PART 70 OPERATING PERMIT
TECHNICAL SUPPORT DOCUMENT
(STATEMENT of BASIS)

APPLICATION FOR:
Reopening for Causes

SUBMITTED BY:
Initiated by DES

FOR:
Blue Diamond Hill Gypsum
Source ID: #17286

LOCATION:
8360 Nevada Highway 159
Blue Diamond, Nevada 89004

SIC code 1499, “Miscellaneous Nonmetallic Minerals, Except Fuel”
NAICS code 212399, “All Other Nonmetallic Mineral Mining”

TSD Date: January 24, 2022
EXECUTIVE SUMMARY

Blue Diamond Hill Gypsum is a gypsum processing operation located in the Las Vegas Valley Area, hydrographic basin 212, which is currently designated as attainment for all pollutants except ozone. It was designated a marginal nonattainment area for ozone on August 3, 2018. The designation has not imposed any new requirements at this time. The source is not a categorical source as defined in AQR 12.2.2(j).

The source consists of screens, crushers, conveyors, an overburden process, blasting, stockpiles, paved and unpaved haul roads, continuous-duty diesel engines, and a continuous-duty diesel water pump. The source also has 13 hp diesel light stands that are designated as insignificant activities. The initial Part 70 OP was issued November 13, 2017, with a significant revision issued on November 14, 2019, and an administrative revision on September 8, 2020. Blue Diamond Hill Gypsum is also a source of GHG pollutants.

The following table summarizes the source potential to emit for each regulated air pollutant from all emission units addressed by this Part 70 Operating Permit:

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>PM$_{10}$</th>
<th>PM$_{2.5}$</th>
<th>NO$_X$</th>
<th>CO</th>
<th>SO$_2$</th>
<th>VOC</th>
<th>HAPs</th>
<th>GHG$^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gypsum Processing</td>
<td>43.26</td>
<td>11.37</td>
<td>78.98</td>
<td>12.33</td>
<td>0.10</td>
<td>4.28</td>
<td>0.10</td>
<td>6932.05</td>
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<tr>
<td>Fugitives</td>
<td>99.36</td>
<td>11.15</td>
<td>2.38</td>
<td>12.29</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Tons/year</td>
<td>142.62</td>
<td>22.52</td>
<td>81.36</td>
<td>24.62</td>
<td>0.10</td>
<td>4.28</td>
<td>0.10</td>
<td>6932.05</td>
</tr>
<tr>
<td>Major Source Thresholds (Title V)</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>10/25$^1$</td>
<td>-</td>
</tr>
<tr>
<td>Major Stationary Source Thresholds (PSD)</td>
<td>250</td>
<td>250</td>
<td>250</td>
<td>250</td>
<td>250</td>
<td>250</td>
<td>10/25$^1$</td>
<td>-</td>
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<tr>
<td>Major Stationary Source Threshold (Nonattainment)</td>
<td>100</td>
<td>100</td>
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<td></td>
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<td></td>
</tr>
</tbody>
</table>

$^1$Ten tons for any individual hazardous air pollutant, or 25 tons for the combination of all hazardous air pollutants.
$^2$Metric tons per year, CO$_2$e.

DAQ will continue to require the sources to estimate their GHG potential to emit in terms of each individual pollutant (CO$_2$, CH$_4$, N$_2$O, CF$_6$, etc.). The TSD includes these PTEs for informational purposes.

This gypsum processing operation is subject to 40 CFR Part 60, Subpart OOO, 40 CFR Part 60, Subpart IIII, and 40 CFR Part 63, Subpart ZZZZ. The engines subject to 40 CFR Part 60, Subpart IIII satisfies the requirements of 40 CFR Part 63, Subpart ZZZZ through compliance with 40 CFR Part 60, Subpart IIII.
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I. ACRONYMS

Table I-1: List of Acronyms

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Term</th>
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<tbody>
<tr>
<td>ANFO</td>
<td>ammonium nitrate-fuel oil</td>
</tr>
<tr>
<td>AQR</td>
<td>Clark County Air Quality Regulation</td>
</tr>
<tr>
<td>ATC</td>
<td>Authority to Construct</td>
</tr>
<tr>
<td>BLM</td>
<td>Bureau of Land Management</td>
</tr>
<tr>
<td>CF</td>
<td>control factor</td>
</tr>
<tr>
<td>CFR</td>
<td>Code of Federal Regulations</td>
</tr>
<tr>
<td>CO</td>
<td>carbon monoxide</td>
</tr>
<tr>
<td>CO₂</td>
<td>carbon dioxide</td>
</tr>
<tr>
<td>CO₂e</td>
<td>carbon dioxide equivalent</td>
</tr>
<tr>
<td>CD</td>
<td>control device</td>
</tr>
<tr>
<td>DAQ</td>
<td>Division of Air Quality</td>
</tr>
<tr>
<td>DES</td>
<td>Department of Environment and Sustainability</td>
</tr>
<tr>
<td>DOM</td>
<td>date of manufacture</td>
</tr>
<tr>
<td>EF</td>
<td>emissions factor</td>
</tr>
<tr>
<td>EPA</td>
<td>U.S. Environmental Protection Agency</td>
</tr>
<tr>
<td>EU</td>
<td>emission unit</td>
</tr>
<tr>
<td>g/dscm</td>
<td>gram per dry standard cubic meter</td>
</tr>
<tr>
<td>gr/dscf</td>
<td>grains per dry standard cubic feet</td>
</tr>
<tr>
<td>GHG</td>
<td>greenhouse gas</td>
</tr>
<tr>
<td>HA</td>
<td>Hydrographic Area</td>
</tr>
<tr>
<td>HAP</td>
<td>hazardous air pollutant</td>
</tr>
<tr>
<td>hp</td>
<td>horsepower</td>
</tr>
<tr>
<td>kW</td>
<td>kilowatts</td>
</tr>
<tr>
<td>NAAQS</td>
<td>National Ambient Air Quality Standard</td>
</tr>
<tr>
<td>NAICS</td>
<td>North American Industry Classification System</td>
</tr>
<tr>
<td>NOₓ</td>
<td>nitrogen oxide(s)</td>
</tr>
<tr>
<td>PM&lt;sub&gt;2.5&lt;/sub&gt;</td>
<td>particulate matter less than 2.5 microns in aerodynamic diameter</td>
</tr>
<tr>
<td>PM&lt;sub&gt;10&lt;/sub&gt;</td>
<td>particulate matter less than 10 microns in aerodynamic diameter</td>
</tr>
<tr>
<td>PSD</td>
<td>prevention of significant deterioration</td>
</tr>
<tr>
<td>PTE</td>
<td>potential to emit</td>
</tr>
<tr>
<td>RACT</td>
<td>Reasonably Achievable Control Technology</td>
</tr>
<tr>
<td>SCC</td>
<td>Source Classification Code</td>
</tr>
<tr>
<td>SIC</td>
<td>Standard Industrial Classification</td>
</tr>
<tr>
<td>SO₂</td>
<td>sulfur dioxide</td>
</tr>
<tr>
<td>SOP</td>
<td>standard operating procedure</td>
</tr>
<tr>
<td>TPH</td>
<td>tons per hour</td>
</tr>
<tr>
<td>Abbreviation</td>
<td>Description</td>
</tr>
<tr>
<td>--------------</td>
<td>-------------------------------</td>
</tr>
<tr>
<td>UTM</td>
<td>Universal Transverse Mercator</td>
</tr>
<tr>
<td>VGF</td>
<td>vibrating grizzly feeder</td>
</tr>
<tr>
<td>VMT</td>
<td>vehicle miles traveled</td>
</tr>
<tr>
<td>VOC</td>
<td>volatile organic compound</td>
</tr>
</tbody>
</table>
II. SOURCE INFORMATION

A. GENERAL

Permittee: Gypsum Resources LLC
Mailing Address: 8360 Nevada Highway 159, Blue Diamond, Nevada 89004
Responsible Official: James Rhodes
Phone Number: 702-493-8111

B. DESCRIPTION OF PROCESS

Blue Diamond Hill Gypsum is a gypsum mining and processing operation. It is a synthetic major source for PM$_{10}$ and NO$_x$ and true minor for all other air pollutants in the Las Vegas Valley Area 212 hydrographic basin. The source consists of screens, crushers, a surge bin, conveyors, an overburden process, drilling, blasting, stockpiles, paved and unpaved haul roads, continuous-duty diesel engines, and a continuous-duty diesel water pump. The source also has eight 13-hp diesel light stands that are designated as insignificant activities.

Table II-B-1 lists the emission units covered by this operating permit. The gypsum processing plant’s emission units in this table are affected by the reopening for cause for PM$_{2.5}$.

<table>
<thead>
<tr>
<th>EU</th>
<th>Description</th>
<th>Capacity (tons/hr)</th>
<th>Manufacturer</th>
<th>Model #</th>
<th>Serial #</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gypsum Processing Plant</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A00</td>
<td>Truck Unloading to Stockpile from Mining</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A01</td>
<td>Loader to VGF</td>
<td>800</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A02</td>
<td>VGF Underbelt (VGF Underbelt to Reject Conveyor)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A03</td>
<td>Reject Conveyor (Reject Conveyor to Screen)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A39</td>
<td>Reject Screen (8' x 20')</td>
<td>350</td>
<td>Terex</td>
<td>LJ-TSH8203-32</td>
<td></td>
</tr>
<tr>
<td>A04</td>
<td>Screen Underbelt (Screen Underbelt to Recirc Conveyor #1)</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>A06</td>
<td>Recirc Conveyor (Recirc Conveyor to VGF)</td>
<td></td>
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<tr>
<td>A09</td>
<td>Reject Underbelt (Reject Underbelt to Reject Stacker)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A33</td>
<td>Reject Stacker (Reject Stacker to Stockpile)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EU</td>
<td>Description</td>
<td>Capacity (tons/hr)</td>
<td>Manufacturer</td>
<td>Model #</td>
<td>Serial #</td>
</tr>
<tr>
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<td>-------------------------------------------------</td>
<td>--------------------</td>
<td>--------------</td>
<td>----------</td>
<td>---------------------</td>
</tr>
<tr>
<td>A05</td>
<td>HSI Crusher (VGF to HSI Crusher)</td>
<td>800</td>
<td>Terex</td>
<td>1316</td>
<td>TRX1316BV</td>
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<tr>
<td></td>
<td>HSI Underbelt</td>
<td></td>
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<td>OKCC0391</td>
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<tr>
<td>A07</td>
<td>HSI Underbelt to Surge Bin</td>
<td></td>
<td></td>
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<tr>
<td>A10</td>
<td>Surge Bin (Surge Bin to West Conveyor)</td>
<td></td>
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</tr>
<tr>
<td>A11</td>
<td>West Conveyor (West Conveyor to West Screen)</td>
<td></td>
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<tr>
<td>A08</td>
<td>West Screen (8’ x 20’)</td>
<td>800</td>
<td>Terex</td>
<td>LJ-TSH8203-32</td>
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<tr>
<td>A12</td>
<td>West Underbelt (West Underbelt to Cone Conveyor)</td>
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<tr>
<td>A48</td>
<td>Cone Conveyor (Conveyor to Cone Crusher)</td>
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<tr>
<td>A34</td>
<td>Cone Crusher</td>
<td>250</td>
<td>Terex</td>
<td>MVP 450x</td>
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<tr>
<td></td>
<td>Cone Underbelt</td>
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</tr>
<tr>
<td>A35</td>
<td>Cone Underbelt (Cone Underbelt to Recirc Conveyor #2)</td>
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<tr>
<td>A40</td>
<td>Recirc Conveyor #2 (Recirc Conveyor #2 to West Screen)</td>
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<tr>
<td>A36</td>
<td>Belt Conveyor #1– #7</td>
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<tr>
<td>A38</td>
<td>Stacker 2&quot;</td>
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<tr>
<td>A41</td>
<td>Belt Conveyor #8– #14</td>
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<td>A79</td>
<td>Stacker 1/8&quot;</td>
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**Truck Loading**

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</thead>
<tbody>
<tr>
<td>E01</td>
<td>Loader to Hopper</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>30504099</td>
</tr>
<tr>
<td>E02</td>
<td>Conveyor to Conveyor</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>30504021</td>
</tr>
<tr>
<td></td>
<td>Conveyor to Truck</td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>E03</td>
<td>Loader to Hopper</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>30504099</td>
</tr>
<tr>
<td>E04</td>
<td>Conveyor to Conveyor</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>30504021</td>
</tr>
<tr>
<td></td>
<td>Conveyor to Truck</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>F01</td>
<td>Loader to Hopper</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>30504099</td>
</tr>
<tr>
<td>F02</td>
<td>Conveyor to Conveyor</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>30504021</td>
</tr>
<tr>
<td></td>
<td>Conveyor to Truck</td>
<td></td>
<td></td>
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</table>
### Miscellaneous Activities

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<thead>
<tr>
<th>EU</th>
<th>Description</th>
<th>Capacity (tons/hr)</th>
<th>Manufacturer</th>
<th>Model #</th>
<th>Serial #</th>
<th>SCC</th>
</tr>
</thead>
<tbody>
<tr>
<td>A001</td>
<td>Blasting</td>
<td>25,000 ft²</td>
<td></td>
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<tr>
<td>A002</td>
<td>Overburden Removal</td>
<td>880</td>
<td></td>
<td></td>
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<tr>
<td>A003</td>
<td>Drilling</td>
<td>154 hole/day</td>
<td></td>
<td></td>
<td></td>
<td>20504002</td>
</tr>
<tr>
<td>A32</td>
<td>Stockpiles</td>
<td>25.0 Acres</td>
<td></td>
<td></td>
<td></td>
<td>30504025</td>
</tr>
<tr>
<td>B01</td>
<td>Unpaved – BLM Rd</td>
<td>4 Miles R.T.</td>
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<td></td>
<td></td>
<td>30504099</td>
</tr>
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<td>B02</td>
<td>Paved – On-site</td>
<td>1 Mile R.T.</td>
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<td></td>
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<td>30504099</td>
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<tr>
<td>B03</td>
<td>Paved – Overburden</td>
<td>0.8 Miles R.T.</td>
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<td>30504099</td>
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<tr>
<td>B04</td>
<td>Unpaved – Material Hauling Rd</td>
<td>1.2 Miles R.T.</td>
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<td>30504099</td>
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### Internal Combustion Engines

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<tr>
<th>EU</th>
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<th>Manufacturer</th>
<th>Model #</th>
<th>Serial #</th>
<th>SCC</th>
</tr>
</thead>
<tbody>
<tr>
<td>C01</td>
<td>Continuous-duty Diesel Engine</td>
<td>2,206 hp</td>
<td>Caterpillar; DOM 2007</td>
<td>XQ1500</td>
<td>G4W00376</td>
<td>20300101</td>
</tr>
<tr>
<td></td>
<td>Genset</td>
<td>1500 kW</td>
<td>Caterpillar</td>
<td>3512</td>
<td>EBG00282</td>
<td></td>
</tr>
<tr>
<td>C05</td>
<td>Continuous-duty Diesel Engine</td>
<td>173 hp</td>
<td>Isuzu; DOM 2007</td>
<td>BI-4HK1X</td>
<td>4HK1XDIBA-01</td>
<td>20300101</td>
</tr>
<tr>
<td></td>
<td>Genset</td>
<td>100 kW</td>
<td>Whisperwatt</td>
<td>DCA125SSIU</td>
<td>7510150</td>
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<tr>
<td>C06</td>
<td>Continuous-duty Diesel Engine</td>
<td>99 hp</td>
<td>John Deere; DOM 2011</td>
<td>4045TF285E</td>
<td>N/A</td>
<td>20300101</td>
</tr>
<tr>
<td></td>
<td>Genset</td>
<td>63 kW</td>
<td>Mecc Alte</td>
<td>ECO 32-L/4</td>
<td>0001440549</td>
<td></td>
</tr>
<tr>
<td>C07</td>
<td>Continuous-duty Diesel Engine</td>
<td>80 hp</td>
<td>John Deere; DOM 1998</td>
<td>4045DF150</td>
<td>N/A</td>
<td>20300101</td>
</tr>
<tr>
<td></td>
<td>Water Pump</td>
<td>60 kW</td>
<td>Power Prime</td>
<td>98DV150</td>
<td>372870</td>
<td></td>
</tr>
<tr>
<td>C08</td>
<td>Continuous-duty Diesel Engine</td>
<td>107 hp</td>
<td>John Deere; DOM 2012</td>
<td>4045HFG92</td>
<td>PE4045015497</td>
<td>20300101</td>
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<tr>
<td></td>
<td>Genset</td>
<td>56 kW</td>
<td>Atlas Copco</td>
<td>QAS70</td>
<td>N/A</td>
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</table>

1This process covers the front end loader to truck loading operation.

### C. PERMITTING HISTORY

The following represents permitting activities prior to this permitting action:

<table>
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<th>Issue Date</th>
<th>Description</th>
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<tbody>
<tr>
<td>11/13/2017</td>
<td>Part 70 permit issued</td>
</tr>
<tr>
<td>08/17/2018</td>
<td>Significant Revision Permit Application</td>
</tr>
<tr>
<td>11/14/2019</td>
<td>Significant Revision Issued</td>
</tr>
<tr>
<td>09/08/2020</td>
<td>Administrative revision issued</td>
</tr>
</tbody>
</table>
D. CURRENT PERMITTING ACTION

Reopening for Cause – January 28, 2021

A reopen for cause was opened on January 28, 2018, to address PM$_{2.5}$ emissions for all emission units with particulate emission potential. No response was received from the source to DAQ’s Notification to reopen the Title V Operating Permit; therefore, DAQ’s PM$_{2.5}$ EF memo was utilized for each emission unit and activity related to processing, transporting, and/or sorting materials to incorporate the PM$_{2.5}$ emissions into the Title V Operating Permit for the stockpiles, haul roads, and char handling operations.

PM$_{2.5}$ emissions for the gypsum processing operations have been revised in this permitting action.

Reopening for Cause – August 9, 2021

The Department of Environment and Sustainability, Division of Air Quality (DAQ) has identified this source as possibly emitting 25 tons or more of actual emissions for oxides of nitrogen (NO$_X$) and/or volatile organic compounds (VOCs) in any calendar year. Clark County was required to implement Section 182(a)(3)(B) of the Clean Air Act (CAA) which requires all ozone nonattainment areas to have in place a program that requires emissions statements from stationary sources of NO$_X$ and/or VOCs.

Section 12.9.1 of the Clark County Air Quality Regulations (AQRs) codifies this requirement for Clark County and states the following:

a. The Responsible Official of each Stationary Source that emits 25 tons or more of NO$_X$ and/or VOC shall submit an Annual Emissions Statement (Statement) to the department for the previous calendar year.
b. Pursuant to CAA Section 182, the Statement must include all actual emissions for all NO$_X$ and VOC emitting activities.
c. The Statement shall be submitted to and received by the department on or before March 31 of each year or other date, upon prior notice by the Control Officer, and shall include a certification that the information contained in the Statement is accurate to the best knowledge of the individual certifying the Statement.

A condition requiring submittal of annual emissions statement has been included in the permit.

Reopening for Cause – September 2, 2021

This source is an existing major source that has a potential to emit of fugitive particulate emissions. The Division of Air Quality (DAQ) is revising the permit pursuant to Sections 12.5.2.15 of the Clark County Air Quality Regulations (AQR), which maintain that the Control Officer may reopen and revise a permit “to assure compliance with the applicable requirements.” This permit is revised to include recently promulgated fugitive dust requirements for stationary sources.

AQR Sections 92 (Fugitive Dust from Unpaved Parking Lots and Storage Areas) and 94 (Permitting and Dust Control for Construction Activities) were recently revised to address fugitive dust at stationary sources. The revised regulations became effective on August 17, 2021. Subsections 92.1(c) and 94.1.1(a) require that the control measures and stabilization standards therein be made enforceable by the terms and conditions of the stationary source permit.
The source’s operating permit has been revised to include the fugitive dust emission limits and control requirements.

Control, monitoring, and recordkeeping requirements were added to the permit for engines that burn diesel fuel to restrict the maximum sulfur content to 15 ppm.

E. ALTERNATE OPERATING SCENARIO

None proposed.

III. EMISSIONS INFORMATION

A. SOURCE-WIDE PTE

There are changes to the source-wide PTE due to the reopenings for cause.

Blue Diamond Hill Gypsum is a Title V source for PM$_{10}$ and a minor source for all other air pollutants, including greenhouse gases (GHGs).

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>PM$_{10}$</th>
<th>PM$_{2.5}$</th>
<th>NO$_x$</th>
<th>CO</th>
<th>SO$_2$</th>
<th>VOC</th>
<th>HAPs</th>
<th>GHG$^1$</th>
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</thead>
<tbody>
<tr>
<td>Gypsum Processing</td>
<td>43.26</td>
<td>11.37</td>
<td>78.98</td>
<td>12.33</td>
<td>0.10</td>
<td>4.28</td>
<td>0.10</td>
<td>6932.05</td>
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<tr>
<td>Fugitives</td>
<td>99.36</td>
<td>11.15</td>
<td>2.38</td>
<td>12.29</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Tons/year</td>
<td>142.62</td>
<td>22.52</td>
<td>81.36</td>
<td>24.62</td>
<td>0.10</td>
<td>4.28</td>
<td>0.10</td>
<td>6932.05</td>
</tr>
</tbody>
</table>

$^1$Metric tons per year, CO$_{2e}$.

B. ALLOWABLE EMISSIONS CALCULATIONS

There are changes to the emission units PTE due to the reopening for cause for PM$_{2.5}$.

C. OPERATIONAL LIMITS

There are no changes to the operational limits due to these reopenings for cause.

D. CONTROL TECHNOLOGY

In the past DAQ did not require sources to incorporate PM$_{2.5}$ into permits for operations other than those associated with combustion and chemical processes. A reopening for cause of the Title V operating permit was initiated because the permit needed additional PM$_{2.5}$ emissions evaluations for activities relating to processing, transporting, and/or sorting solid materials. These emissions were existing but they were not adequately addressed in the permit. Therefore, these additional emissions are excluded from the NSR applicability analysis.

The small increase in PM$_{10}$ and decrease in HAP are due to correction errors in the calculation table.

There are no changes to the control technology due to these reopenings for cause.
Table III-D-1: Emission Increase (tons per year)

<table>
<thead>
<tr>
<th>Activity</th>
<th>PM$_{10}$</th>
<th>PM$_{2.5}$</th>
<th>NO$_x$</th>
<th>CO</th>
<th>SO$_2$</th>
<th>VOC</th>
<th>HAPs</th>
<th>H$_2$S</th>
<th>Pb</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proposed PTE</td>
<td>142.62</td>
<td>22.52</td>
<td>81.36</td>
<td>24.62</td>
<td>0.10</td>
<td>4.28</td>
<td>0.10</td>
<td>0</td>
<td>0</td>
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<tr>
<td>Existing PTE</td>
<td>142.59</td>
<td>1.50</td>
<td>81.36</td>
<td>24.62</td>
<td>0.10</td>
<td>4.28</td>
<td>0.21</td>
<td>0</td>
<td>0</td>
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<tr>
<td>Difference</td>
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<td>21.02</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>-0.11</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Excluded Emissions</td>
<td>0</td>
<td>21.02</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
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<td>0</td>
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<td>EI for NSR Applicability</td>
<td>0.03</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>-0.11</td>
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<tr>
<td>Minor NSR Significance</td>
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<td>20</td>
<td>50</td>
<td>20</td>
<td>20</td>
<td>-</td>
<td>5</td>
<td>-</td>
</tr>
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<td>Significance Triggered</td>
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<td>No</td>
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<td>No</td>
<td>No</td>
<td>N/A</td>
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<tr>
<td>RACT Triggered</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>

E. MONITORING

Control, monitoring and recordkeeping requirements were added in this permit to monitor diesel sulfur content. Emission limitations and control requirements were added to the permit for fugitive dust emissions.

F. PERFORMANCE TESTING

None required due to this permitting action.

G. RACT ANALYSIS

There are no RACT analysis triggered by these reopenings for cause.

H. PUBLIC PARTICIPATION

Pursuant to AQR 12.5.2.17, the Control Officer should provide for public notice, comment, and an opportunity for a hearing on initial permit issuances, significant revisions, reopenings for cause, and renewals in accordance with the procedures outlined in the regulation. Given the broad range of changes that can be addressed through a reopening of the permit, including those that typically do not require public participation, DAQ relied on the other criteria for public participation to ascertain whether it should be initiated for this reopening of the permit. As the updates addressed in this reopening qualify as neither an initial permit issuance nor a renewal of the Title V permit, the criteria for a significant permit revision was used to determine whether public participation is warranted. Even though the calculated emission increase does not trigger significance for NSR evaluation, there is a significant PM$_{2.5}$ PTE increase due to this reopening for cause. Therefore, initiation of a public participation process can be adequately supported.

IV. REGULATORY REVIEW

There are no new regulatory review triggered by these reopen for causes.

V. COMPLIANCE

Added the emissions statement to the reporting table.
VI. EMISSION REDUCTION CREDITS (OFFSETS)

None.

VII. MODELING

Blue Diamond Hill Gypsum is a major source in Hydrographic Area 212 (Las Vegas Valley). Permitted emission units include gypsum processing operations. Since minor source baseline dates for NO\textsubscript{X} (October 21, 1988) and SO\textsubscript{2} (June 29, 1979) have been triggered, Prevention of Significant Deterioration (PSD) increment analysis is required.

Air Quality 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. United States Geological Survey (USGS) National Elevation Dataset (NED) terrain data was used to calculate elevations. Table VII-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 VII-1: PSD Increment Consumption

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Averaging Period</th>
<th>Source’s PSD Increment Consumption (µg/m\textsuperscript{3})</th>
<th>Location of Maximum Impact</th>
</tr>
</thead>
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<tr>
<td>SO\textsubscript{2}</td>
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<tr>
<td>SO\textsubscript{2}</td>
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<tr>
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<td>NO\textsubscript{X}</td>
<td>Annual</td>
<td>5.63</td>
<td>644312</td>
</tr>
</tbody>
</table>

\textsuperscript{1} Highest Second High Concentration.

VIII. ATTACHMENTS

See attachments in next page
### Gypsum Processing:

<table>
<thead>
<tr>
<th>EU</th>
<th>Rating</th>
<th>PM$_{10}$</th>
<th>PM$_{2.5}$</th>
<th>NO$_x$</th>
<th>CO</th>
<th>SO$_2$</th>
<th>VOC</th>
<th>HAPs</th>
<th>H$_2$S</th>
<th>Pb</th>
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<td>A00</td>
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<td>280.32</td>
<td>42.05</td>
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**Total:** 2356.44 441.71 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00
### Engines:

<table>
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<tr>
<th>Engine</th>
<th>Power</th>
<th>Efficiency</th>
<th>NOx</th>
<th>CO</th>
<th>SO2</th>
<th>VOC</th>
<th>HAP</th>
<th>H2S</th>
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**Total:** 1.98 1.98 159.20 23.96 0.16 7.30 0.16 0.00 0.00

### Insignificant Activities:

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<tr>
<th>Units</th>
<th>PM10</th>
<th>PM2.5</th>
<th>NOx</th>
<th>CO</th>
<th>SO2</th>
<th>VOC</th>
<th>HAP</th>
<th>H2S</th>
<th>Pb</th>
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**Facility Total:** 2358.53 443.80 161.04 24.38 7.86 0.24 0.00 0.00
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Subtotal PM$_{10}$/PM$_{2.5}$: 2356.44 441.71
## Allowables

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| C01      | 4,200    | 0.41      | 0.41      | 67.20  | 8.89| 0.06   | 1.63 | 0.05 | 0      | 0   |
| C05      | 6,500    | 0.16      | 0.16      | 2.40   | 1.02| 0.01   | 1.41 | 0.02 | 0      | 0   |
| C06      | 6,500    | 0.10      | 0.10      | 2.17   | 1.22| 0.01   | 0.81 | 0.01 | 0      | 0   |
| C07      | 4,200    | 0.37      | 0.37      | 5.21   | 1.12| 0.01   | 0.42 | 0.01 | 0      | 0   |
| C08      | 8,760    | 0.01      | 0.01      | 2.00   | 0.08| 0.01   | 0.01 | 0.01 | 0      | 0   |

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<th>H$_2$S</th>
<th>Pb</th>
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</thead>
<tbody>
<tr>
<td>Gypsum</td>
<td>42.21</td>
<td>10.32</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Engines</td>
<td>1.05</td>
<td>1.05</td>
<td>78.98</td>
<td>12.33</td>
<td>0.10</td>
<td>4.28</td>
<td>0.10</td>
<td>0.00</td>
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### Gypsum/Engines:

<table>
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<tr>
<th>Allowable</th>
<th>PM$_{10}$</th>
<th>PM$_{2.5}$</th>
<th>NO$_x$</th>
<th>CO</th>
<th>SO$_2$</th>
<th>VOC</th>
<th>HAPs</th>
<th>H$_2$S</th>
<th>Pb</th>
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<tbody>
<tr>
<td>Gypsum/Engines</td>
<td>43.26</td>
<td>11.37</td>
<td>78.98</td>
<td>12.33</td>
<td>0.10</td>
<td>4.28</td>
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<td>0.00</td>
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### Fugitives:

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
<th>25,000 ft²/200 blasts/yr</th>
<th>0.17</th>
<th>2.38</th>
<th>12.29</th>
<th>0</th>
<th>0</th>
<th>0</th>
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<th>0</th>
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</thead>
<tbody>
<tr>
<td>A001</td>
<td>25,000 ft²/200 blasts/yr</td>
<td>2.88</td>
<td>0.17</td>
<td>2.38</td>
<td>12.29</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
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<tr>
<td>A002</td>
<td>3,400,000 tons/yr</td>
<td>13.60</td>
<td>2.04</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
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<tr>
<td>A003</td>
<td>14,000 holes</td>
<td>4.76</td>
<td>0.28</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
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<tr>
<td>A32</td>
<td>25.0 Acres</td>
<td>7.57</td>
<td>1.14</td>
<td>0</td>
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<td>0</td>
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<td>0</td>
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</tr>
<tr>
<td>B01</td>
<td>128,0000 VMT</td>
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<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
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<td>0</td>
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<tr>
<td>B02</td>
<td>32,000 VMT</td>
<td>2.42</td>
<td>0.36</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
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<td>0</td>
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<tr>
<td>B03</td>
<td>68,000 VMT</td>
<td>5.15</td>
<td>0.78</td>
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<td>0</td>
<td>0</td>
<td>0</td>
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<td>0</td>
<td>0</td>
</tr>
<tr>
<td>B04</td>
<td>38,400 VMT</td>
<td>14.53</td>
<td>1.47</td>
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<td>0</td>
<td>0</td>
<td>0</td>
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</table>

Total Fugitives: 99.36  11.15  2.38  12.29  0.00  0.00  0.00  0.00  0.00  0.00

<table>
<thead>
<tr>
<th></th>
<th>Total Facility:</th>
<th>142.62</th>
<th>22.52</th>
<th>81.36</th>
<th>24.62</th>
<th>0.10</th>
<th>4.28</th>
<th>0.10</th>
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## Gypsum Processing:

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<thead>
<tr>
<th>EU</th>
<th>Description</th>
<th>Limitation</th>
<th>EF PM(_{10})</th>
<th>EF PM(_{2.5})</th>
<th>CF</th>
<th>Emissions (PM(_{10}))</th>
<th>Emissions (PM(_{2.5}))</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>tons/yr</td>
<td>(lbf/ton)</td>
<td>(lbf/ton)</td>
<td></td>
<td>tons/yr</td>
<td>tons/yr</td>
</tr>
<tr>
<td>A00</td>
<td>Truck Unloading to Stockpile from Mining</td>
<td>1,280,000</td>
<td>0.08</td>
<td>0.012</td>
<td>0.10</td>
<td>5.12</td>
<td>0.77</td>
</tr>
<tr>
<td>A01</td>
<td>Loader to VGF</td>
<td>1,280,000</td>
<td>0.04</td>
<td>0.006</td>
<td>0.04</td>
<td>0.26</td>
<td>0.04</td>
</tr>
<tr>
<td>A02</td>
<td>VGF Underbelt (VGF to VGF Underbelt)</td>
<td>560,000</td>
<td>0.01</td>
<td>0.003</td>
<td>1.00</td>
<td>2.80</td>
<td>0.84</td>
</tr>
<tr>
<td>A03</td>
<td>Reject Conveyor (Reject Conveyor to Screen)</td>
<td>Emission included in A39</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A04</td>
<td>Screen Underbelt (Screen Underbelt to Recir Conveyor #1)</td>
<td>560,000</td>
<td>0.01</td>
<td>0.003</td>
<td>1.00</td>
<td>2.80</td>
<td>0.84</td>
</tr>
<tr>
<td>A06</td>
<td>Recir Conveyor (Recir Conveyor to VGF)</td>
<td>Emission included in A09</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A09</td>
<td>Reject Underbelt (Reject Underbelt to Reject Stacker)</td>
<td>560,000</td>
<td>0.01</td>
<td>0.003</td>
<td>0.185</td>
<td>0.52</td>
<td>0.16</td>
</tr>
<tr>
<td>A33</td>
<td>Reject Stacker (Reject Stacker to Stockpile)</td>
<td>560,000</td>
<td>0.04</td>
<td>0.011</td>
<td>0.185</td>
<td>2.07</td>
<td>0.57</td>
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<tr>
<td>A05</td>
<td>HSI Crusher (VGF to HSI Underbelt)</td>
<td>1,280,000</td>
<td>0.13</td>
<td>0.025</td>
<td>0.01</td>
<td>0.83</td>
<td>0.16</td>
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<tr>
<td>A07</td>
<td>HSI Underbelt to Surge Bin</td>
<td>1,280,000</td>
<td>0.01</td>
<td>0.003</td>
<td>0.01</td>
<td>0.06</td>
<td>0.02</td>
</tr>
<tr>
<td>A10</td>
<td>Surge Bin (Surge Bin to West Screen)</td>
<td>1,280,000</td>
<td>0.01</td>
<td>0.003</td>
<td>0.01</td>
<td>0.06</td>
<td>0.02</td>
</tr>
<tr>
<td>A11</td>
<td>West Conveyor (West Conveyor to West Screen)</td>
<td>Emission included in A08</td>
<td></td>
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<td></td>
<td></td>
<td></td>
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<tr>
<td>A08</td>
<td>West Screen (8' x 20&quot;)</td>
<td>1,280,000</td>
<td>0.08</td>
<td>0.006</td>
<td>0.01</td>
<td>0.51</td>
<td>0.04</td>
</tr>
<tr>
<td>A12</td>
<td>West Underbelt (West Underbelt to Cone Conveyor)</td>
<td>400,000</td>
<td>0.01</td>
<td>0.003</td>
<td>1.00</td>
<td>2.00</td>
<td>0.60</td>
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<tr>
<td>A48</td>
<td>Cone Conveyor (Conveyor to Cone Crusher)</td>
<td>Emission included with A34</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>A34</td>
<td>Cone Crusher</td>
<td>400,000</td>
<td>0.13</td>
<td>0.025</td>
<td>0.01</td>
<td>0.26</td>
<td>0.05</td>
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<tr>
<td>A35</td>
<td>Cone Underbelt (Cone Underbelt to Recir Conveyor #2)</td>
<td>400,000</td>
<td>0.01</td>
<td>0.003</td>
<td>1.00</td>
<td>2.00</td>
<td>0.60</td>
</tr>
<tr>
<td>A40</td>
<td>Recir Conveyor #2 (Recir Conveyor #2 to West Screen)</td>
<td>Emission included in A08</td>
<td></td>
<td></td>
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<td></td>
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</tr>
<tr>
<td>A36</td>
<td>Belt Conveyor #1</td>
<td>1,280,000</td>
<td>0.07</td>
<td>0.021</td>
<td>0.185</td>
<td>8.29</td>
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<tr>
<td>A38</td>
<td>Stacker 2&quot;</td>
<td>1,280,000</td>
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<td>0.011</td>
<td>0.185</td>
<td>4.74</td>
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<td>A41</td>
<td>Belt Conveyor #6</td>
<td>1,280,000</td>
<td>0.07</td>
<td>0.021</td>
<td>0.185</td>
<td>8.29</td>
<td>2.49</td>
</tr>
<tr>
<td>A79</td>
<td>Stacker 1/8&quot;</td>
<td>1,280,000</td>
<td>0.04</td>
<td>0.011</td>
<td>0.185</td>
<td>4.74</td>
<td>1.30</td>
</tr>
<tr>
<td>E01</td>
<td>Loader to Hopper</td>
<td>1,280,000</td>
<td>0.04</td>
<td>0.008</td>
<td>0.185</td>
<td>4.74</td>
<td>0.71</td>
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<tr>
<td>E02</td>
<td>Conveyor to Conveyor</td>
<td>1,280,000</td>
<td>0.02</td>
<td>0.006</td>
<td>0.185</td>
<td>2.37</td>
<td>0.71</td>
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<td>E03</td>
<td>Loader to Hopper</td>
<td>1,280,000</td>
<td>0.04</td>
<td>0.006</td>
<td>0.185</td>
<td>4.74</td>
<td>0.71</td>
</tr>
<tr>
<td>E04</td>
<td>Conveyor to Conveyor</td>
<td>1,280,000</td>
<td>0.02</td>
<td>0.006</td>
<td>0.185</td>
<td>2.37</td>
<td>0.71</td>
</tr>
<tr>
<td>E01</td>
<td>Hopper</td>
<td>1,280,000</td>
<td>0.04</td>
<td>0.006</td>
<td>0.185</td>
<td>4.74</td>
<td>0.71</td>
</tr>
<tr>
<td>E02</td>
<td>Conveyor to Conveyor</td>
<td>1,280,000</td>
<td>0.02</td>
<td>0.006</td>
<td>0.185</td>
<td>2.37</td>
<td>0.71</td>
</tr>
<tr>
<td>A01</td>
<td>Blasting</td>
<td>200 blasts/yr</td>
<td>See Blasting Form</td>
<td>2.88</td>
<td>0.17</td>
<td>2.88</td>
<td>0.17</td>
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<tr>
<td>A02</td>
<td>Overburden</td>
<td>3,400,000</td>
<td>0.08</td>
<td>0.012</td>
<td>0.10</td>
<td>13.60</td>
<td>2.04</td>
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<tr>
<td>A03</td>
<td>Drilling</td>
<td>14,000 holes</td>
<td>See Drilling Form</td>
<td>4.76</td>
<td>0.28</td>
<td>4.76</td>
<td>0.28</td>
</tr>
<tr>
<td>A32</td>
<td>Stockpiles</td>
<td>25 Acres</td>
<td>1.66 lbs/acre-day</td>
<td>0.25 lbs/acre-day</td>
<td>7.57</td>
<td>1.14</td>
<td></td>
</tr>
<tr>
<td>B01</td>
<td>BLM Haul Road; Unpaved</td>
<td>128,000</td>
<td>7.57</td>
<td>0.767</td>
<td>0.10</td>
<td>48.45</td>
<td>4.91</td>
</tr>
<tr>
<td>B02</td>
<td>On-Site Haul Road; Paved</td>
<td>32,000</td>
<td>7.57</td>
<td>1.14</td>
<td>0.02</td>
<td>2.42</td>
<td>0.36</td>
</tr>
<tr>
<td>B03</td>
<td>Overburden Haul Road; Paved</td>
<td>68,000</td>
<td>7.57</td>
<td>1.14</td>
<td>0.02</td>
<td>5.15</td>
<td>0.78</td>
</tr>
<tr>
<td>B04</td>
<td>Material Haul Road; Unpaved</td>
<td>38,400</td>
<td>7.57</td>
<td>0.77</td>
<td>0.10</td>
<td>14.53</td>
<td>1.47</td>
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</table>

Subtotal (PM\(_{10}\)) 168.82 28.09

141.58 21.46
### Drilling

<table>
<thead>
<tr>
<th>Proposed limit (holes/yr)</th>
<th>$PM_{10}$ EF (lb/hole)</th>
<th>Potential $PM_{10}$ (tpy)</th>
<th>$PM_{2.5}$ EF (lb/hole)</th>
<th>Potential $PM_{2.5}$ (tpy)</th>
</tr>
</thead>
<tbody>
<tr>
<td>14000</td>
<td>0.68</td>
<td><strong>4.76</strong></td>
<td>0.04</td>
<td><strong>0.28</strong></td>
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### Blasting

<table>
<thead>
<tr>
<th>Horizontal Area (ft²/blast)</th>
<th>Proposed Blasts (blasts/yr)</th>
<th>$PM_{10}$ EF (lb/blast)</th>
<th>Potential $PM_{10}$ (tpy)</th>
<th>$PM_{2.5}$ EF (lb/blast)</th>
<th>Potential $PM_{2.5}$ (tpy)</th>
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<tbody>
<tr>
<td>25000</td>
<td>200</td>
<td>28.78</td>
<td><strong>2.88</strong></td>
<td>1.66</td>
<td><strong>0.17</strong></td>
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EPA AP-42 EF TSP <30 Table 11.9-1: \(0.000014(A)^{1.5}\) lb/blast, where \(A\) = horizontal area

EPA AP-42 EF <10 scaling factor Table 11.9-1: 0.52

EPA AP-42 EF <2.5 scaling factor Table 11.9-1: 0.03

### ANFO only

<table>
<thead>
<tr>
<th>Proposed ANFO (tons/yr)</th>
<th>CO EF (lb/ton)</th>
<th>Potential CO (tpy)</th>
<th>NO(_x) EF (lb/ton)</th>
<th>Potential NO(_x) (tpy)</th>
</tr>
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<tbody>
<tr>
<td>600</td>
<td>40.97</td>
<td><strong>12.29</strong></td>
<td>7.92</td>
<td><strong>2.38</strong></td>
</tr>
</tbody>
</table>

National Institute of Safety and Health: A Technique for Measuring Gasses produced by Blast Agents, 1997

For combustion calculation, see 17286_20191114_TSD.