DES
DEPARTMENT OF ENVIRONMENT AND SUSTAINABILITY
air quality desert conservation PROGRAM sustainability

4701 W. Russell Rd Suite 200
Las Vegas, NV 89118-2231
Phone (702) 455-5942
Fax (702) 383-9994

# PART 70
# TECHNICAL SUPPORT DOCUMENT
## (STATEMENT of BASIS)

APPLICATION FOR:
**Minor Revision**

SUBMITTED BY:
CertainTeed Gypsum Manufacturing Inc.

FOR:
CertainTeed Gypsum Manufacturing Inc.

**Source ID: 00004**

**CertainTeed Gypsum Manufacturing Inc.**

LOCATION:
13500 Blue Diamond Road
Las Vegas, Nevada 89161

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

**Application Received:** March 13, 2023

**TSD Date**: **September 20, 2023**

# EXECUTIVE SUMMARY

CertainTeed Gypsum Manufacturing, Inc. (CertainTeed) owns and operates a wallboard manufacturing facility located in Clark County, Nevada. CertainTeed is located approximately 20 miles west of Las Vegas near Blue Diamond in the Las Vegas Valley Hydrographic Area (HA) 212. HA 212 is currently designated as an attainment area for all regulated air pollutants except ozone, which was classified as a moderate nonattainment area on January 5, 2023.

CertainTeed is categorized under SIC code 3275, "Gypsum Products" (NAICS code 327420, "Gypsum Product Manufacturing"). CertainTeed 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. CertainTeed is a major source of CO, synthetic minor (80) of $NO_X$, synthetic minor for $PM_{10}$ and a minor source for $PM_{2.5}$, $SO_2$, VOC and HAPs, as well as a source of GHG emissions. Emission units at the source include rock crushing and screening equipment, the transport of raw rock, mill operations, plaster operations, and wallboard manufacturing. Table 1 shows potential emissions for the source.

This source is subject to 40 CFR Part 60, Subparts OOO, UUU, and IIII, and 40 CFR Part 63, Subparts CCCCCC and ZZZZ. However, the source will meet the federal requirements of Subpart ZZZZ by adhering to the federal requirements of 40 CFR Part 60, Subpart IIII.

This project increases the facility-wide PTE. Table-1 provides the facility–wide PTE after the project.

**Table 1: Facility-Wide PTE Summary (TPY)**

| Pollutants | $PM_{10}$ | $PM_{2.5}$ | $NO_X$ | CO | $SO_2$ | VOC | HAPs | $H_2S$ | Pb | GHG[1] |
|---|---|---|---|---|---|---|---|---|---|---|
| Total | 63.54 | 32.48 | 84.86 | 171.28 | 0.79 | 27.16 | 3.40 | 0 | 0 | 141,561 |

[1]Expressed as metric tons of $CO_2e$

# TABLE OF CONTENTS

## LIST OF TABLES

# ACRONYMS AND ABBREVIATIONS

(These terms may be seen in the Technical Support Document)

| | |
|---|---|
| AQR | Clark County Air Quality Regulation |
| AST | aboveground storage tank |
| ATC | Authority to Construct |
| Avgas | aviation gasoline |
| CARB | California Air Resources Board |
| CFR | Code of Federal Regulations |
| CO | carbon monoxide |
| DAQ | Clark County Division of Air Quality |
| dscm | dry standard cubic meter |
| EPA | U.S. Environmental Protection Agency |
| EU | emission unit |
| GHG | greenhouse gas |
| HAP | hazardous air pollutant |
| hp | horsepower |
| MMBtu | Millions of British thermal units |
| MSP | Minor Source Permit |
| NAC | Nevada Administrative Code |
| $NO_X$ | nitrogen oxides |
| NRS | Nevada Revised Statutes |
| NTTR | Nevada Test and Training Range |
| OP | Operating Permit |
| $PM_{10}$ | particulate matter less than 10 microns |
| $PM_{2.5}$ | particulate matter less than 2.5 microns |
| ppm | parts per million |
| PSD | Prevention of Significant Deterioration |
| PTE | potential to emit |
| RICE | reciprocating internal combustion engine |
| SDS | Safety Data Sheet |
| SIP | state implementation plan |
| $SO_2$ | sulfur dioxide |
| UST | underground storage tank |
| VEE | Visible Emissions Evaluation |
| VOC | volatile organic compound |

# I. SOURCE INFORMATION

**Responsible Official:** Sean Brennan

**Phone Number:** (702) 875-4111

# II. PROCESS DESCRIPTION

The CP Mill (EU E.11) combines grinding, drying, and calcining operations into a single unit. The discharge terminal conveys the material to a 1,200-ton board rock bin. A rock elevator transfers the gypsum to the CP Mill, pulverizes it, then combines it with the flash calciner combustion gases. The calciner burns and converts the pulverized gypsum rock into stucco at 50 MMBtu/hr. The gases carry the calcinated stucco to the baghouses, which separate the stucco from the gas stream and control the particulate emissions during transference. The stucco is transported to storage bins and used for wallboard manufacturing.

$PM_{10}$ is the primary pollutant associated with this process. Pollutants from the CP Mill combustion include $PM_{10}$, $NO_X$, CO, VOCs, and $SO_2$.

**Table II-1: Permitting History**

| Issued Date | Description |
|---|---|
| 5/3/2022 | Part 70 ATC – 12.4.3.2(b) |
| 11/21/2021 | Title V OP - Reopen for Cause |
| 11/21/2021 | Title V OP - Reopen for Cause |
| 6/22/2020 | Title V OP - Renewal |

# III. PERMITTING ACTION

This source is an existing Part 70 source, as defined in AQR 12.5.1(c), that is submitting this application to revise its major source permit. The source is proposing to replace the burner to emission unit (EU: E.11). The source appropriately applied for a minor revision to the Part 70 operating permit (OP) under AQR 12.4.3.2(e).

The permitting action shall address the following:

1. Replacing the burner to EU: E.11; and

2. Updating the PTE to reflect the change in emissions per pollutant as applicable.

Table III-1 lists the affected units addressed in the project for this ATC permit.

**Table III-1. Affected Emission Units List**

| EU | Description | Rating | Manufacturer | Model No. | Serial No. | Group | SCC |
|---|---|---|---|---|---|---|---|
| E.11 | C.P. Mill (burner) | 37 MMBtu/hr | Maxon | 140KDZER LE-NFS | 18903163 | 5 | 30501513 |

# IV. FACILITY EMISSION UNITS

See attachment section for a complete list of emission units at the facility.

# V. CALCULATION OF EMISSIONS

Applicability

See the attachment section for the applicability emissions after the project. Applicability emissions because of this action do not change the facility's current status.

PTE

PTE is calculated to include any controls or limits, whether voluntarily proposed by the source or required. PTE does not include insignificant emission units and activities, including fugitive emissions.

Table V-1 shows the PTE associated with the affected emission unit in this action. PTE calculations are included in the attachments.

**Table V-1. PTE of Affected Emission Units (tons per year)**

| EU | Condition | $PM_{10}$ | $PM_{2.5}$ | $NO_X$ | CO | $SO_2$ | VOC | HAPs | $H_2S$ | Pb |
|---|---|---|---|---|---|---|---|---|---|---|
| E.11 | 8,760 hours | 8.54 | 8.54 | 7.88 | 17.97 | 0.10 | 0.88 | 0.31 | 0 | 0 |

Emission Increase

The emission increases for all the pollutants associated with the new burner for EU: E.11. Significance thresholds are not triggered by this project. A RACT analysis is not requisite as shown in Table V-2.

**Table V-2. Emissions Increase Calculation and Significance Evaluation (tons per year)**

| Affected EU | $PM_{10}$ | $PM_{2.5}$ | $NO_X$ | CO | $SO_2$ | VOC | HAPs | $H_2S$ | Pb |
|---|---|---|---|---|---|---|---|---|---|
| Proposed PTE | 63.54 | 32.48 | 84.86 | 171.28 | 0.79 | 27.16 | 3.40 | 0 | 0 |
| Existing PTE | 63.54 | 32.48 | 94.72 | 154.32 | 0.81 | 27.34 | 3.46 | 0 | 0 |
| ∆ Emissions | **0.00** | **0.00** | **-9.86** | **16.96** | **-0.02** | **-0.18** | **-0.06** | **0** | **0** |
| **Minor NSR Significance Threshold** | **7.5** | **5.0** | **20** | **20** | **40** | **20** | **10/25** | **5** | **0.6** |
| RACT Analysis Required | No | No | No | No | No | No | No | NA | NA |

# VI. CONTROL TECHNOLOGY

The proposed burner emissions were calculated using an emission rating of 40 ppm of $NO_X$ and 150 ppm of CO as provided by the manufacturer's guarantee. The permittee proposed a 30 ppm of $NO_X$ emission rating; however, the manufacturer lowest guarantee was 40 ppm. The CO emissions are higher than those of the previous burner. The increased emissions do not violate a voluntarily acceptable emissions limit (VAEL), an established limit, nor do they affect the status of the source or trigger additional regulations, so the increase isn't triggering any applicable requirements.

The AQR 92 and 94 language was removed from the controls section of the permit until further notice.

## VII. EMISSION LIMITS

Replacing the burner from the C.P. Mill doesn't trigger additional or a change in the existing emission limits. However, as an affected facility under 40 CFR Part 60, Subpart UUU, the permittee shall not from any affected facility:

1. Emit particulate matter in excess of 0.092 g/dscm for calciners and calciners and dryers in series nor more than 0.057 g/dscm for dryers only.

2. Exhibit greater than 10 percent opacity unless the emissions are from a wet scrubbing control device.

## VIII. OPERATIONAL LIMITS

The CP Mill for the combustion component is permitted for unlimited operation (8,760 hours per year).

The AQR 92 and 94 language was removed from the operational limits section of the permit until further notice.

## IX. REVIEW OF APPLICABLE REGULATIONS

Local

Additional local regulations are not triggered by the burner replacement. The existing provisions per any applicable regulations established in the OP will remain effective.

Federal Regulations

**40 CFR Part 60, Subpart UUU**

This subpart applies to each calciner and dryer at an affected facility. As an existing affected facility, and the source must continue to comply with the provisions of this subpart.

## X. MONITORING

There are no monitoring requirements associated with the burner for this emission unit. The existing provisions as required by 40 CFR Part 60, Subpart UUU, remain binding.

## XI. PERFORMANCE TESTING

The source was required to perform an initial performance test for particulate matter under 40 CFR Part 60, Subpart UUU, will still be required to perform subsequent testing every 5 years.

# XII. INCREMENT ANALYSIS

CertainTeed Gypsum Manufacturing is a major source in Hydrographic Area 212 (the Las Vegas Valley). Permitted emission units include a mill, 6 dryers, 7 calciners, 2 paper heaters, one fire pump and other gypsum manufacturing equipment. Since minor source baseline dates for $NO_x$ (October 21, 1988) and $SO_2$ (June 29, 1979) have been triggered, Prevention of Significant Deterioration (PSD) increment analysis is required.

DAQ modeled the source using AERMOD to track the increment consumption. 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 XII-1 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 XII-1: PSD Increment Consumption**

| Pollutant | Averaging Period | Source's PSD Increment Consumption (µg/m³) | Location of Maximum Impact | |
|---|---|---|---|---|
| | | | UTM X (m) | UTM Y (m) |
| $SO_2$ | 3-hour | 2.93[1] | 645275 | 3991315 |
| $SO_2$ | 24-hour | 0.76[1] | 645727 | 3991531 |
| $SO_2$ | Annual | 0.36 | 645727 | 3991531 |
| $NO_X$ | Annual | 24.02 | 645727 | 3991531 |

[1] Highest Second High Concentration.

# XIII. PUBLIC PARTICIPATION

This is an existing Part 70 source proposing a modification which will increase the source-wide PTE. However, the emission increase is less than the minor NSR significant levels in AQR 12.5.1(d). Therefore, the public participation procedures in AQR 12.5 do not apply.

# XIV. ATTACHMENTS

**Table XIV-1: List of Emission Units at the Facility**

| EU | Rating | EU Description | Controls | Manufacturer | Model No. | Serial No. |
|---|---|---|---|---|---|---|
| **Group 3A—Truck Unloading Station** | | | | | | |
| C.16 | 2.5 miles | Paved Haul Road | Sweeping | | | |
| C.17 | 60 tons | Hoppers #1, #2 | BH01 | | | |
| C.18 | 3 acres | Gypsum Rock Storage Pile | | | | |
| C.19 | | Conveyor System (4 Belts) | Moisture | | | |
| **Group 5—Discharge Terminal** | | | | | | |
| E1 | | Stacker E.1 | Moisture | | | |
| E.2 | | Conveyor System (5 Belts) | Moisture | | | |
| E.8.1 | | Silo #1 | BV01 | | | |

| EU | Rating | EU Description | Controls | Manufacturer | Model No. | Serial No. |
|---|---|---|---|---|---|---|
| E.8.2 | | Silo #2 | BV02 | | | |
| E.9 | | Conveyor System (2 Belts) | Moisture | | | |
| E.9.2 | | Emergency Hopper | | | | |
| E.9.3 | | Silo #3 | BV03 | | | |
| E.11 | 37 MMBtu/hr | CP Mill | BH02 | | | |
| E.12 | 55 ton/hr | Stucco Cooler | BH02 | | | |
| **Group 6—Rolling Mills** | | | | | | |
| F.1(a-e) | 55 ton/hr | Rock Bin #1-5 | BH04-BH08 | | | |
| F.1.1 | 1.8 MMBtu/hr | Flash Dryer #1 | BH04 | | | |
| F.1.2 | 1.8 MMBtu/hr | Flash Dryer #2 | BH05 | | | |
| F.1.3 | 1.8 MMBtu/hr | Flash Dryer #3 | BH06 | | | |
| F.1.4 | 1.8 MMBtu/hr | Flash Dryer #4 | BH07 | | | |
| F.1.5 | 1.8 MMBtu/hr | Flash Dryer #5 | BH08 | | | |
| F.2(a-e) | 55 ton/hr | Roller Mill #1-5 | BH04-BH08 | | | |
| F.3(a-e) | | Collection Screw Conveyor | BH04-BH08 | | | |
| F.4(a-e) | | LP Collection Screw Conveyor | BH04-BH08 | | | |
| F.6 | | LP Bin (400 tons) | BH09 | | | |
| **Group 7—Plaster Production/Kettles** | | | | | | |
| G.1 | 55 ton/hr | Bucket Elevator #1 | BH09 | | | |
| G.2 | | LP Distribution Screw Conveyor | BH09 | | | |
| G.3(a-g) | 55 ton/hr | LP Bins #1-7 | BH09 | | | |
| G.8.4a-g | 87.5 ton/hr | Kettle Calciner#1-7 | BH10-BH16 | | | |
| G.8.4a(1) | 12 MMBtu/hr | Kettle Calciner #1 (Burner) | None | | | |
| G.8.4b(2) | 12 MMBtu/hr | Kettle Calciner #2 (Burner) | None | | | |
| G.8.4c(3) | 12 MMBtu/hr | Kettle Calciner #3 (Burner) | None | | | |
| G.8.4d(4) | 12 MMBtu/hr | Kettle Calciner #4 (Burner) | None | | | |
| G.8.4e(5) | 12 MMBtu/hr | Kettle Calciner #5 (Burner) | None | | | |
| G.8.4f(6) | 12 MMBtu/hr | Kettle Calciner #6 (Burner) | None | | | |
| G.8.4g(7) | 12 MMBtu/hr | Kettle Calciner #7 (Burner) | None | | | |

| EU | Rating | EU Description | Controls | Manufacturer | Model No. | Serial No. |
|---|---|---|---|---|---|---|
| G.9(a-g) | 87.5 ton/hr | Hot Pits #1-7 | BH10-BH16 | | | |
| G.10 | | Stucco Collection Screw Conveyor | BH17 | | | |
| G.11 | 87.5 ton/hr | Bucket Elevator #2 | BH17 | | | |
| G.12 | | Stucco Distribution Screw Conveyor | BH17 | | | |
| G.14 | 50 ton/hr | Truck Loading | BH17 | | | |
| **Group 8—Plaster Operations** | | | | | | |
| H.1 | | Hardwall Screw Conveyor | BH17 | | | |
| H.2.1 | 50 ton/hr | Hardwall Bin System (Bins #6HR, #5HR) | BH17 | | | |
| H.3.1 | | Screw Conveyor H.3.1 | BH17 | | | |
| H.4 | 20 ton/hr | Hopper | BH17 | | | |
| H.6 | 20 ton/hr | Ball Mill | BH17 | | | |
| H.7 | 20 ton/hr | Bucket Elevator #3 | BH17 | | | |
| H.8 | | Screw Conveyor | BH17 | | | |
| H.9 | 20 ton/hr | Bin #3HF | BH17 | | | |
| H2.2 | 20 ton/hr | Casting Bin System (Bins #1CR - 4CR) | BH17 | | | |
| H.3.2 | | Screw Conveyor | BH17 | | | |
| H.3.3 | | Screw Conveyor | BH17 | | | |
| H.10.4 | 10 ton/hr | Entoleter | BH17 | | | |
| H.10.5 | | Screw Conveyor | BH17 | | | |
| H.10.6 | 10 ton/hr | Bucket Elevator #4 | BH17 | | | |
| H.10.7 | | Casting Screw Conveyor | BH17 | | | |
| H.13 | | Screw Conveyor | BH17 | | | |
| H.13.1 | | Air Classifier | BH17 | | | |
| H.14.2 | | Screw Conveyor | BH17 | | | |
| H.15 | 20 ton/hr | Bucket Elevator #5 | BH17 | | | |
| H.16 | | Finish Bin Feed Screw Conveyor System (2 Screw Conveyors) | BH17 | | | |
| H.17 | | Finish Bin System (6 Bins) | BH17 | | | |
| H.18 | | Mixer Feed Screw Conveyor System (5 Screw Conveyors) | BH17 | | | |
| H.19.1 | | Mixer #3 | BH18 | | | |
| H.19.2 | | Bucket Elevator #6 | BH18 | | | |
| H.20.1 | | Sacker | BH18 | | | |

| EU | Rating | EU Description | Controls | Manufacturer | Model No. | Serial No. |
|---|---|---|---|---|---|---|
| H.19.3 | | Mixer #5 | BH19 | | | |
| H.19.4 | | Bucket Elevator #7 | BH19 | | | |
| H.20.2 | | Sacker | BH19 | | | |
| H.19.5 | | Bucket Elevator #8 | BH17 | | | |
| H.19.6 | | Mixer #6 | BH20 | | | |
| H.20.4 | | Supersacker | BH20 | | | |
| H.21 | | Bulk Loading Bin | BH21 | | | |
| H.20.3 | | Truck Loading | BH21 | | | |
| H.22 | | Cement Bin | BV04 | | | |
| **Group 9—Stucco Storage Bins** | | | | | | |
| I.1 | | Stucco Screw Conveyor System (2 Screw Conveyors) | BH23 | | | |
| I.2 | 55 ton/hr | Cooling Bins System (2 Bins) | BV05 | | | |
| I.3 | | Stucco Screw Conveyor 3 | BH23 | | | |
| I.4 | 55 ton/hr | Bucket Elevator #9 | BH23 | | | |
| I.6 | 55 ton/hr | Stucco Storage Bin System (4 Bins) | BH23 | | | |
| I.7 | | Stucco Screw Conveyor 4 | BH23 | | | |
| I.8 | 55 ton/hr | Surge Bin | BH23 | | | |
| I.9 | | Stucco Screw Conveyor 5 | BH23 | | | |
| I.10 | | Metering Screw Conveyor | BH23 | | | |
| I.11 | 55 ton/hr | Recirculation Elevator # 10 | BH23 | | | |
| I.13 | | Mixing Screw Conveyor | BH23 | | | |
| I.14 | | Stucco Transfer | BH03 | | | |
| **Group 10—Boardplant** | | | | | | |
| J.1 | 50 ton/hr | Pin Mixer | BH23 | | | |
| J.1.1 | 50 ton/hr | Edge Mixer | BH23 | | | |
| J.2.1 | 1.2 MMBtu/hr | Paper Heater #1 | | | | |
| J.2.2 | 1.2 MMBtu/hr | Paper Heater #2 | | | | |
| J.3 | 141 MMBtu/hr | AKI Board Dryer | | | | |
| J.3.1 | | Wallboard Raw Materials - Inks | | | | |
| J.3.1.1 | | Wallboard Raw Materials - Silicone | | | | |

| EU | Rating | EU Description | Controls | Manufacturer | Model No. | Serial No. |
|---|---|---|---|---|---|---|
| J.4 | | Radial Center Saw | BH24 | | | |
| J.5 | | End Saws (4 Saws) | BH24 | | | |
| J.6 | | Slutter Machine | BH24 | | | |
| J.7 | | STMP Feed System | BH25 | | | |
| **Group 11—Accelerator System** | | | | | | |
| K.1 | 0.3 ton/hr | LP Bin w/Additive Bin | BV06 | | | |
| K.2 | | Screw Conveyor K.2 | BH22 | | | |
| K.3 | 0.3 ton/hr | Bucket Elevator #11 | BH22 | | | |
| K.4 | | Screw Conveyor System (2 Screw Conveyors) | BH22 | | | |
| K.6 | 0.3 ton/hr | Ball Mill System (8 Mills) | BH22 | | | |
| K.7 | | Screw Conveyor | BH22 | | | |
| K.8 | 0.3 ton/hr | Bucket Elevator #12 | BH22 | | | |
| K.9 | | Screw Conveyor System (2 Screw Conveyors) | BH22 | | | |
| K.12 | 0.3 ton/hr | Accelerator Bin | BV06 | | | |
| K.13 | | Mixing Screw Conveyor | BH22 | | | |
| **Group 14—Wallboard Recycling System** | | | | | | |
| L.1 | 15 acres | Recycle Stockpile | | | | |
| L.10 | 1 acre | Finished Product Stockpile | | | | |
| L.13 | 0.46 miles | Unpaved Haul Roads | | | | |
| L.14 | | Recycle Stockpile Transfer | Moisture | | | |
| L.17 | 10 ton/hr | Recycle Feeder | Moisture | | | |
| L.20 | | Screw Conveyor | Moisture | | | |
| L.18 | 10 ton/hr | Bucket Elevator #13 | Moisture | | | |
| N.1 | 100 ton/hr | Grinder | Moisture | Komptech | Crambo 6000 | G2D00222 |
| N.2 | | Conveyor | Moisture | | | |
| N.3 | 50 ton/hr | Screen | Moisture | Komptech | Nemus 2700 | 28054 |
| N.4 | | Conveyor System (4 Belts) | Moisture | | | |
| **Engines** | | | | | | |
| N.5 | 575 hp | Diesel Engine, DOM: 2017 | | Caterpillar | C18 | WRH09907 |
| N.6 | 95 hp | Diesel Engine, DOM: 2016 | | CAT/Perkins | C4.4/1104 D-44T | U262427A |

| EU | Rating | EU Description | Controls | Manufacturer | Model No. | Serial No. |
|---|---|---|---|---|---|---|
| N.7 | 65 hp | Diesel Engine, DOM: 2004 | | Cummins | B3.3 | 68027481 |
| P.01 | 136 hp | Diesel Fire Pump, DOM: 2018 | | John Deere | 4050HFC28 | PE4045N017106 |
| **Miscellaneous** | | | | | | |
| T.1 | 1,000 gal | Gasoline Aboveground Storage Tank | | | | |
| **Fugitives – Haul Roads/Stockpiles** | | | | | | |
| C.16 | 2.5 miles | Paved Haul Road | Sweeping | | | |
| C.18 | 3 acres | Gypsum Rock Storage Pile | | | | |
| L.1 | 15 acres | Recycle Stockpile | | | | |
| L.10 | 1 acre | Finished Product Stockpile | | | | |
| L.13 | 0.46 miles | Unpaved Haul Roads | Moisture | | | |

Note: BH = baghouse; BV = bin vent; DOM = date of manufacture; MMBtu = millions of British thermal units.

## Table XIV-2: Applicability

| Pollutants | $PM_{10}$ | $PM_{2.5}$ | $NO_X$ | CO | $SO_2$ | VOC | HAPs | $H_2S$ | Pb | GHG |
|---|---|---|---|---|---|---|---|---|---|---|
| Applicability Emissions 12/5/2022 | 226.05 | 59.91 | 114.47 | 163.14 | 0.83 | 28.22 | 3.51 | 0 | 0 | 0 |
| Old Burner | 8.54 | 8.54 | 17.74 | 1.01 | 0.12 | 1.06 | 0.37 | 0 | 0 | 0 |
| New Burner | 8.54 | 8.54 | 7.88 | 17.97 | 0.10 | 0.88 | 0.31 | 0 | 0 | 0 |
| **New Appicability** | **226.05** | **59.91** | **104.61** | **180.10** | **0.81** | **28.04** | **3.45** | **0** | **0** | **0** |

## Table XIV-3: Emission Calculations for Proposed Burner (EU: E.11)

| | | | | Emission Factor (lb/mmBtu) | Potential Emissions | | |
|---|---|---|---|---|---|---|---|
| **EU#:** | E.11 proposed | | | | lb/hr | lb/day | ton/yr |
| **Make:** | MAXON | | | | | | |
| **Model:** | 140KDZERLE-NFS | | **PM10** | | 1.95 | 46.82 | 8.54 |
| **S/N:** | 18903163 | | **PM2.5** | | 1.95 | 46.82 | 8.54 |
| | | | **NOx** | 0.0486 | 1.80 | 43.16 | 7.88 |
| 37.0 | mmBtu/hr | | **CO** | 0.1109 | 4.10 | 98.48 | 17.97 |
| 24.0 | hr/day | | **$SO_2$** | 6.00E-04 | 0.02 | 0.53 | 0.10 |
| 8760 | hr/yr | | **VOC** | 0.0054 | 0.20 | 4.80 | 0.88 |
| | | | **HAP** | 1.90E-03 | 0.07 | 1.69 | 0.31 |
| **Concetrations:** | | **%O2** | **Lead** | 4.90E-07 | 1.81E-05 | 4.35E-04 | 7.94E-05 |
| 40 | ppm NOx | 3.0 | | | | | |
| 150 | ppm CO | 3.0 | | | | | |
| **Fuel:** | Propane | | | | | | |