineral Processing Plants
	40 C.F.R. Part 60 Subpart UUU	NSPS for Calciners and Dryers in Mineral Industries
	40 C.F.R. Part 60 Subpart IIII	Standards of Performance for Stationary Compression Ignition Internal Combustion Engines
	40 C.F.R. Part 63 Subpart ZZZZ	Standards of Performance for Stationary Reciprocating Internal Combustion Engines (RICE)
	40 C.F.R. Part 61	Asbestos inspection and removal
	40 C.F.R. Part 82, Subpart F	Ozone depleting substances
State Only:	45CSR4	No objectionable odors.

Each State and Federally-enforceable condition of the Title V Operating Permit references the specific relevant requirements of 45CSR30 or the applicable requirement upon which it is based. Any condition of the Title V permit that is enforceable by the State but is not Federally-enforceable is identified in the Title V permit as such.

The Secretary's authority to require standards under 40 C.F.R. Part 60 (NSPS), 40 C.F.R. Part 61 (NESHAPs), and 40 C.F.R. Part 63 (NESHAPs MACT) is provided in West Virginia Code §§ 22-5-1 *et seq.*, 45CSR16, 45CSR34 and 45CSR30.

Active Permits/Consent Orders

Permit or Consent Order Number	Date of Issuance	Permit Determinations or Amendments That Affect the Permit *(if any)*
R13-2656F	August 14, 2017	
G60-C070	April 17, 2015	

Conditions from this facility's Rule 13 permit(s) governing construction-related specifications and timing requirements will not be included in the Title V Operating Permit but will remain independently enforceable under the applicable Rule 13 permit(s). All other conditions from this facility's Rule 13 permit(s) governing the source's operation and compliance have been incorporated into this Title V permit in accordance with the "General Requirement Comparison Table," which may be downloaded from DAQ's website.

Determinations and Justifications

The following changes were made to the previous permit renewal:

- Minor modification MM01 was issued on December 12, 2017 (based on the revised underlying permit R13-2656F issued August 14, 2017) to remove a small dust collector on the top of a screw conveyor #3 (EU07).

The following changes were made to the previous version of the Title V permit during this renewal:

1. Emission Units Table 1.1 – added a 3,000 ft^3 Boric Acid Silo (EU54) and a 3,000 ft^3 Potash Silo (EU55) installed in 2007, and their control devices (Fabric Filters FF54 and FF55 respectively); added new Lift Station Emergency Generators 1, 2, and 3 (EG1 through EG3), a Fire Pump (EG4) and #2 Fuel Tanks (T01 through T04) located on the top of the Generators and on the top of a Fire Pump (based on Class II General Permit Registration G60-C070 issued April 17, 2015).

2. Section 4.0 - added Boric Acid Silo (EU54) and Potash Silo (EU55) (constructed 01/19/2007 and installed on 10/18/2007). These silos were overlooked by the company and were not included in R13-2656 when the initial construction permit was issued. There are a Boric Acid Bin (EU29) and Potash Bin (EU30) included in the permit R13-2656F and in the Title V permit which were installed at the same time as the Boric Acid Silo (EU54) and Potash Silo (EU55), so it appears these silos were inadvertently excluded. Boric Acid Silo (EU54) and Potash Silo (EU55) emission rates (controlled by Fabric Filters FF54 and FF55) are shown in the table below (in accordance with the Title V renewal application):

Source	$PM_{2.5}$		PM_{10}[1]		NO_x		CO		SO_2		VOC		HAPs	
	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy
EU54	0.13	0.6	0.26	1.1	--	--	--	--	--	--	--	--	--	--
EU55	0.13	0.6	0.26	1.1	--	--	--	--	--	--	--	--	--	--

[1]PM_{10} emission rates are also total PM emission rates

Since newly added silos store Boric Acid and Potash, and these materials do not meet the definition of "nonmetallic minerals" in 40 C.F.R. §60.671, these silos are not subject to the requirements of 40 C.F.R. Part 60 Subpart OOO. These silos are subject to "20 percent opacity" existing requirement 4.1.5 (45CSR§7-3.1) when material is added into or removed from the silos, and to "no visible emissions" existing requirement 4.1.9 (45CSR§7-3.7) when the silos are holding materials. To demonstrate compliance with the opacity limits of the Boric Acid and Potash Silos (EU54 and EU55), the permittee will be required to conduct visible emission checks. Since condition 4.2.5 already included visible emission checks for the equipment in R13-2656F, 45CSR§30-5.1.c was added to the citation of condition 4.2.5 to also require visible emission checks for EU54 and EU55. Per 45CSR§7-4.1, the Boric Acid and Potash Silos (EU54 and EU55) are also subject to the hourly Maximum Allowable Total Stack PM Emission Rate in Table 45-7A. The rates are 50 lbs/hr for each silo (based on source operation type "a" and process weight rate for each silo 600 ton/hr) and they are included with requirement 4.1.20. According to the table above, these Maximum Allowable Total Stack PM Emission Rates will be met because they are significantly higher than the controlled emission rates. To demonstrate compliance with Maximum Allowable Total Stack PM Emission Rates, the permittee will maintain the pressure drop across the baghouses in accordance with existing permit condition 4.1.17, monitor and record the pressure drop in accordance with existing permit condition 4.2.1, and maintain malfunction records of the baghouses in accordance with existing permit condition 4.2.2. References were added for the Boric Acid Silo (EU54) and Potash Silo (EU55) to the existing applicable requirement 4.1.17 (pressure drop across baghouses). For existing conditions 4.2.1 and 4.2.2., 40CSR§30-5.1.c was added to the citation to include the Boric Acid and Potash Silos (EU54 and EU55) and their fabric filters.

3. Section 4.0 – requirement 4.3.2 (test schedule for End Saw System EU02, Cage Mill DSG Dryer EU05, K10 Kettle EU12, K20 Kettle EU13, Board Dryer EU36) was revised to remove the note about the dates of the performed stack tests as well as the following tests dates. This information will be included with the Fact Sheet instead in the following Table below. The previous stack tests were performed in August 2016 and August 2018. Resulting emission rates for each unit and pollutant are shown in the Table, as well as emission limits (per requirement 4.1.1) and what % of the limit is each emission rate. Also, included are required test frequency and next required test date. The latest test for each unit and pollutant was performed in August 2020.

Stack Tests Dates, Results and Tests Frequency Table (based on requirement 4.3.2)

Source	Pollutant	Permit limit, lb/hr (per 4.1.1)	Test required by following date (per 4.3.2)	Test date	Test results		Required Test Frequency (per 4.3.2)	Next Test required by the following date	Test performed on the following date
					lb/hr	% of limit			
EU02	$PM_{2.5}$	0.99	August 6, 2018	August 7, 2018	1.34	> 90%	Re-done on October 30, 2018	N/A	N/A
EU02	$PM_{2.5}$	0.99	August 6, 2018	October 30, 2018	0.07	≤ 50%	Once per 5 years	August 6, 2023	August 11-13, 2020
EU05	$PM_{2.5}$	6.0	August 6, 2018	August 6, 2018	0.78	≤ 50%	Once per 5 years	August 6, 2023	August 11-13, 2020
	NO_x	2.29	August 6, 2018	August 6, 2018	0.14	≤ 50%	Once per 5 years	August 6, 2023	August 11-13, 2020
	CO	2.65	August 6, 2018	August 6, 2018	1.75	< 90%	Once per 3 years	August 6, 2021	August 11-13, 2020
EU12, EU13*	$PM_{2.5}$	3.23	August 6, 2018	August 6, 2018	0.69	≤ 50%	Once per 5 years	August 6, 2023	August 11-13, 2020
	NO_x	6.80	August 6, 2016	August 7-8, 2016	4.46	< 90%	Once per 3 years	August 6, 2019	August 11-13, 2020
	CO	25.62	August 6, 2016	August 7-8, 2016	4.97	≤ 50%	Once per 5 years	August 6, 2021	August 11-13, 2020
EU36[1]	$PM_{2.5}$	2.15	August 6, 2016	August 7-8, 2016	0.1	≤ 50%	Once per 5 years	August 6, 2021	August 11-13, 2020
	NO_x	4.65	August 6, 2016	August 7-8, 2016	0.71	≤ 50%	Once per 5 years	August 6, 2021	August 11-13, 2020
	CO	13.9	August 6, 2016	August 7-8, 2016	8.91	< 90%	Once per 3 years	August 6, 2019	August 11-13, 2020
EU36[2]	$PM_{2.5}$	32.03 / 2.4	August 6, 2016	August 7-8, 2016	0.51	≤ 50%	Once per 5 years	August 6, 2021	August 11-13, 2020
	NO_x	3.01	August 6, 2016	August 7-8, 2016	2.1	< 90%	Once per 3 years	August 6, 2019	August 11-13, 2020
	CO	10.4	August 6, 2016	August 7-8, 2016	1.18	≤ 50%	Once per 5 years	August 6, 2021	August 11-13, 2020

*EU12 and EU13 are identical units, therefore only one unit (EU13) was tested.

[1]Zones 1 and 2

[2]Zone 3. High hourly $PM_{2.5}$ applies when processing Moisture Resistant Board. Low hourly $PM_{2.5}$ applies when processing Regular Board.

4. Section 5.0 - requirements of Class II General Permit G60-D and a General Permit Registration G60-C070 (issued on April 17, 2015) for the Lift Station Emergency Generators EG1 through EG3, a Fire Pump EG4 and #2 Fuel Tanks (T01 through T04) were included with the Section 5.0 of the Title V permit during this permit renewal process. Class II General Permit G60-C was superseded and replaced by Class II General Permit G60-D. Therefore, all the general permit requirements, included in this Title V permit, are based on the latest version of the general permit (G60-D).

40 C.F.R. 60 Subpart IIII §60.4200 states that "provisions of Subpart IIII are applicable to manufacturers, owners, and operators of stationary compression ignition (CI) internal combustion engines (ICE)", and 40 C.F.R. §60.4200(a)(2) states that Subpart IIII applies to "owners and operators of stationary CI ICE that commence construction after July 11, 2005, where the stationary CI ICE are:

(i) Manufactured after April 1, 2006, and are not fire pump engines, or

(ii) Manufactured as a certified National Fire Protection Association (NFPA) fire pump engine after July 1, 2006."

Based on the applicability information above, requirements of 40 C.F.R. 60 Subpart IIII are applicable to the Emergency Generators EG1 through EG3 and Fire Pump EG4. Below is the 40 C.F.R. 60 Subpart IIII applicability table for the engines.

40 C.F.R. 60 Subpart IIII applicability Table for the Emergency Generators EG1 through EG3 and a Fire Pump EG4

Engine	Type	Displacement (l/cyl)	Model Year / Year Installed	Design Capacity (Bhp)
EG1	CI Emergency Generator, 4SLB	2.2 (<10 l/cyl)	2004-2006 (Pre-2007) / March 2008	37
EG2	CI Emergency Generator, 4SLB	1.6 (<10 l/cyl)	2006 (Pre-2007) / March 2008	27
EG3	CI Emergency Generator, 4SLB	1.6 (<10 l/cyl)	2006 (Pre-2007) / March 2008	27
EG4	CI Fire Pump, 4SLB	8.1 (<10 l/cyl)	2006 (Pre-2007) / March 2008	252

These engines are certified 40 C.F.R. 60 Subpart IIII engines. They are subject to emission standards for NMHC + NO_X, CO and PM (requirement 5.1.5), non-resettable hour meter installation (requirement 5.2.1), performance testing (requirement 5.3.1) and reporting conditions (requirement 5.5.1). Applicable General Permit Registration G60-C070 sections are included under requirements 5.1.1 (table of the equipment subject to the General Permit G60-D requirements) and 5.1.2 (emission limits for the engines).

These engines are also subject to requirements of 40 C.F.R. 63 Subpart ZZZZ. Below is the 40 C.F.R. 63 Subpart ZZZZ applicability table for the engines.

40 C.F.R. 63 Subpart ZZZZ applicability Table for the Emergency Generators EG1 through EG3 and a Fire Pump EG4

Engine	Ignition / Type	Source of HAPs	Constructed / Year Installed	Design Capacity (Bhp)
EG1	CI Emergency Generator, 4SLB	Area source	March 2008 (new)	37
EG2	CI Emergency Generator, 4SLB	Area source	March 2008 (new)	27
EG3	CI Emergency Generator, 4SLB	Area source	March 2008 (new)	27
EG4	CI Fire Pump, 4SLB	Area source	March 2008 (new)	252

Per 40 C.F.R. §63.6590(a)(2)(iii), these CI engines are considered new units (area source units constructed on or after June 12, 2006) since they were installed in 2008. Therefore, per 40 C.F.R. §63.6590(c)(1), they are only subject to 40 C.F.R. 60 Subpart IIII requirements (condition 5.1.7).

The only General Permit condition applicable to the #2 fuel oil tanks T01 through T04 is included under requirement 5.1.8.

Non-Applicability Determinations

The following requirements have been determined not to be applicable to the subject facility due to the following:

1. **45CSR2 – *To Prevent and Control Particulate Air Pollution from Combustion of Fuel in Indirect Heat Exchangers.*** This rule applies to fuel burning units that operate as indirect heat exchangers. Since the DSG cage mill system, kettles, paper heaters, and board dryer are all direct heat transfer units, these units are not subject to 45CSR2 as they are not classified as fuel burning units. In addition, the Stucco Cooler (EU14) does not meet the definition of a fuel burning unit since there is no combustion associated with it. This determination applies to the following sources: Cage Mill DSG Dryer (EU05), K10 Kettle (EU12), K20 Kettle (EU13), Board Dryer (EU36), Two Paper Heaters (EU37), and Stucco Cooler (EU14).

2. **40 C.F.R. Part 64 *Compliance Assurance Monitoring* (CAM)**. The facility utilizes a number of baghouses; however, these baghouses are an integral part of the material transfer and separation process and are not considered air pollution control devices for purposes of meeting an emission limitation. All of the material collected by the baghouses is reintroduced into the process. In addition, the bin vent filters used at the facility are integrated into the bins they serve and operate passively to capture material in displacement air and return it to the storage bin. Therefore, because the baghouses and bin vent filters are for product recovery and are thereby inherent process equipment as defined in 40 C.F.R §64.1, they are not considered control devices with respect to CAM and this regulation does not apply.

3. **40 C.F.R. 60 Subpart OOO** - Boric Acid Silo (EU54) and Potash Silo (EU55) are not subject to the requirements of this subpart because Boric Acid and Potash materials do not meet the definition of "nonmetallic minerals" in 40 C.F.R. §60.671.

Request for Variances or Alternatives

None.

Insignificant Activities

Insignificant emission unit(s) and activities are identified in the Title V application.

Comment Period

Beginning Date:	August 31, 2020
Ending Date:	September 30, 2020

Point of Contact

All written comments should be addressed to the following individual and office:

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Procedure for Requesting Public Hearing

During the public comment period, any interested person may submit written comments on the draft permit and may request a public hearing, if no public hearing has already been scheduled. A request for public hearing shall be in writing and shall state the nature of the issues proposed to be raised in the hearing. The

Secretary shall grant such a request for a hearing if he/she concludes that a public hearing is appropriate. Any public hearing shall be held in the general area in which the facility is located.

Response to Comments (Statement of Basis)

Not applicable.