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# **PART 70**

## **TECHNICAL SUPPORT DOCUMENT**

### **(STATEMENT of BASIS)**

**APPLICATION FOR:**  
**Minor Revision**

**SUBMITTED BY**  
Georgia-Pacific Gypsum, LLC  
P.O. Box 337350  
North Las Vegas, Nevada 89033

**FOR**  
Georgia-Pacific Gypsum, LLC  
Source: 00593

**LOCATION:**  
11401 US Highway 91  
Las Vegas, Nevada 89165

SIC code 3275, "Gypsum Manufacturing"  
NAICS code 327420, "Gypsum Product Manufacturing"

Application Received: December 26, 2023

TSD Date: February 22, 2024

## EXECUTIVE SUMMARY

Georgia-Pacific Gypsum, LLC (GP) is a gypsum wallboard and plaster manufacturing operation located twenty miles north of the City of Las Vegas, Nevada, along U.S. Highway 91, in Apex, Nevada, Hydrographic Area 216 (Garnet Valley). Garnet Valley is designated as an attainment area for all pollutants.

GP is neither a categorical stationary source as defined in AQR 12.2.2(j) nor does it belong to any other stationary source category regulated under Section 111 or 112 of the Act as of August 7, 1980. Therefore, fugitive emissions are not included in the source status determination. The source is a major Part 70 source for CO and NO<sub>x</sub>, synthetic minor for PM<sub>10</sub> and PM<sub>2.5</sub>, and a minor source for SO<sub>2</sub>, VOC, and HAP. The source emits greenhouse gases.

The source produces wallboard and resin mats. The wallboard operation consists of crushers, screens, calciners, aggregate dryers, impeller mills, mixers, storage bins, conveyors, and a board dryer to manufacture wallboard and two grades of plaster, designated as alpha and beta. The resin mat operation consists of a vacuum loader, hopper dryer, pigment feeder, resin extruder and die head, water tank cooling and forming system, cutter/slitter, and winder. All manufacturing and support processes at the site are grouped under SIC code 3275, “Gypsum Products,” and NAICS code 327420, “Gypsum Products Manufacturing.”

The source is subject to 40 CFR Part 60, Subparts Dc, “Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units”; OOO, “Standards of Performance for Nonmetallic Mineral Processing Plants”; UUU, “Standards of Performance for Calciners and Dryers in Mineral Industries”; and IIII, “Standards of Performance for Stationary Compression Ignition Internal Combustion Engines.” It is also subject to 40 CFR Part 63, Subpart ZZZZ, “National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines.”

Table 1 summarizes the source potential to emit for each regulated air pollutant.

**Table 1: Source PTE (tons/year)<sup>1</sup>**

Pollutant	PM <sub>10</sub>	PM <sub>2.5</sub>	NO <sub>x</sub>	CO	SO <sub>2</sub>	VOC	HAP <sup>2</sup>	Pb	H <sub>2</sub> S	GHG <sup>3</sup>
Applicability/SDE	25,079.30	13,759.62	103.45	231.93	2.56	45.69	14.44	0	0	93,588.77
Point Emissions	60.94	39.06	102.94	231.50	2.55	7.05	7.27	0	0	92,973.30
Fugitive Emissions	13.52	2.56	0.51	0.43	0.00	38.64	7.17	0	0	615.47
Tons/year (PTE)	74.45	40.62	103.45	231.93	2.56	45.69	14.62	0	0	93,588.77
Major Source Thresholds (Title V)	100	100	100	100	100	100	10/25 <sup>1</sup>	100	100	-
Major Stationary Source Thresholds (PSD)	250	250	250	250	250	250	10/25 <sup>1</sup>	250	250	-

<sup>1</sup>Not a source-wide emission limit; values are used for determining the major source status.

<sup>2</sup>Ten tons for any individual HAP or 25 tons for a combination of all HAP. Neither value is exceeded.

<sup>3</sup>Metric tons per year, CO<sub>2e</sub>. PSD requirements for GHG have not been triggered.

The Clark County Department of Environment and Sustainability, Division of Air Quality (DAQ) has received delegated authority from the U.S. Environmental Protection Agency to implement the requirements of the Part 70 Operating Permit (OP). The most recent Part 70 OP renewal was issued on December 31, 2015. There have been several permit actions since the last Part 70 OP renewal was issued, including minor revisions, AQR 12.4.3.2(b)s, Notice and Go revisions, and a Reopen for Cause. Outstanding actions will all be addressed during this renewal. Based on the information submitted by the applicant in the renewal application, subsequent revision applications, and a technical review performed by DAQ staff, the draft Part 70 OP renewal is proposed for GP.

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## I. ACRONYMS

**Table I-1: List of Acronyms**

<b>Acronym</b>	<b>Term</b>
AQR	Clark County Air Quality Regulation
AST	Aboveground Storage Tank
ASTM	American Society for Testing Materials
ATC	Authority to Construct
CAAA	Clean Air Act, as amended, or Clean Air Act Amendments
CAM	Compliance Assurance Monitoring
CATEF	California Air Toxics Emission Factor
CEMS	Continuous Emissions Monitoring System
CF	control factor
CFC	Chlorofluorocarbon
CFR	Code of Federal Regulations
CO	carbon monoxide
CO <sub>2</sub>	carbon dioxide
CD	control device
dscf	dry standard cubic feet
DAQ	Division of Air Quality
DES	Clark County Department of Environment and Sustainability
DOM	date of manufacture
EF	emissions factor
EPA	U.S. Environmental Protection Agency
EU	emission unit
GHG	greenhouse gas
HA	Hydrographic Area
HAP	hazardous air pollutant
HCFC	Hydrochlorofluorocarbon
HHV	High Heating Value
hp	horsepower
kg	kilogram
kW	kilowatts
LHV	Lower Heating Value
MEQ	Megawatt Equivalent
MMBtu/hr	Million British thermal units per hour
MW	megawatt
NAC	Nevada Administrative Code
NAAQS	National Ambient Air Quality Standard

<b>Acronym</b>	<b>Term</b>
NAICS	North American Industry Classification System
NNSR	Nonattainment New Source Review
NO <sub>x</sub>	nitrogen oxide(s)
NRS	Nevada Revised Statutes
PM <sub>2.5</sub>	particulate matter less than 2.5 microns in aerodynamic diameter
PM <sub>10</sub>	particulate matter less than 10 microns in aerodynamic diameter
ppm	Parts per million
ppmvd	Parts per million, volumetric dry
PSD	prevention of significant deterioration
PTE	potential to emit
QA	Quality Assurance
QIP	Quality Improvement Plan
RACT	Reasonably Achievable Control Technology
RATA	Relative Accuracy Test Audit
SCC	Source Classification Code
SDE	Status Determination Emissions
SIC	Standard Industrial Classification
SIP	State Implementation Plan
SO <sub>2</sub>	sulfur dioxide
UTM	Universal Transverse Mercator
VOC	volatile organic compound

## II. SOURCE INFORMATION

### A. GENERAL

Permittee: Georgia-Pacific Gypsum, LLC  
Mailing Address: P.O. Box 337350, North Las Vegas, Nevada 89033  
Responsible Official: Brett Diliberto, Plant Manager & Sound Mat  
Phone Number: (702) 643-8100  
Source Location: 11401 US Highway 91, Las Vegas, Nevada 89165  
Hydrographic Area: 216  
SIC code: 3275, “Gypsum Manufacturing”  
NAICS code: 327420, “Gypsum Product Manufacturing”

### B. DESCRIPTION OF PROCESS

The permittee produces wallboard and resin mats. The wallboard operation consists of crushers, screens, calciners, aggregate dryers, impeller mills, mixers, storage bins, conveyors, and a board dryer, to manufacture wallboard and two grades of plaster, designated as Alpha and Beta. The resin mat operation consists of a vacuum loader, hopper dryer, pigment feeder, resin extruder and die head, water tank cooling and forming system, cutter/slitter, and winder. All manufacturing and support processes at the site are grouped under SIC code 3275, “Gypsum Products,” and NAICS code 327420, “Gypsum Products Manufacturing.”

The source is subject to 40 CFR Part 60, Subparts Dc, “Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units”; OOO, “Standards of Performance for Nonmetallic Mineral Processing Plants”; UUU, “Standards of Performance for Calciners and Dryers in Mineral Industries”; and IIII, “Standards of Performance for Stationary Compression Ignition Internal Combustion Engines.” It is also subject to 40 CFR Part 63, Subpart ZZZZ, “National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines.”

Table II-B-1 lists the affected emission units covered by this minor revision.

**Table II-B-1: Summary of Affected Emission Units—Wallboard Plant**

EU	Rating	Description	Manufacturer
E03	Zone 1: 30.0 MMBtu/hr Zone 2: 30.0 MMBtu/hr Zone 3: 15.0 MMBtu/hr	Board Dryer: Natural Gas Heaters and/or Heat Supplied by NCA #1 (includes emissions from EU: E02)	COE
	Main Exhaust (including wet and dry end seals) <sup>1</sup>	Board Dryer: Natural Gas Heaters and/or Heat Supplied by NCA #1 (includes emissions from EU: E02)	

Note: MMBtu/her = millions of British thermal units per hour; TPH = tons per hour.

<sup>1</sup>Burner rate for the main exhaust will be based on the heat inputs from the Zone 1, 2, and 3 burners



### C. PERMITTING HISTORY

The last renewal was issued May 2, 2023.

**Table II-C-1: Permitting Actions Issued Since Last Renewal Was Issued**

Submittal Date	Description
5/22/2023	Notice and Go (experimental trial – approved. Resulted in PNF or 7/31/2023)
7/31/2023	Notice and Go (relocating an EU – approved. No change to permit needed)
7/31/2023	Minor Revision with regard to heat source and stack testing inboard Dryer.
10/12/2023	Notice and Go (installing flame shields in Board Dryer burners - approved. No change to permit needed)
12/26/2023	Minor Revision with regard to heat source and stack testing in board Dryer. (this action)

### D. CURRENT PERMITTING ACTION

#### Title V Minor Revision Application

DAQ received the Title V minor revision application on December 26, 2023. The application was deemed complete on January 30, 2024.

**Table II-D-1: Changes Requested in the Minor Revision**

<p>Proposal: (EU: E03) GP proposed to exhaust either through the three dryer zones stacks or through the main exhaust stack and the two end seal stacks (one wet and one dry) regardless of the source of heat, or a mixture of both. GP proposed to add flexibility to exhaust through either stack scenario. The intent is to improve efficiency and heat usage.</p> <p>Discussion: DAQ agrees with this change. Because the PTE is calculated based on a worst case emission (burners vs NCA #1 gas) for each pollutant, the emissions do not change depending on which stack(s) carry the exhaust. The DAQ modeler has verified this assertion. All stacks are currently capable of being performance tested, so no additional requirements are needed in the permit.</p>
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**Table II-D-2: Changes Included by DAQ as Part of the Renewal Process**

Description
None

### E. OPERATING SCENARIOS

Other than the change to which stack(s) are used depending on the heat source, no changes are being made to the operating scenarios.

## III. EMISSIONS INFORMATION

### A. SOURCE-WIDE PTE

The source is a major Part 70 source for CO and NO<sub>x</sub>, synthetic minor for PM<sub>10</sub> and PM<sub>2.5</sub>, and a minor source for, SO<sub>2</sub>, VOC, and HAP. The source is also a source of greenhouse gases.

**Table III-A-1: Source-wide PTE (tons per year)**

PM <sub>10</sub>	PM <sub>2.5</sub>	NO <sub>x</sub>	CO	SO <sub>2</sub>	VOC	HAP <sup>1</sup>	Pb	H <sub>2</sub> S	GHG <sup>2</sup>
74.45	40.62	103.45	231.93	2.56	45.69	14.62	0	0	93,588.77

<sup>1</sup> Total HAP. No single HAP equals or exceeds 10 tpy.

<sup>2</sup> Metric tons per year, CO<sub>2e</sub>

Emissions of Pb and H<sub>2</sub>S have not been identified. Therefore, they will not be listed subsequently in the TSD nor in the permit.

## **B. EMISSIONS CALCULATIONS**

There are no changes to any emission values. A stack location changed. Permit language has been revised.

## **C. OPERATIONAL LIMITS**

There are no changes in operational limits.

## **D. CONTROL TECHNOLOGY**

There are no changes to control requirements.

## **E. MONITORING**

There are no changes to monitoring.

## **F. PERFORMANCE TESTING**

There are no changes to performance testing requirements except a change in the stack testing points depending on whether NCA gas is use or natural gas is used. Permit language has been revised.

## **G. CONTROL ANALYSIS**

There was no change in emissions, so no control analysis was triggered.

# **IV. REGULATORY REVIEW**

## **A. LOCAL REGULATORY REQUIREMENTS**

There was no change to any AQR applicability.

## **B. FEDERALLY APPLICABLE REGULATIONS**

There was no change in federal CFR applicability. The conditions related to demand response for emergency generators was updated to the lates DAQ standard language.

## V. COMPLIANCE

### A. COMPLIANCE CERTIFICATION

- a. Regardless of the date of issuance of this Part 70 OP, the schedule for the submittal of reports to the Control Officer shall be as follows:

**Table V-A-1: Reporting Schedule**

Required Report	Applicable Period	Due Date
Semiannual report for 1 <sup>st</sup> half of year.	January, February, March, April, May, June	July 30 of each year <sup>1</sup>
Semiannual report for 2 <sup>nd</sup> half of year; any additional annual records required.	July, August, September, October, November, December	January 30 each year <sup>1</sup>
Annual Compliance Certification Report	Calendar year	January 30 each year <sup>1</sup>
Annual Emission Inventory Report	Calendar year	March 31 each year <sup>1</sup>
Annual Emission Statement <sup>2</sup>	Calendar year	March 31 each year <sup>1</sup>
Notification of Malfunctions, Startup, Shutdowns, or Deviations with Excess Emissions	As required	Within 24 hours of when permittee learns of event
Excess Emissions that Pose a Potential Imminent and Substantial Danger	As required	Within 12 hours of when permittee learns of event
Performance Testing Protocol	As required	No less than 45 days, but no more than 90 days, before anticipated test date <sup>1</sup>
Report of Malfunctions, Startup, Shutdowns, or Deviations with Excess Emission	As required	Within 72 hours of notification
Deviation Report without Excess Emissions	As required	Along with semiannual reports <sup>1</sup>
Performance Testing	As required	Within 60 days of end of test <sup>1</sup>

<sup>1</sup> If the due date falls on a Saturday, Sunday, or federal or Nevada holiday, or any day DAQ is not normally open for business, submittals are due on the next regularly scheduled business day.

<sup>2</sup> Required only for stationary sources that emit 25 tons or more of NO<sub>x</sub> and/or 25 tons or more of VOC during a calendar year.

- b. A statement of methods used for determining compliance, including a description of monitoring, recordkeeping, and reporting requirements and test methods.
- c. A schedule for submission of compliance certifications during the permit term.
- d. A statement indicating the permittee's compliance status with any applicable enhanced monitoring and compliance certification requirements of the Act.

### B. COMPLIANCE SUMMARY

There has been no change to the compliance summary with this action.

### C. SUMMARY OF MONITORING FOR COMPLIANCE

There has been no change to monitoring with this action.

## D. PERMIT SHIELD

### Permit Shield

The permittee did not request a permit shield with this action.

### Streamlining

There has been no change to the streamlining with this action.

## E. COMPLIANCE HISTORY

Notice of Violation (NOV) #009516. Noticed 3/1/21, adjudicated 3/18/21.

## VI. EMISSION REDUCTION CREDITS (OFFSETS)

The source is subject to offset requirements in accordance with AQR 12.7. Offset requirements and associated mitigation are pollutant specific.

## VII. MODELING

Facility Location: 686600, 4024250 (Universal Transverse Mercator (UTM) NAD83)

Georgia Pacific Gypsum is a major Title V source in Hydrographic Area 216 (Garnet Valley). Permitted emission units include gypsum products manufacturing. Since minor source baseline dates for PM<sub>10</sub> (December 31, 1980), NO<sub>x</sub> (January 24, 1991) and SO<sub>2</sub> (December 31, 1980) have been triggered, Prevention of Significant Deterioration (PSD) increment analysis is required.

DAQ had analyzed the alternate scenario of all emissions exhausted either through the main stack or the existing scenario of three dryer zones for the operating permit that was issued on May 2, 2023. The analysis showed compliance with the PSD increment for both scenarios. In this permitting action, the source has proposed to add flexibility to exhaust the dryer emissions utilizing both the scenarios at the same time (main stack and three zone stacks). DAQ performed modeling to assess the impacts when the exhaust passes through these stacks in different proportions. As shown in Table VII-1, the impacts using a combination of the stacks were less than when all emissions were exhausted through the main stack.

**Table VII-1: Impacts for Different Stack Scenarios (µg/m<sup>3</sup>)**

Exhaust Proportion	Main Stack	0 %	25 %	50 %	75 %	100 %
	Three Zones	100 %	75 %	50 %	25 %	0 %
NO <sub>x</sub>	1-hour	57.87	59.73	63.85	71.83	79.33
NO <sub>x</sub>	Annual	15.38	16.01	16.63	17.25	17.87
PM <sub>10</sub>	24-hour	11.04	11.19	11.68	12.12	12.41
PM <sub>10</sub>	Annual	5.53	5.78	6.03	6.29	6.54

DAQ modeled the source using AERMOD to track the increment consumption. The average of 2021 and 2022 actual emissions were used in the model. Stack data submitted by the applicant were supplemented with information available for similar emission units. Five years (2011 to

2015) of meteorological data from the McCarran Station were used in the model. U.S. Geological Survey National Elevation Dataset terrain data were used to calculate elevations. Table VII-2 shows the location of the maximum impact and the potential PSD increment consumed by the source at that location. The impacts are below the PSD increment limits.

**Table VII-2: PSD Increment Consumption**

Pollutant	Averaging Period	Source's PSD Increment Consumption ( $\mu\text{g}/\text{m}^3$ )	Location of Maximum Impact	
			UTM X (m)	UTM Y (m)
SO <sub>2</sub>	3-hour	1.55 <sup>1</sup>	686683	4024085
SO <sub>2</sub>	24-hour	0.87 <sup>1</sup>	686776	4024416
SO <sub>2</sub>	Annual	0.46	686776	4024416
NO <sub>x</sub>	Annual	12.84	686776	4024416
PM <sub>10</sub>	24-hour	22.90 <sup>1</sup>	686453	4024403
PM <sub>10</sub>	Annual	11.86	686695	4024407

<sup>1</sup> Highest Second High Concentration.

## VIII. ENVIRONMENTAL JUSTICE

The GP plant is remotely located. It is far from residences, schools, and hospitals. There is no increase in emissions. This Part 70 OP minor revision is not subject to a public participation process.

## IX. PUBLIC PARTICIPATION

Under AQR 12.5.2.17, the public participation requirement is not triggered for a minor Part 70 OP revision.

## X. ADMINISTRATIVE REQUIREMENTS

There has been no change to any administrative requirements.

## XI. ATTACHMENTS

The PTE calculation is in the source folder.

The Applicability/SDE calculation is in the source folder.