Iowa Department of Natural Resources  
Title V Operating Permit Draft

Name of Permitted Facility: CertainTeed Gypsum & Ceiling Mfg, Inc.  
Facility Location: 2109 Quail Ave., Fort Dodge, IA 50501  
Air Quality Operating Permit Number: 99-TV-028R3-M001  
Expiration Date: August 20, 2024  
Permit Renewal Application Deadline: February 20, 2024

EIQ Number: 92-0844  
Facility File Number: 94-01-002

Responsible Official  
Name: David Cook  
Title: Equipment Manager  
Mailing Address: P.O. Box 698, Fort Dodge, IA 50501  
Phone #: (515) 576-1133

Permit Contact Person for the Facility  
Name: John D. Kimble  
Title: Regional EHS Manager  
Mailing Address: 3303 East 4th Ave., Shakopee, MN 55379  
Phone #: (515) 574-0112

This permit is issued in accordance with 567 Iowa Administrative Code Chapter 22, and is issued subject to the terms and conditions contained in this permit.

For the Director of the Department of Natural Resources

Marnie Stein, Supervisor of Air Operating Permits Section  
Date: 08/19/2021
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Abbreviations

acfm............................actual cubic feet per minute
CFR ............................Code of Federal Regulation
CE ..............................control equipment
CEM.............................continuous emission monitor
°F ...............................degrees Fahrenheit
EIQ.........................emissions inventory questionnaire
EP..........................emission point
EU ............................emission unit
ESP..........................Electrostatic Precipitator
gr./dscf ..........................grains per dry standard cubic foot
IAC............................Iowa Administrative Code
IDNR..........................Iowa Department of Natural Resources
MVAC..........................motor vehicle air conditioner
NAICS..........................North American Industry Classification System
NSPS..........................new source performance standard
ppmv ..........................parts per million by volume
lb./hr ..........................pounds per hour
lb./MMBtu .......................pounds per million British thermal units
SCC............................Source Classification Codes
scfm ..........................standard cubic feet per minute
sf/hr..........................square feet per hour
SIC............................Standard Industrial Classification
TPY ............................tons per year
USEPA.....................United States Environmental Protection Agency

Pollutants
PM ..........................particulate matter
PM_{10}..................particulate matter ten microns or less in diameter
SO_{2} ..................sulfur dioxide
NO_{x} ..................nitrogen oxides
VOC ........................volatile organic compound
CO ..........................carbon monoxide
HAP ..........................hazardous air pollutant
## I. Facility Description and Equipment List

Facility Name: CertainTeed Gypsum & Ceiling Mfg, Inc.
Permit Number: 99-TV-028R3-M001

Facility Description: Gypsum Products Manufacturing (SIC 3275)

### Equipment List

<table>
<thead>
<tr>
<th>Emission Point Number</th>
<th>Emission Unit Number</th>
<th>Emission Unit Description</th>
<th>IDNR Construction Permit Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>EP LS</td>
<td>EU C 4000</td>
<td>Land Stripping</td>
<td>NA</td>
</tr>
<tr>
<td>EP 002</td>
<td>EU C 4002</td>
<td>Blasting Holes Drilling on Gypsum Rock</td>
<td>NA</td>
</tr>
<tr>
<td>EP 003</td>
<td>EU C 4003</td>
<td>Open Gypsum Rock Pile</td>
<td>NA</td>
</tr>
<tr>
<td>EP 004</td>
<td>EU C 4004</td>
<td>Gypsum Rock Truck Hauling</td>
<td>NA</td>
</tr>
<tr>
<td>EP 008</td>
<td>EU 4303</td>
<td>Covered Gypsum Rock Pile</td>
<td>NA</td>
</tr>
<tr>
<td></td>
<td>EU 4314</td>
<td>Scalping Screen</td>
<td>NA</td>
</tr>
<tr>
<td></td>
<td>EU 4403</td>
<td>Landplaster Storage Bin A</td>
<td>NA</td>
</tr>
<tr>
<td></td>
<td>EU 4404</td>
<td>Landplaster Storage Bin B</td>
<td>NA</td>
</tr>
<tr>
<td></td>
<td>EU 4405</td>
<td>Landplaster Storage Bin C</td>
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</tr>
<tr>
<td></td>
<td>EU 4513</td>
<td>Stucco Surge Tank No. 1</td>
<td>NA</td>
</tr>
<tr>
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<td>EU 4514</td>
<td>Stucco Surge Tank No. 2</td>
<td>NA</td>
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<td></td>
<td>EU 5016</td>
<td>Elevator Conveyor for Starch, Vermiculite &amp; Clay</td>
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<td>Starch Storage Bin</td>
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<td>EP 011</td>
<td>EU 4401</td>
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<td>EU 4402</td>
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<td>EU 4501</td>
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<td>EU 4502</td>
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<td>Calcining Kettle C w/ Hot Pit</td>
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<td>EU 4507</td>
<td>West Hot Pit Screw Conveyor</td>
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<td>EU 5002</td>
<td>Middle Stucco Bin</td>
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<td>EU 5003</td>
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<td>EU 5019</td>
<td>Vermiculite Storage Bin</td>
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<td>Clay Storage Bin</td>
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<td>EP 017</td>
<td>EU 5021</td>
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<td>EP 022</td>
<td>EU 5023</td>
<td>Wallboard End Sawing</td>
<td>04-A-357-S1</td>
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<td>EP 092</td>
<td>EU 5030</td>
<td>Wallboard End Sawing</td>
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<td>EU 5031</td>
<td>Riser Machine</td>
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## Equipment List

<table>
<thead>
<tr>
<th>Emission Point Number</th>
<th>Emission Unit Number</th>
<th>Emission Unit Description</th>
<th>IDNR Construction Permit Number</th>
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<tbody>
<tr>
<td>EP 024</td>
<td>EU 5101</td>
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<td>EU 5023</td>
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<td>EP 091</td>
<td>EU 4306</td>
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<td>EU 4308</td>
<td>North Hammer Mill</td>
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<td>EU 4309</td>
<td>South Hammer Mill</td>
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<td>EU 6025</td>
<td>Crusher Feeder</td>
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<td>EU 6026</td>
<td>Diverter Valve</td>
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<td>EU C 6037</td>
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<td>EP 099</td>
<td>EU 5029</td>
<td>Four Zone Wallboard Dryer</td>
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## Insignificant Activities Equipment List

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<td>EU 4304</td>
<td>Secondary Crushing</td>
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<td>EU 4305</td>
<td>Covered Belt Conveyor</td>
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<td>EU 4310</td>
<td>Screw Conveyor</td>
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<td>EU 4311</td>
<td>Screw Conveyor</td>
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<td>EU 4312</td>
<td>North Bucket Elevator</td>
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<tr>
<td>EU 4313</td>
<td>South Bucket Elevator</td>
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<tr>
<td>EU 4315</td>
<td>North Raymond Mill Feed Bin</td>
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<tr>
<td>EU 4316</td>
<td>South Raymond Mill Feed Bin</td>
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<tr>
<td>EU 4504</td>
<td>Kettle Burner (8.15 MMBtu/hr.)</td>
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<tr>
<td>EU 4505</td>
<td>Kettle Burner (8.15 MMBtu/hr.)</td>
</tr>
<tr>
<td>EU 4506</td>
<td>Kettle Burner (8.15 MMBtu/hr.)</td>
</tr>
<tr>
<td>EU 4511</td>
<td>East Stucco Screw Conveyor</td>
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<tr>
<td>EU 4512</td>
<td>West Stucco Screw Conveyor</td>
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<tr>
<td>EU 5004</td>
<td>Stucco Screw Conveyor</td>
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<td>EU 5005</td>
<td>Stucco Return Bucket Elevator #1</td>
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<td>EU 5006</td>
<td>Stucco Return Bucket Elevator #2</td>
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<td>EU 5007</td>
<td>Stucco Delivery Bucket Elevator</td>
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<td>Stucco Delivery Screen</td>
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<td>EU 5009</td>
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<td>EU 5010</td>
<td>North Dextrose Bag break Feeder</td>
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<td>EU 5011</td>
<td>South Dextrose Bag Break Feeder</td>
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<td>EU 5012</td>
<td>North Ball Mill</td>
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<td>EU 5013</td>
<td>South Ball Mill</td>
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<td>EU 5015</td>
<td>Pneumatic Conveying &amp; Storage</td>
</tr>
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<td>EU 5024</td>
<td>Soap Storage Tank</td>
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<td>EU 5025</td>
<td>Foam Generator</td>
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<td>EU 5026</td>
<td>Bag Hand Feeders</td>
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<td>Insignificant Emission Unit Number</td>
<td>Insignificant Emission Unit Description</td>
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<td>EU 6001</td>
<td>Boiler (1.68 MMBtu/hr.)</td>
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<td>EU 6002</td>
<td>Water Heater</td>
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<td>EU 6003</td>
<td>22 Air Heater Furnaces</td>
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<td>EU 6027</td>
<td>Reclaim Handling</td>
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<td>EU 6028</td>
<td>Incline Reclaim Conveyor</td>
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<td>EU 6029</td>
<td>Horizontal Reclaim Conveyor</td>
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<td>EU 6031</td>
<td>Labelers (2)</td>
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<tr>
<td>EU 6032</td>
<td>UL Labeler</td>
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<td>EU 6033</td>
<td>UL Labeler</td>
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<tr>
<td>EU 6034</td>
<td>Paper Heaters (2 at 0.05 MMBtu/hr. each)</td>
</tr>
<tr>
<td>EU C 4001</td>
<td>Blasting</td>
</tr>
<tr>
<td>EU C 4301</td>
<td>Primary Crushing</td>
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<tr>
<td>EU C 4302</td>
<td>Covered Belt Conveyor</td>
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<td>EU C 6035</td>
<td>Reclaim Storage Pile</td>
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<td>EU C 6036</td>
<td>Portable Reclaim Crusher</td>
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<tr>
<td>EU C 6038</td>
<td>Paper Pile</td>
</tr>
<tr>
<td>EU C 6039</td>
<td>Screened Reclaimed Wallboard Pile</td>
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</tbody>
</table>
II. Plant-Wide Conditions

Facility Name: CertainTeed Gypsum & Ceiling Mfg, Inc.
Permit Number: 99-TV-028R3-M001

Permit Duration

The term of this permit is: Five (5) years from permit issuance
Commencing on: 8/21/2019
Ending on: 8/20/2024

Amendments, modifications and reopenings of the permit shall be obtained in accordance with 567 Iowa Administrative Code rules 22.110 - 22.114. Permits may be suspended, terminated, or revoked as specified in 567 Iowa Administrative Code Rules 22.115.

Emission Limits

Unless specified otherwise in the Source Specific Conditions, the following limitations and supporting regulations apply to all emission points at this plant:

Opacity (visible emissions): 40% opacity
Authority for Requirement: 567 IAC 23.3(2)"d"

Sulfur Dioxide (SO₂): 500 parts per million by volume
Authority for Requirement: 567 IAC 23.3(3)"e"

Particulate Matter:
No person shall cause or allow the emission of particulate matter from any source in excess of the emission standards specified in this chapter, except as provided in 567 – Chapter 24. For sources constructed, modified or reconstructed on or after July 21, 1999, the emission of particulate matter from any process shall not exceed an emission standard of 0.1 grain per dry standard cubic foot of exhaust gas, except as provided in 567 – 21.2(455B), 23.1(455B), 23.4(455B) and 567 – Chapter 24.
For sources constructed, modified or reconstructed prior to July 21, 1999, the emission of particulate matter from any process shall not exceed the amount determined from Table I, or amount specified in a permit if based on an emission standard of 0.1 grain per standard cubic foot of exhaust gas or established from standards provided in 23.1(455B) and 23.4(455B).
Authority for Requirement: 567 IAC 23.3(2)"a"

Fugitive Dust: Attainment and Unclassified Areas - A person shall take reasonable precautions to prevent particulate matter from becoming airborne in quantities sufficient to cause a nuisance as defined in Iowa Code section 657.1 when the person allows, causes or permits any materials to be handled, transported or stored or a building, its appurtenances or a construction haul road to be used, constructed, altered, repaired or demolished, with the exception of farming operations or dust generated by ordinary travel on unpaved roads. Ordinary travel includes routine traffic and road maintenance activities such as scarifying, compacting, transporting road maintenance.
surfacing material, and scraping of the unpaved public road surface. (the preceding sentence is State Only) All persons, with the above exceptions, shall take reasonable precautions to prevent the discharge of visible emissions of fugitive dusts beyond the lot line of the property on which the emissions originate. The public highway authority shall be responsible for taking corrective action in those cases where said authority has received complaints of or has actual knowledge of dust conditions which require abatement pursuant to this subrule. Reasonable precautions may include, but not be limited to, the following procedures.

1. Use, where practical, of water or chemicals for control of dusts in the demolition of existing buildings or structures, construction operations, the grading of roads or the clearing of land.
2. Application of suitable materials, such as but not limited to asphalt, oil, water or chemicals on unpaved roads, material stockpiles, race tracks and other surfaces which can give rise to airborne dusts.
3. Installation and use of containment or control equipment, to enclose or otherwise limit the emissions resulting from the handling and transfer of dusty materials, such as but not limited to grain, fertilizer or limestone.
4. Covering, at all times when in motion, open-bodied vehicles transporting materials likely to give rise to airborne dusts.
5. Prompt removal of earth or other material from paved streets or to which earth or other material has been transported by trucking or earth-moving equipment, erosion by water or other means.
6. Reducing the speed of vehicles traveling over on-property surfaces as necessary to minimize the generation of airborne dusts.

Authority for Requirement: 567 IAC 23.3(2)"c"
III. Emission Point-Specific Conditions

Facility Name: CertainTeed Gypsum & Ceiling Mfg, Inc.
Permit Number: 99-TV-028R3-M001


<table>
<thead>
<tr>
<th>Emission Point</th>
<th>Emission Unit</th>
<th>Emission Unit Description</th>
<th>Control Equipment</th>
<th>Raw Material</th>
<th>Rated Capacity</th>
<th>Construction Permit</th>
</tr>
</thead>
<tbody>
<tr>
<td>EP LS</td>
<td>EU C 4000</td>
<td>Land Stripping</td>
<td>NA</td>
<td>Land</td>
<td>400 cubic yards/hr.</td>
<td>NA</td>
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<tr>
<td>EP 002</td>
<td>EU C 4002</td>
<td>Blasting Hole Drilling on Gypsum Rock</td>
<td>NA</td>
<td>Holes</td>
<td>0.62 /hour</td>
<td>NA</td>
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<tr>
<td>EP 003</td>
<td>EU C 4003</td>
<td>Open Gypsum Rock Pile</td>
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<td>Gypsum Rock</td>
<td>93 tons/hr.</td>
<td>NA</td>
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<tr>
<td>EP 004</td>
<td>EU C 4004</td>
<td>Gypsum Rock Truck Hauling</td>
<td>NA</td>
<td>Gypsum Rock</td>
<td>3.72 VMT/hr.</td>
<td>NA</td>
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</table>

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)
The emissions from each emission point shall not exceed the levels specified below.

Pollutant: Fugitive Dust
Emission Limit: No person shall allow, cause or permit any materials to be handled, transported or stored; or a building, its appurtenances or a construction haul road to be used, constructed, altered, repaired or demolished, without taking reasonable precautions to prevent a nuisance. All persons shall take reasonable precautions to prevent the discharge of visible emissions of fugitive dusts beyond the lot line of the property on which the emissions originate.

Authority for Requirement: 567 IAC 23.3(2)"c"

Monitoring Requirements
The owner/operator of this equipment shall comply with the monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? Yes ☐ No ☒
Facility Maintained Operation & Maintenance Plan Required? Yes ☐ No ☒
Compliance Assurance Monitoring (CAM) Plan Required? Yes ☐ No ☒

Authority for Requirement: 567 IAC 22.108(3)
Emission Point ID Number: EP 008

Associated Equipment

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<thead>
<tr>
<th>Emission Unit</th>
<th>Emission Unit Description</th>
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<th>Rated Capacity</th>
<th>Construction Permit</th>
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<td>EU 4303</td>
<td>Covered Gypsum Rock Pile</td>
<td>NA</td>
<td>Gypsum Rock</td>
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Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)

The emissions from this emission point shall not exceed the levels specified below.

Pollutant: Fugitive Dust

Emission Limit: No person shall allow, cause or permit any materials to be handled, transported or stored; or a building, its appurtenances or a construction haul road to be used, constructed, altered, repaired or demolished, without taking reasonable precautions to prevent a nuisance. All persons shall take reasonable precautions to prevent the discharge of visible emissions of fugitive dusts beyond the lot line of the property on which the emissions originate.

Authority for Requirement: 567 IAC 23.3(2)"c"

Monitoring Requirements

The owner/operator of this equipment shall comply with the monitoring requirements listed below.

- Agency Approved Operation & Maintenance Plan Required? Yes ☐ No ☒
- Facility Maintained Operation & Maintenance Plan Required? Yes ☐ No ☒
- Compliance Assurance Monitoring (CAM) Plan Required? Yes ☐ No ☒

Authority for Requirement: 567 IAC 22.108(3)
Emission Point ID Number:  EP 011 (All units Vent Inside the Building)

Associated Equipment

<table>
<thead>
<tr>
<th>Emission Unit</th>
<th>Emission Unit Description</th>
<th>Control Equipment</th>
<th>Raw Material</th>
<th>Rated Capacity</th>
<th>Construction Permit</th>
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<tbody>
<tr>
<td>EU 4314</td>
<td>Scalping Screen</td>
<td>NA</td>
<td>Landplaster</td>
<td>60 tons/hr.</td>
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<td>Landplaster Storage Bin B</td>
<td>CE 003: Baghouse</td>
<td>Landplaster</td>
<td>80 tons/hr.</td>
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<td>Landplaster</td>
<td>80 tons/hr.</td>
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<td>NA</td>
<td>Stucco</td>
<td>60 tons/hr.</td>
<td>NA</td>
</tr>
<tr>
<td>EU 4514</td>
<td>Stucco Surge Tank No. 2</td>
<td>NA</td>
<td>Stucco</td>
<td>60 tons/hr.</td>
<td>NA</td>
</tr>
<tr>
<td>EU 5016</td>
<td>Elevator Conveyor for Starch, Vermiculite, &amp; Clay</td>
<td>NA</td>
<td>Starch/Clay/ Vermiculite</td>
<td>16.67 tons/hr.</td>
<td>NA</td>
</tr>
<tr>
<td>EU 5018</td>
<td>Starch Storage Bin</td>
<td>NA</td>
<td>Starch</td>
<td>16.67 tons/hr.</td>
<td>NA</td>
</tr>
</tbody>
</table>

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)

The emissions from this emission point shall not exceed the levels specified below.

Pollutant: Opacity
Emission Limit(s): 40 %
Authority for Requirement: 567 IAC 23.3(2)"d"

Pollutant: Particulate Matter
Emission Limit(s): 0.1 gr/scf
Authority for Requirement: 567 IAC 23.3(2)"a"
**Monitoring Requirements**
The owner/operator of this equipment shall comply with the monitoring requirements listed below.

**Agency Approved Operation & Maintenance Plan Required?**  Yes ☐  No ☒

**Facility Maintained Operation & Maintenance Plan Required?**  Yes ☐  No ☒
(Required for CE 003)

**Compliance Assurance Monitoring (CAM) Plan Required?**  Yes ☐  No ☒

Facility operation and maintenance plans must be sufficient to yield reliable data from the relevant time period that are representative of the source’s compliance with the applicable requirements.

The data pertaining to the plan shall be maintained on site for at least 5 years. The plan and associated recordkeeping provides documentation of this facility’s implementation of its obligation to operate according to good air pollution control practice.

Good air pollution control practice is achieved by adoption of quality control standards in the operation and maintenance procedures for air pollution control that are comparable to industry quality control standards for the production processes associated with this emission point.

Authority for Requirement: 567 IAC 22.108(3)
Emission Point ID Number: EP 015

Associated Equipment

<table>
<thead>
<tr>
<th>Emission Unit</th>
<th>Emission Unit Description</th>
<th>Control Equipment</th>
<th>Raw Material</th>
<th>Rated Capacity</th>
<th>Construction Permit</th>
</tr>
</thead>
<tbody>
<tr>
<td>EU 4401</td>
<td>North Raymond Mill</td>
<td>CE 002: Cyclone</td>
<td>Gypsum/Reclaimed Wallboard, Natural Gas/Propane</td>
<td>40 tons/hr., 2.5 MMBtu/hr.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Crushing &amp; Flash Drying</td>
<td>CE 007: ESP</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EU 4402</td>
<td>South Raymond Mill</td>
<td>CE 001: Cyclone</td>
<td>Gypsum/Reclaimed Wallboard, Natural Gas/Propane</td>
<td>40 tons/hr., 2.5 MMBtu/hr.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Crushing &amp; Flash Drying</td>
<td>CE 007: ESP</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EU 4501</td>
<td>Calcining Kettle A w/ Hot</td>
<td>CE 004: Cyclone</td>
<td>Landplaster</td>
<td>20 tons/hr.</td>
<td>18-A-132</td>
</tr>
<tr>
<td></td>
<td>Pit</td>
<td>CE 007: ESP</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EU 4502</td>
<td>Calcining Kettle B w/ Hot</td>
<td>CE 005: Cyclone</td>
<td>Landplaster</td>
<td>20 tons/hr.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Pit</td>
<td>CE 007: ESP</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EU 4503</td>
<td>Calcining Kettle C w/ Hot</td>
<td>CE 006: Cyclone</td>
<td>Landplaster</td>
<td>20 tons/hr.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Pit</td>
<td>CE 007: ESP</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EU 4507</td>
<td>West Hot Pit Screw</td>
<td>CE 007: ESP</td>
<td>Stucco</td>
<td>60 tons/hr.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Conveyor</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EU 4508</td>
<td>East Hot Pit Screw</td>
<td>CE 007: ESP</td>
<td>Stucco</td>
<td>60 tons/hr.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Conveyor</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EU 4509</td>
<td>West Hot Pit Elevator</td>
<td>CE 007: ESP</td>
<td>Stucco</td>
<td>60 tons/hr.</td>
<td></td>
</tr>
<tr>
<td>EU 4510</td>
<td>East Hot Pit Elevator</td>
<td>CE 007: ESP</td>
<td>Stucco</td>
<td>60 tons/hr.</td>
<td></td>
</tr>
</tbody>
</table>

---

Applicable Requirements

**Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)**
The emissions from this emission point shall not exceed the levels specified below.

Pollutant: Opacity
Emission Limit(s): 40 %^(1)^ 
Authority for Requirement: DNR Construction Permit 18-A-132 
567 IAC 23.3(2)"d"

^(1)^ An exceedance of the indicator opacity of 25% will require the owner or operator to promptly investigate the emission unit and make corrections to operations or equipment associated with the exceedance. If exceedances continue after the corrections, the Department may require additional proof to demonstrate compliance (e.g., stack testing).

Pollutant: PM\(_{10}\)
Emission Limit(s): 32.00 lb/hr.
Authority for Requirement: DNR Construction Permit 18-A-132
Pollutant: Particulate Matter
Emission Limit(s): 32.00 lb/hr.
Authority for Requirement: DNR Construction Permit 18-A-132

Pollutant: Particulate Matter
Emission Limit(s): 65.72 lb/hr.\(^{(1)}\)
Authority for Requirement: DNR Construction Permit 18-A-132
567 IAC 23.3(2)"a"
\(^{(1)}\) Based on process weight of 380 tons/hr.

Pollutant: Sulfur Dioxide (SO\(_2\))
Emission Limit(s): 500 ppmv
Authority for Requirement: DNR Construction Permit 18-A-132
567 IAC 23.3(3)"e"

**Operational Limits & Reporting/Record keeping Requirements**

*The owner/operator of this equipment shall comply with the operational limits and requirements listed below.*

*Records shall be kept on site for at least five years and shall be available for inspection by the Department.*

1. The owner or operator shall operate and maintain the Cyclone (001), Cyclone (002), Cyclone (004), Cyclone (005), Cyclone (006), and Electrostatic Precipitator (007) according to the manufacturer’s specifications and maintenance schedule. The owner or operator shall maintain a log of all maintenance and inspection activities performed on the Cyclone (001), Cyclone (002), Cyclone (004), Cyclone (005), Cyclone (006), and Electrostatic Precipitator (007). This log shall include, but is not necessarily limited to:
   a. The date and time any inspection and/or maintenance was performed on the Cyclone (001), Cyclone (002), Cyclone (004), Cyclone (005), Cyclone (006), and Electrostatic Precipitator (007);
   b. Any issues identified during the inspection and the date each issue was resolved;
   c. Any issues addressed during the maintenance activities and the date each issue was resolved; and
   d. Identification of the staff member performing the maintenance or inspection.
2. The owner or operator shall maintain and monitor the Electrostatic Precipitator (007) according to the facility’s operation and maintenance (O&M) plan. The owner or operator shall meet all of the applicable monitoring methods and corrective action requirements.
3. The owner or operator shall only combust natural gas in the North Raymond Mill Crushing and Flash Drying (EU 4401) and South Raymond Mill Crushing and Flash Drying (EU 4402).

Authority for Requirement: DNR Construction Permit 18-A-132
**Emission Point Characteristics**
*The emission point shall conform to the specifications listed below.*

- Stack Height, (ft., from the ground): 98.75
- Stack Opening, (inches): 52 x 39
- Exhaust Flow Rate (scfm): 25,000
- Exhaust Temperature (°F): 220
- Discharge Style: Vertical Unobstructed
- Authority for Requirement: DNR Construction Permit 18-A-132

The temperature and flowrate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that either the temperature or flowrate above are different than the values stated, the owner or operator shall submit a request to the Department within thirty (30) days of the discovery to determine if a permit amendment is required or submit a permit application requesting to amend the permit.

**Monitoring Requirements**
*The owner/operator of this equipment shall comply with the monitoring requirements listed below.*

**Stack Testing:**
- Pollutant – Particulate Matter
  - 1st Stack Test to be Completed by – **8/20/2023**
  - 2nd Stack Test to be Completed between – **2/20/2024**
  - Authority for Requirement - 567 IAC 22.108(3)

- Pollutant – PM10
  - 1st Stack Test to be Completed by – **8/20/2023**
  - 2nd Stack Test to be Completed between – **2/20/2024**
  - Test Method – 40 CFR 51, Appendix M, 201A with 202
  - Authority for Requirement - 567 IAC 22.108(3)

The owner of this equipment or the owner's authorized agent shall provide written notice to the Director, not less than 30 days before a required stack test or performance evaluation of a continuous emission monitor. Results of the test shall be submitted in writing to the Director in the form of a comprehensive report within 6 weeks of the completion of the testing. 567 IAC 25.1(7)
Agency Approved Operation & Maintenance Plan Required?  Yes ☐  No ☑

Facility Maintained Operation & Maintenance Plan Required?  Yes ☐  No ☑
(Required for CE's 001, 002, 004, 005, & 006)

Compliance Assurance Monitoring (CAM) Plan Required?  Yes ☐  No ☑
(Required for CE 007)

Facility operation and maintenance plans must be sufficient to yield reliable data from the relevant time period that are representative of the source’s compliance with the applicable requirements.

The data pertaining to the plan shall be maintained on site for at least 5 years. The plan and associated recordkeeping provides documentation of this facility’s implementation of its obligation to operate according to good air pollution control practice.

Good air pollution control practice is achieved by adoption of quality control standards in the operation and maintenance procedures for air pollution control that are comparable to industry quality control standards for the production processes associated with this emission point.

Authority for Requirement:  567 IAC 22.108(3)
Emission Point ID Number: EP 017 (All units Vent Inside the Building)

### Associated Equipment

<table>
<thead>
<tr>
<th>Emission Unit</th>
<th>Emission Unit Description</th>
<th>Control Equipment</th>
<th>Raw Material</th>
<th>Rated Capacity</th>
<th>Construction Permit</th>
</tr>
</thead>
<tbody>
<tr>
<td>EU 5001</td>
<td>West Stucco Bin</td>
<td>CE 009: Baghouse</td>
<td>Stucco</td>
<td>60 tons/hr.</td>
<td>75-A-144</td>
</tr>
<tr>
<td>EU 5002</td>
<td>Middle Stucco Bin</td>
<td>CE 010: Baghouse</td>
<td>Stucco</td>
<td>60 tons/hr.</td>
<td>75-A-145</td>
</tr>
<tr>
<td>EU 5003</td>
<td>East Stucco Bin</td>
<td>CE 011: Baghouse</td>
<td>Stucco</td>
<td>60 tons/hr.</td>
<td>75-A-146</td>
</tr>
<tr>
<td>EU 5017</td>
<td>Screw Conveyor</td>
<td>CE 008: Baghouse</td>
<td>Starch/Clay/Vermiculite</td>
<td>16.67 tons/hr.</td>
<td>75-A-147</td>
</tr>
<tr>
<td>EU 5019</td>
<td>Vermiculite Storage Bin</td>
<td>NA</td>
<td>Vermiculite</td>
<td>11.10 tons/hr.</td>
<td>NA</td>
</tr>
<tr>
<td>EU 5020</td>
<td>Clay Storage Bin</td>
<td>NA</td>
<td>Clay</td>
<td>12.50 tons/hr.</td>
<td>NA</td>
</tr>
</tbody>
</table>

---

### Applicable Requirements

**Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)**

*The emissions from this emission point shall not exceed the levels specified below.*

**Pollutant: Opacity**
- Emission Limit(s): 40 %
  - 567 IAC 23.3(2)”d”

**Pollutant: Particulate Matter**
- Emission Limit(s): 0.1 gr/scf
  - 567 IAC 23.3(2)”a”
Monitoring Requirements
The owner/operator of this equipment shall comply with the monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required?    Yes ☐ No ☑

Facility Maintained Operation & Maintenance Plan Required?
(Required for CE's 009, 010, 011, & 008)    Yes ☑ No ☐

Compliance Assurance Monitoring (CAM) Plan Required?    Yes ☑ No ☐

Facility operation and maintenance plans must be sufficient to yield reliable data from the relevant time period that are representative of the source’s compliance with the applicable requirements.

The data pertaining to the plan shall be maintained on site for at least 5 years. The plan and associated recordkeeping provides documentation of this facility’s implementation of its obligation to operate according to good air pollution control practice.

Good air pollution control practice is achieved by adoption of quality control standards in the operation and maintenance procedures for air pollution control that are comparable to industry quality control standards for the production processes associated with this emission point.

Authority for Requirement: 567 IAC 22.108(3)

Associated Equipment

<table>
<thead>
<tr>
<th>Emission Unit*</th>
<th>Emission Unit Description</th>
<th>Control Equipment</th>
<th>Raw Material</th>
<th>Rated Capacity</th>
<th>Construction Permit</th>
</tr>
</thead>
<tbody>
<tr>
<td>EU 5021</td>
<td>Raw Material Feed Screw to Pin Mixer</td>
<td>See Below</td>
<td>Raw Material</td>
<td>60 tons/hr.</td>
<td>See Below</td>
</tr>
<tr>
<td>EU 5030</td>
<td>Wallboard End Sawing</td>
<td>See Below</td>
<td>Wallboard</td>
<td>48,000 sf/hr.</td>
<td>See Below</td>
</tr>
<tr>
<td>EU 5031</td>
<td>Riser Machine</td>
<td>See Below</td>
<td>Wallboard</td>
<td>5,600 sf/hr.</td>
<td>See Below</td>
</tr>
</tbody>
</table>

* All three emission units are able to vent through all three emission points. EP's 022 and 023 are considered to be bypass stacks for EP 092.

<table>
<thead>
<tr>
<th>Emission Point</th>
<th>Control Equipment</th>
<th>Construction Permit</th>
</tr>
</thead>
<tbody>
<tr>
<td>EP 022</td>
<td>CE 014: Baghouse</td>
<td>04-A-356-S1</td>
</tr>
<tr>
<td>EP 023</td>
<td>CE 015: Baghouse</td>
<td>04-A-357-S1</td>
</tr>
<tr>
<td>EP 092</td>
<td>CE 030: Cyclone</td>
<td>00-A-1094-S3</td>
</tr>
<tr>
<td></td>
<td>CE 031: Dust Collector</td>
<td></td>
</tr>
</tbody>
</table>

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)
The emissions from these emission points shall not exceed the levels specified below.

<table>
<thead>
<tr>
<th>Emission Point</th>
<th>Opacity</th>
<th>PM$_{10}$</th>
<th>Particulate Matter</th>
<th>Authority for Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>EP 022</td>
<td>40%$^{(1)}$</td>
<td>1.55 lb/hr.</td>
<td>1.55 lb/hr. 0.1 gr/dscf</td>
<td>04-A-356-S1, 567 IAC 23.3(2)&quot;d&quot;, 23.3(2)&quot;a&quot;</td>
</tr>
<tr>
<td>EP 023</td>
<td>40%$^{(1)}$</td>
<td>1.55 lb/hr.</td>
<td>1.55 lb/hr. 0.1 gr/dscf</td>
<td>04-A-357-S1, 567 IAC 23.3(2)&quot;d&quot;, 23.3(2)&quot;a&quot;</td>
</tr>
<tr>
<td>EP 092</td>
<td>40%$^{(1)}$</td>
<td>3.09 lb/hr.</td>
<td>3.09 lb/hr. 0.1 gr/dscf</td>
<td>00-A-1094-S3, 567 IAC 23.3(2)&quot;d&quot;, 23.3(2)&quot;a&quot;</td>
</tr>
</tbody>
</table>

$^{(1)}$ An exceedance of the indicator opacity of (10%) will require the owner/operator to promptly investigate the emission unit and make corrections to operations or equipment associated with the exceedance. If exceedances continue after the corrections, the DNR may require additional proof to demonstrate compliance (e.g., stack testing).
**Operational Limits & Requirements**

The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

**EP's 022 and 023 (each)**

Hours of operation:
1. Emissions may only be vented through these stacks while no emissions are being vented through EP 092.

Reporting & Record keeping:

*Records shall be kept on site for at least five years and shall be available for inspection by the Department.*

1. A log of the usage of these emission points shall be maintained. This log shall include the time and date of each usage, the duration of each usage, as well as the reason EP 092 is not being used.

Authority for Requirement: Iowa DNR Construction Permits 04-A-356-S1 and 04-A-357-S1

**EP 092**

Control equipment parameters:
1. The control device shall be inspected and maintained according to manufacturer’s instructions and specifications.

Reporting & Record keeping:

*Records shall be kept on site for at least five years and shall be available for inspection by the Department.*

1. The owner or operator shall maintain a log detailing control device inspections and maintenance activities.

Authority for Requirement: Iowa DNR Construction Permit 00-A-1094-S3

**Emission Point Characteristics**

*Each emission point shall conform to the specifications listed below.*

<table>
<thead>
<tr>
<th>Emission Point</th>
<th>Stack Height, (ft, from the ground)</th>
<th>Stack Opening, (inches)</th>
<th>Exhaust Flow Rate (scfm)</th>
<th>Exhaust Temperature (°F)</th>
<th>Discharge Style</th>
<th>Authority for Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>EP 022</td>
<td>35</td>
<td>22 x 18</td>
<td>6,600</td>
<td>Ambient</td>
<td>Horizontal</td>
<td>04-A-356-S1</td>
</tr>
<tr>
<td>EP 023</td>
<td>35</td>
<td>22 x 18</td>
<td>6,600</td>
<td>Ambient</td>
<td>Horizontal</td>
<td>04-A-357-S1</td>
</tr>
<tr>
<td>EP 092</td>
<td>40</td>
<td>24 (dia)</td>
<td>7,000</td>
<td>70</td>
<td>Vertical Obstructed</td>
<td>00-A-1094-S3</td>
</tr>
</tbody>
</table>
The temperature and flowrate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that either the temperature or flowrate above are different than the values stated, the owner or operator shall submit a request to the Department within thirty (30) days of the discovery to determine if a permit amendment is required or submit a permit application requesting to amend the permit.

**Monitoring Requirements**

*The owner/operator of this equipment shall comply with the monitoring requirements listed below.*

**Stack Testing for EP 092:**

- **Pollutant – Particulate Matter**
  - Stack Test to be Completed by: **8/20/2023**
  - Authority for Requirement: 567 IAC 22.108(3)

- **Pollutant – PM**
  - Stack Test to be Completed by: **8/20/2023**
  - Test Method: 40 CFR 51, Appendix M, 201A with 202
  - Authority for Requirement: 567 IAC 22.108(3)

The owner of this equipment or the owner’s authorized agent shall provide written notice to the Director, not less than 30 days before a required stack test or performance evaluation of a continuous emission monitor. Results of the test shall be submitted in writing to the Director in the form of a comprehensive report within 6 weeks of the completion of the testing. 567 IAC 25.1(7)

**Agency Approved Operation & Maintenance Plan Required?** Yes ☐ No ☑

**Facility Maintained Operation & Maintenance Plan Required?** Yes ☑ No ☐

*(Required for CE's 014 and 015)*

**Compliance Assurance Monitoring (CAM) Plan Required?** Yes ☑ No ☐

*(Required for CE 031)*

Facility operation and maintenance plans must be sufficient to yield reliable data from the relevant time period that are representative of the source’s compliance with the applicable requirements.

The data pertaining to the plan shall be maintained on site for at least 5 years. The plan and associated recordkeeping provides documentation of this facility’s implementation of its obligation to operate according to good air pollution control practice.

Good air pollution control practice is achieved by adoption of quality control standards in the operation and maintenance procedures for air pollution control that are comparable to industry quality control standards for the production processes associated with this emission point. Authority for Requirement: 567 IAC 22.108(3)
Emission Point ID Number: EP 024

Associated Equipment

<table>
<thead>
<tr>
<th>Emission Unit</th>
<th>Emission Unit Description</th>
<th>Control Equipment</th>
<th>Raw Material</th>
<th>Rated Capacity</th>
<th>Construction Permit</th>
</tr>
</thead>
<tbody>
<tr>
<td>EU 5101</td>
<td>Finished Product Truck Hauling</td>
<td>NA</td>
<td>Truck Traffic</td>
<td>0.42 VMT/hr.</td>
<td>NA</td>
</tr>
</tbody>
</table>

Applicable Requirements

**Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)**
The emissions from this emission point shall not exceed the levels specified below.

Pollutant: Fugitive Dust
Emission Limit: No person shall allow, cause or permit any materials to be handled, transported or stored; or a building, its appurtenances or a construction haul road to be used, constructed, altered, repaired or demolished, without taking reasonable precautions to prevent a nuisance. All persons shall take reasonable precautions to prevent the discharge of visible emissions of fugitive dusts beyond the lot line of the property on which the emissions originate.

Authority for Requirement: 567 IAC 23.3(2)"c"

**Monitoring Requirements**
The owner/operator of this equipment shall comply with the monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? Yes ☐ No ☑
Facility Maintained Operation & Maintenance Plan Required? Yes ☐ No ☑
Compliance Assurance Monitoring (CAM) Plan Required? Yes ☐ No ☑

Authority for Requirement: 567 IAC 22.108(3)
Emission Point ID Number: EP 050 (All units Vent Inside the Building)

Associated Equipment

<table>
<thead>
<tr>
<th>Emission Unit</th>
<th>Emission Unit Description</th>
<th>Control Equipment</th>
<th>Raw Material</th>
<th>Rated Capacity</th>
<th>Construction Permit</th>
</tr>
</thead>
<tbody>
<tr>
<td>EU 5022</td>
<td>Raw Material Feed Screw</td>
<td>CE 012: Baghouse</td>
<td>Raw Material</td>
<td>60 tons/hr.</td>
<td>NA</td>
</tr>
<tr>
<td>EU 5023</td>
<td>Raw Material Mixed for Product Formation</td>
<td></td>
<td>Raw Material</td>
<td>80 tons/hr.</td>
<td>NA</td>
</tr>
</tbody>
</table>

Applicable Requirements

Emission Limits (lb./hr., gr./dscf, lb./MMBtu, % opacity, etc.)

The emissions from this emission point shall not exceed the levels specified below.

Pollutant: Opacity
Emission Limit(s): 40 %
Authority for Requirement: 567 IAC 23.3(2)"d"

Pollutant: Particulate Matter
Emission Limit(s): 0.1 gr/scf
Authority for Requirement: 567 IAC 23.3(2)"a"

Monitoring Requirements

Agency Approved Operation & Maintenance Plan Required? Yes ☐ No ☒
Facility Maintained Operation & Maintenance Plan Required? Yes ☒ No ☐
Compliance Assurance Monitoring (CAM) Plan Required? Yes ☒ No ☐

Facility operation and maintenance plans must be sufficient to yield reliable data from the relevant time period that are representative of the source’s compliance with the applicable requirements.

The data pertaining to the plan shall be maintained on site for at least 5 years. The plan and associated recordkeeping provides documentation of this facility’s implementation of its obligation to operate according to good air pollution control practice.

Good air pollution control practice is achieved by adoption of quality control standards in the operation and maintenance procedures for air pollution control that are comparable to industry quality control standards for the production processes associated with this emission point.

Authority for Requirement: 567 IAC 22.108(3)
Emission Point ID Number: EP 091

### Associated Equipment

<table>
<thead>
<tr>
<th>Emission Unit</th>
<th>Emission Unit Description</th>
<th>Control Equipment</th>
<th>Raw Material</th>
<th>Rated Capacity</th>
<th>Construction Permit</th>
</tr>
</thead>
<tbody>
<tr>
<td>EU 4306</td>
<td>North Rock Storage Bin</td>
<td></td>
<td>Gypsum Rock</td>
<td>200 tons/hr.</td>
<td></td>
</tr>
<tr>
<td>EU 4307</td>
<td>South Rock Storage Bin</td>
<td></td>
<td>Gypsum Rock</td>
<td>200 tons/hr.</td>
<td></td>
</tr>
<tr>
<td>EU 4308</td>
<td>North Hammer Mill</td>
<td>CE 025: Dust Collector</td>
<td>Gypsum/Reclaim Wallboard</td>
<td>30 tons/hr.</td>
<td>96-A-556-S3</td>
</tr>
<tr>
<td>EU 4309</td>
<td>South Hammer Mill</td>
<td></td>
<td>Gypsum/Reclaim Wallboard</td>
<td>30 tons/hr.</td>
<td></td>
</tr>
<tr>
<td>EU 6025</td>
<td>Crusher Feeder</td>
<td></td>
<td>Reclaim Wallboard</td>
<td>10 tons/hr.</td>
<td></td>
</tr>
<tr>
<td>EU 6026</td>
<td>Diverter Valve</td>
<td></td>
<td>Reclaim Wallboard</td>
<td>10 tons/hr.</td>
<td></td>
</tr>
</tbody>
</table>

### Applicable Requirements

**Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)**

The emissions from this emission point shall not exceed the levels specified below.

**Pollutant: Opacity**

Emission Limit(s): 7%⁽¹⁾

Authority for Requirement:  Iowa DNR Construction Permit 96-A-556-S3

567 IAC 23.1(2)"bbb"

40 CFR 60.672

⁽¹⁾ In addition, fugitive emissions which escape the capture system from this source shall not exceed 10% opacity (Table 3, 40 CFR 60.672(b)).

**Pollutant: PM₁₀**

Emission Limit(s): 0.93 lb/hr., 0.022 gr/scf

Authority for Requirement:  Iowa DNR Construction Permit 96-A-556-S3

**Pollutant: Particulate Matter**

Emission Limit(s): 0.93 lb/hr., 0.022 gr/dscf

Authority for Requirement:  Iowa DNR Construction Permit 96-A-556-S3

567 IAC 23.1(2)"bbb"

40 CFR 60.672
**Operational Limits & Requirements**
The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

Control equipment parameters:
1. The control device shall be inspected and maintained according to manufacturer’s instructions and specifications.

Reporting & Record keeping:
*Records shall be kept on site for at least five years and shall be available for inspection by the Department.*
1. The owner or operator shall maintain a log detailing control device inspections and maintenance activities

**Authority for Requirement:** Iowa DNR Construction Permit 96-A-556-S3

**Emission Point Characteristics**
The emission point shall conform to the specifications listed below.

Stack Height, (ft, from the ground): 72  
Stack Opening, (inches, dia.): 24  
Exhaust Flow Rate (scfm): 5,000  
Exhaust Temperature (°F): 70  
Discharge Style: Vertical Obstructed  

**Authority for Requirement:** Iowa DNR Construction Permit 96-A-556-S3

The temperature and flowrate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that either the temperature or flowrate above are different than the values stated, the owner or operator shall submit a request to the Department within thirty (30) days of the discovery to determine if a permit amendment is required or submit a permit application requesting to amend the permit.

**Monitoring Requirements**
The owner/operator of this equipment shall comply with the monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? Yes ☒ No ☐  
Facility Maintained Operation & Maintenance Plan Required? Yes ☒ No ☐  
Compliance Assurance Monitoring (CAM) Plan Required? Yes ☒ No ☐

**Authority for Requirement:** 567 IAC 22.108(3)
Emission Point ID Number: EP 095

Associated Equipment

<table>
<thead>
<tr>
<th>Emission Unit</th>
<th>Emission Unit Description</th>
<th>Control Equipment</th>
<th>Raw Material</th>
<th>Rated Capacity</th>
<th>Construction Permit</th>
</tr>
</thead>
<tbody>
<tr>
<td>EU C 6037</td>
<td>Portable Reclaim Screen</td>
<td>NA</td>
<td>Reject Wallboard</td>
<td>100 tons/hr.</td>
<td>NA</td>
</tr>
</tbody>
</table>

Applicable Requirements

**Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)**
The emissions from this emission point shall not exceed the levels specified below.

Pollutant: Fugitive Dust
Emission Limit: No person shall allow, cause or permit any materials to be handled, transported or stored; or a building, its appurtenances or a construction haul road to be used, constructed, altered, repaired or demolished, without taking reasonable precautions to prevent a nuisance. All persons shall take reasonable precautions to prevent the discharge of visible emissions of fugitive dusts beyond the lot line of the property on which the emissions originate.

Authority for Requirement: 567 IAC 23.3(2)"c"

**Monitoring Requirements**
The owner/operator of this equipment shall comply with the monitoring requirements listed below.

- **Agency Approved Operation & Maintenance Plan Required?** Yes □ No ☒
- **Facility Maintained Operation & Maintenance Plan Required?** Yes □ No ☒
- **Compliance Assurance Monitoring (CAM) Plan Required?** Yes □ No ☒

Authority for Requirement: 567 IAC 22.108(3)
Emission Point ID Number: EP 099

Associated Equipment

<table>
<thead>
<tr>
<th>Emission Unit</th>
<th>Emission Unit Description</th>
<th>Raw Material</th>
<th>Rated Capacity</th>
<th>Construction Permit</th>
</tr>
</thead>
<tbody>
<tr>
<td>EU 5029</td>
<td>Four Zone Wallboard Dryer*</td>
<td>Natural Gas</td>
<td>103.3 MMBtu/hr</td>
<td>06-A-692-S1</td>
</tr>
</tbody>
</table>

Zone 1 30.7 MMBtu/hr.
Zone 2 30.7 MMBtu/hr.
Zone 3 19.9 MMBtu/hr.
Zone 4 22 MMBtu/hr.

Applicable Requirements

**Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)**

The emissions from each emission point shall not exceed the levels specified below.

Pollutant: Opacity
Emission Limit(s): 40 %\(^{(1)}\)
Authority for Requirement: Iowa DNR Construction Permit 06-A-692-S1
567 IAC 23.3(2)"d"

\(^{(1)}\) An exceedance of the indicator opacity of "no visible emissions" will require the owner/operator to promptly investigate the emission unit and make corrections to operations or equipment associated with the exceedance. If exceedances continue after the corrections, the DNR may require additional proof to demonstrate compliance (e.g., stack testing).

Pollutant: PM\(_{10}\)
Emission Limit(s): 0.79 lb/hr.
Authority for Requirement: Iowa DNR Construction Permit 06-A-692-S1

Pollutant: Particulate Matter
Emission Limit(s): 0.79 lb/hr., 0.1 gr/dscf
Authority for Requirement: Iowa DNR Construction Permit 06-A-692-S1
567 IAC 23.3(2)"a"

Pollutant: Sulfur Dioxide (SO\(_2\))
Emission Limit(s): 500 ppmv
Authority for Requirement: Iowa DNR Construction Permit 06-A-692-S1
567 IAC 23.3(3)"e"
Operational Limits & Requirements
The owner/operator of this equipment shall comply with the operational limits and requirements listed below.
Records shall be kept on site for at least five years and shall be available for inspection by the Department.

Process throughput:

1. The owner or operator shall only combust natural gas in the wallboard dryer (EU 5029).
   The owner or operator shall maintain a record of the type of fuel burned in the wallboard dryer (EU 5029).

Authority for Requirement: Iowa DNR Construction Permit 06-A-692-S1

Emission Point Characteristics
The emission point shall conform to the specifications listed below.

Stack Height, (ft, from the ground): 60
Stack Opening, (inches, dia.): 48
Exhaust Flow Rate (scfm): 42,200
Exhaust Temperature (°F): 328
Discharge Style: Vertical Unobstructed

Authority for Requirement: Iowa DNR Construction Permit 06-A-692-S1

The temperature and flowrate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that either the temperature or flowrate above are different than the values stated, the owner or operator shall submit a request to the Department within thirty (30) days of the discovery to determine if a permit amendment is required or submit a permit application requesting to amend the permit.

Monitoring Requirements
The owner/operator of this equipment shall comply with the monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? Yes ☐ No ☑
Facility Maintained Operation & Maintenance Plan Required? Yes ☐ No ☑
Compliance Assurance Monitoring (CAM) Plan Required? Yes ☐ No ☑

Authority for Requirement: 567 IAC 22.108(3)
IV. General Conditions

This permit is issued under the authority of the Iowa Code subsection 455B.133(8) and in accordance with 567 Iowa Administrative Code chapter 22.

G1. Duty to Comply

1. The permittee must comply with all conditions of the Title V permit. Any permit noncompliance constitutes a violation of the Act and is grounds for enforcement action; for a permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application. 567 IAC 22.108(9) "a"

2. Any compliance schedule shall be supplemental to, and shall not sanction noncompliance with, the applicable requirements on which it is based. 567 IAC 22.105 (2) "h" (3)

3. Where an applicable requirement of the Act is more stringent than an applicable requirement of regulations promulgated under Title IV of the Act, both provisions shall be enforceable by the administrator and are incorporated into this permit. 567 IAC 22.108 (1) "b"

4. Unless specified as either "state enforceable only" or "local program enforceable only", all terms and conditions in the permit, including provisions to limit a source's potential to emit, are enforceable by the administrator and citizens under the Act. 567 IAC 22.108 (14)

5. It shall not be a defense for a permittee, in an enforcement action, that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of the permit. 567 IAC 22.108 (9) "b"

6. For applicable requirements with which the permittee is in compliance, the permittee shall continue to comply with such requirements. For applicable requirements that will become effective during the permit term, the permittee shall meet such requirements on a timely basis. 567 IAC 22.108(15) "c"

G2. Permit Expiration

1. Except as provided in rule 567—22.104(455B), permit expiration terminates a source’s right to operate unless a timely and complete application for renewal has been submitted in accordance with rule 567—22.105(455B). 567 IAC 22.116(2)

2. To be considered timely, the owner, operator, or designated representative (where applicable) of each source required to obtain a Title V permit shall submit on forms or electronic format specified by the Department to the Air Quality Bureau, Iowa Department of Natural Resources, Air Quality Bureau, Wallace State Office Building, 502 E 9th St., Des Moines, IA 50319-0034, two copies (three if your facility is located in Linn or Polk county) of a complete permit application, at least 6 months but not more than 18 months prior to the date of permit expiration. An additional copy must also be sent to U.S. EPA Region VII, Attention: Chief of Air Permitting & Standards Branch, 11201 Renner Blvd., Lenexa, KS 66219. Additional copies to local programs or EPA are not required for application materials submitted through the electronic format specified by the Department. The application must include all emission points, emission units, air pollution control equipment, and monitoring devices at the facility. All emissions generating activities, including fugitive emissions, must be included. The definition of a complete application is as indicated in 567 IAC 22.105. 567 IAC 22.105

G3. Certification Requirement for Title V Related Documents

Any application, report, compliance certification or other document submitted pursuant to this permit shall contain certification by a responsible official of truth, accuracy, and completeness. All certifications shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete. 567 IAC 22.107 (4)

G4. Annual Compliance Certification

By March 31 of each year, the permittee shall submit compliance certifications for the previous
calendar year. The certifications shall include descriptions of means to monitor the compliance status of all emissions sources including emissions limitations, standards, and work practices in accordance with applicable requirements. The certification for a source shall include the identification of each term or condition of the permit that is the basis of the certification; the compliance status; whether compliance was continuous or intermittent; the method(s) used for determining the compliance status of the source, currently and over the reporting period consistent with all applicable department rules. For sources determined not to be in compliance at the time of compliance certification, a compliance schedule shall be submitted which provides for periodic progress reports, dates for achieving activities, milestones, and an explanation of why any dates were missed and preventive or corrective measures. The compliance certification shall be submitted to the administrator, director, and the appropriate DNR Field office. 567 IAC 22.108 (15)"e"

G5. Semi-Annual Monitoring Report
By March 31 and September 30 of each year, the permittee shall submit a report of any monitoring required under this permit for the 6 month periods of July 1 to December 31 and January 1 to June 30, respectively. All instances of deviations from permit requirements must be clearly identified in these reports, and the report must be signed by a responsible official, consistent with 567 IAC 22.107(4). The semi-annual monitoring report shall be submitted to the director and the appropriate DNR Field office. 567 IAC 22.108 (5)

G6. Annual Fee
1. The permittee is required under subrule 567 IAC 22.106 to pay an annual fee based on the total tons of actual emissions of each regulated air pollutant. Beginning July 1, 1996, Title V operating permit fees will be paid on July 1 of each year. The fee shall be based on emissions for the previous calendar year.
2. The fee amount shall be calculated based on the first 4,000 tons of each regulated air pollutant emitted each year. The fee to be charged per ton of pollutant will be available from the department by June 1 of each year. The Responsible Official will be advised of any change in the annual fee per ton of pollutant.
3. The emissions inventory shall be submitted annually by March 31 with forms specified by the department documenting actual emissions for the previous calendar year.
4. The fee shall be submitted annually by July 1 with forms specified by the department.
5. If there are any changes to the emission calculation form, the department shall make revised forms available to the public by January 1. If revised forms are not available by January 1, forms from the previous year may be used and the year of emissions documented changed. The department shall calculate the total statewide Title V emissions for the prior calendar year and make this information available to the public no later than April 30 of each year.
6. Phase I acid rain affected units under section 404 of the Act shall not be required to pay a fee for emissions which occur during the years 1993 through 1999 inclusive.
7. The fee for a portable emissions unit or stationary source which operates both in Iowa and out of state shall be calculated only for emissions from the source while operating in Iowa.
8. Failure to pay the appropriate Title V fee represents cause for revocation of the Title V permit as indicated in 567 IAC 22.115(1)"d".

G7. Inspection of Premises, Records, Equipment, Methods and Discharges
Upon presentation of proper credentials and any other documents as may be required by law, the permittee shall allow the director or the director's authorized representative to:
1. Enter upon the permittee's premises where a Title V source is located or emissions-related activity is conducted, or where records must be kept under the conditions of the permit;
2. Have access to and copy, at reasonable times, any records that must be kept under the
conditions of the permit;
3. Inspect, at reasonable times, any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit; and
4. Sample or monitor, at reasonable times, substances or parameters for the purpose of ensuring compliance with the permit or other applicable requirements. 567 IAC 22.108 (15)"b"

G8. Duty to Provide Information
The permittee shall furnish to the director, within a reasonable time, any information that the director may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit. Upon request, the permittee also shall furnish to the director copies of records required to be kept by the permit, or for information claimed to be confidential, the permittee shall furnish such records directly to the administrator of EPA along with a claim of confidentiality. 567 IAC 22.108 (9)"e"

G9. General Maintenance and Repair Duties
The owner or operator of any air emission source or control equipment shall:
1. Maintain and operate the equipment or control equipment at all times in a manner consistent with good practice for minimizing emissions.
2. Remedy any cause of excess emissions in an expeditious manner.
3. Minimize the amount and duration of any excess emission to the maximum extent possible during periods of such emissions. These measures may include but not be limited to the use of clean fuels, production cutbacks, or the use of alternate process units or, in the case of utilities, purchase of electrical power until repairs are completed.
4. Schedule, at a minimum, routine maintenance of equipment or control equipment during periods of process shutdowns to the maximum extent possible. 567 IAC 24.2(1)

G10. Recordkeeping Requirements for Compliance Monitoring
1. In addition to any source specific recordkeeping requirements contained in this permit, the permittee shall maintain the following compliance monitoring records, where applicable:
   a. The date, place and time of sampling or measurements
   b. The date the analyses were performed.
   c. The company or entity that performed the analyses.
   d. The analytical techniques or methods used.
   e. The results of such analyses; and
   f. The operating conditions as existing at the time of sampling or measurement.
   g. The records of quality assurance for continuous compliance monitoring systems (including but not limited to quality control activities, audits and calibration drifts.)
2. The permittee shall retain records of all required compliance monitoring data and support information for a period of at least 5 years from the date of compliance monitoring sample, measurement report or application. Support information includes all calibration and maintenance records and all original strip chart recordings for continuous compliance monitoring, and copies of all reports required by the permit.
3. For any source which in its application identified reasonably anticipated alternative operating scenarios, the permittee shall:
   a. Comply with all terms and conditions of this permit specific to each alternative scenario.
   b. Maintain a log at the permitted facility of the scenario under which it is operating.
   c. Consider the permit shield, if provided in this permit, to extend to all terms and conditions under each operating scenario. 567 IAC 22.108(4), 567 IAC 22.108(12)

G11. Evidence used in establishing that a violation has or is occurring.
Notwithstanding any other provisions of these rules, any credible evidence may be used for the
purpose of establishing whether a person has violated or is in violation of any provisions herein.

1. Information from the use of the following methods is presumptively credible evidence of whether a violation has occurred at a source:
   a. A monitoring method approved for the source and incorporated in an operating permit pursuant to 567 Chapter 22;
   b. Compliance test methods specified in 567 Chapter 25; or
   c. Testing or monitoring methods approved for the source in a construction permit issued pursuant to 567 Chapter 22.

2. The following testing, monitoring or information gathering methods are presumptively credible testing, monitoring, or information gathering methods:
   a. Any monitoring or testing methods provided in these rules; or
   b. Other testing, monitoring, or information gathering methods that produce information comparable to that produced by any method in subrule 21.5(1) or this subrule. 567 IAC 21.5(1)-567 IAC 21.5(2)

If the permittee is required to develop and register a risk management plan pursuant to section 112(r) of the Act, the permittee shall notify the department of this requirement. The plan shall be filed with all appropriate authorities by the deadline specified by EPA. A certification that this risk management plan is being properly implemented shall be included in the annual compliance certification of this permit. 567 IAC 22.108(6)

G13. Hazardous Release
The permittee must report any situation involving the actual, imminent, or probable release of a hazardous substance into the atmosphere which, because of the quantity, strength and toxicity of the substance, creates an immediate or potential danger to the public health, safety or to the environment. A verbal report shall be made to the department at (515) 725-8694 and to the local police department or the office of the sheriff of the affected county as soon as possible but not later than six hours after the discovery or onset of the condition. This verbal report must be followed up with a written report as indicated in 567 IAC 131.2(2). 567 IAC Chapter 131-State Only

G14. Excess Emissions and Excess Emissions Reporting Requirements
1. Excess Emissions. Excess emission during a period of startup, shutdown, or cleaning of control equipment is not a violation of the emission standard if the startup, shutdown or cleaning is accomplished expeditiously and in a manner consistent with good practice for minimizing emissions. Cleaning of control equipment which does not require the shutdown of the process equipment shall be limited to one six-minute period per one-hour period. An incident of excess emission (other than an incident during startup, shutdown or cleaning of control equipment) is a violation. If the owner or operator of a source maintains that the incident of excess emission was due to a malfunction, the owner or operator must show that the conditions which caused the incident of excess emission were not preventable by reasonable maintenance and control measures. Determination of any subsequent enforcement action will be made following review of this report. If excess emissions are occurring, either the control equipment causing the excess emission shall be repaired in an expeditious manner or the process generating the emissions shall be shutdown within a reasonable period of time. An expeditious manner is the time necessary to determine the cause of the excess emissions and to correct it within a reasonable period of time. A reasonable period of time is eight hours plus the period of time required to shut down the process without damaging the process equipment or control equipment. A variance from this subrule may be available as provided for in Iowa Code section 455B.143. In the case of an
electric utility, a reasonable period of time is eight hours plus the period of time until comparable generating capacity is available to meet consumer demand with the affected unit out of service, unless, the director shall, upon investigation, reasonably determine that continued operation constitutes an unjustifiable environmental hazard and issue an order that such operation is not in the public interest and require a process shutdown to commence immediately.

2. Excess Emissions Reporting
   a. Initial Reporting of Excess Emissions. An incident of excess emission (other than an incident of excess emission during a period of startup, shutdown, or cleaning) shall be reported to the appropriate field office of the department within eight hours of, or at the start of the first working day following the onset of the incident. The reporting exemption for an incident of excess emission during startup, shutdown or cleaning does not relieve the owner or operator of a source with continuous monitoring equipment of the obligation of submitting reports required in 567-subrule 25.1(6). An initial report of excess emission is not required for a source with operational continuous monitoring equipment (as specified in 567-subrule 25.1(1)) if the incident of excess emission continues for less than 30 minutes and does not exceed the applicable emission standard by more than 10 percent or the applicable visible emission standard by more than 10 percent opacity. The initial report may be made by electronic mail (E-mail), in person, or by telephone and shall include as a minimum the following:
      i. The identity of the equipment or source operation from which the excess emission originated and the associated stack or emission point.
      ii. The estimated quantity of the excess emission.
      iii. The time and expected duration of the excess emission.
      iv. The cause of the excess emission.
      v. The steps being taken to remedy the excess emission.
      vi. The steps being taken to limit the excess emission in the interim period.
   b. Written Reporting of Excess Emissions. A written report of an incident of excess emission shall be submitted as a follow-up to all required initial reports to the department within seven days of the onset of the upset condition, and shall include as a minimum the following:
      i. The identity of the equipment or source operation point from which the excess emission originated and the associated stack or emission point.
      ii. The estimated quantity of the excess emission.
      iii. The time and duration of the excess emission.
      iv. The cause of the excess emission.
      v. The steps that were taken to remedy and to prevent the recurrence of the incident of excess emission.
      vi. The steps that were taken to limit the excess emission.
      vii. If the owner claims that the excess emission was due to malfunction, documentation to support this claim. 567 IAC 24.1(1)-567 IAC 24.1(4)

3. Emergency Defense for Excess Emissions. For the purposes of this permit, an “emergency” means any situation arising from sudden and reasonably unforeseeable events beyond the control of the source, including acts of God, which situation requires immediate corrective action to restore normal operation, and that causes the source to exceed a technology-based emission limitation under the permit due to unavoidable increases in emissions attributable to the emergency. An emergency shall not include non-compliance, to the extent caused by improperly designed equipment, lack of preventive maintenance, careless or improper operation or operator error. An emergency constitutes an affirmative defense to an action brought for non-compliance
with technology based limitations if it can be demonstrated through properly signed contemporaneous operating logs or other relevant evidence that:

a. An emergency occurred and that the permittee can identify the cause(s) of the emergency;
b. The facility at the time was being properly operated;
c. During the period of the emergency, the permittee took all reasonable steps to minimize levels of emissions that exceeded the emissions standards or other requirements of the permit; and
d. The permittee submitted notice of the emergency to the director by certified mail within two working days of the time when the emissions limitations were exceeded due to the emergency. This notice fulfills the requirement of paragraph 22.108(5)"b." – See G15. This notice must contain a description of the emergency, any steps taken to mitigate emissions, and corrective actions taken.

In any enforcement proceeding, the permittee seeking to establish the occurrence of an emergency has the burden of proof. This provision is in addition to any emergency or upset provision contained in any applicable requirement. 567 IAC 22.108(16)

G15. Permit Deviation Reporting Requirements
A deviation is any failure to meet a term, condition or applicable requirement in the permit. Reporting requirements for deviations that result in a hazardous release or excess emissions have been indicated above (see G13 and G14). Unless more frequent deviation reporting is specified in the permit, any other deviation shall be documented in the semi-annual monitoring report and the annual compliance certification (see G4 and G5). 567 IAC 22.108(5)"b"

G16. Notification Requirements for Sources That Become Subject to NSPS and NESHAP Regulations
During the term of this permit, the permittee must notify the department of any source that becomes subject to a standard or other requirement under 567-subrule 23.1(2) (standards of performance of new stationary sources) or section 111 of the Act; or 567-subrule 23.1(3) (emissions standards for hazardous air pollutants), 567-subrule 23.1(4) (emission standards for hazardous air pollutants for source categories) or section 112 of the Act. This notification shall be submitted in writing to the department pursuant to the notification requirements in 40 CFR Section 60.7, 40 CFR Section 61.07, and/or 40 CFR Section 63.9. 567 IAC 23.1(2), 567 IAC 23.1(3), 567 IAC 23.1(4)

G17. Requirements for Making Changes to Emission Sources That Do Not Require Title V Permit Modification
1. Off Permit Changes to a Source. Pursuant to section 502(b)(10) of the CAAA, the permittee may make changes to this installation/facility without revising this permit if:
   a. The changes are not major modifications under any provision of any program required by section 110 of the Act, modifications under section 111 of the act, modifications under section 112 of the act, or major modifications as defined in 567 IAC Chapter 22.
   b. The changes do not exceed the emissions allowable under the permit (whether expressed therein as a rate of emissions or in terms of total emissions);
   c. The changes are not modifications under any provisions of Title I of the Act and the changes do not exceed the emissions allowable under the permit (whether expressed therein as a rate of emissions or as total emissions);
   d. The changes are not subject to any requirement under Title IV of the Act (revisions affecting Title IV permitting are addressed in rules 567—22.140(455B) through 567 - 22.144(455B));
   e. The changes comply with all applicable requirements.
f. For each such change, the permitted source provides to the department and the
administrator by certified mail, at least 30 days in advance of the proposed change, a
written notification, including the following, which must be attached to the permit by the
source, the department and the administrator:
   i. A brief description of the change within the permitted facility,
   ii. The date on which the change will occur,
   iii. Any change in emission as a result of that change,
   iv. The pollutants emitted subject to the emissions trade
   v. If the emissions trading provisions of the state implementation plan are
      invoked, then Title V permit requirements with which the source shall comply; a
description of how the emissions increases and decreases will comply with the
terms and conditions of the Title V permit.
   vi. A description of the trading of emissions increases and decreases for the
      purpose of complying with a federally enforceable emissions cap as specified in
      and in compliance with the Title V permit; and
   vii. Any permit term or condition no longer applicable as a result of the change.

567 IAC 22.110(1)

2. Such changes do not include changes that would violate applicable requirements or
contravene federally enforceable permit terms and conditions that are monitoring (including test
methods), record keeping, reporting, or compliance certification requirements. 567 IAC
22.110(2)

3. Notwithstanding any other part of this rule, the director may, upon review of a notice, require
a stationary source to apply for a Title V permit if the change does not meet the requirements of
subrule 22.110(1). 567 IAC 22.110(3)

4. The permit shield provided in subrule 22.108(18) shall not apply to any change made
pursuant to this rule. Compliance with the permit requirements that the source will meet using
the emissions trade shall be determined according to requirements of the state implementation
plan authorizing the emissions trade. 567 IAC 22.110(4)

5. No permit revision shall be required, under any approved economic incentives, marketable
permits, emissions trading and other similar programs or processes, for changes that are provided
for in this permit. 567 IAC 22.108(11)

G18. Duty to Modify a Title V Permit

1. Administrative Amendment.
   a. An administrative permit amendment is a permit revision that does any of the
      following:
      i. Correct typographical errors
      ii. Identify a change in the name, address, or telephone number of any person
          identified in the permit, or provides a similar minor administrative change at the
          source;
      iii. Require more frequent monitoring or reporting by the permittee; or
      iv. Allow for a change in ownership or operational control of a source where the
          director determines that no other change in the permit is necessary, provided that
          a written agreement containing a specific date for transfer of permit responsibility,
          coverage and liability between the current and new permittee has been submitted
to the director.
   b. The permittee may implement the changes addressed in the request for an
      administrative amendment immediately upon submittal of the request. The request shall
      be submitted to the director.
c. Administrative amendments to portions of permits containing provisions pursuant to Title IV of the Act shall be governed by regulations promulgated by the administrator under Title IV of the Act.

2. Minor Title V Permit Modification.
   a. Minor Title V permit modification procedures may be used only for those permit modifications that satisfy all of the following:
      i. Do not violate any applicable requirement;
      ii. Do not involve significant changes to existing monitoring, reporting or recordkeeping requirements in the Title V permit;
      iii. Do not require or change a case by case determination of an emission limitation or other standard, or an increment analysis;
      iv. Do not seek to establish or change a permit term or condition for which there is no corresponding underlying applicable requirement and that the source has assumed in order to avoid an applicable requirement to which the source would otherwise be subject. Such terms and conditions include any federally enforceable emissions caps which the source would assume to avoid classification as a modification under any provision under Title I of the Act; and an alternative emissions limit approved pursuant to regulations promulgated under section 112(i)(5) of the Act;
      v. Are not modifications under any provision of Title I of the Act; and
      vi. Are not required to be processed as significant modification under rule 567 - 22.113(455B).
   b. An application for minor permit revision shall be on the minor Title V modification application form and shall include at least the following:
      i. A description of the change, the emissions resulting from the change, and any new applicable requirements that will apply if the change occurs;
      ii. The permittee's suggested draft permit;
      iii. Certification by a responsible official, pursuant to 567 IAC 22.107(4), that the proposed modification meets the criteria for use of minor permit modification procedures and a request that such procedures be used; and
      iv. Completed forms to enable the department to notify the administrator and the affected states as required by 567 IAC 22.107(7).
   c. The permittee may make the change proposed in its minor permit modification application immediately after it files the application. After the permittee makes this change and until the director takes any of the actions specified in 567 IAC 22.112(4) "a" to "c", the permittee must comply with both the applicable requirements governing the change and the proposed permit terms and conditions. During this time, the permittee need not comply with the existing permit terms and conditions it seeks to modify. However, if the permittee fails to comply with its proposed permit terms and conditions during this time period, the existing permit terms and conditions it seeks to modify may be enforced against the facility.

3. Significant Title V Permit Modification.
   Significant Title V modification procedures shall be used for applications requesting Title V permit modifications that do not qualify as minor Title V modifications or as administrative amendments. These include but are not limited to all significant changes in monitoring permit terms, every relaxation of reporting or recordkeeping permit terms, and any change in the method of measuring compliance with existing requirements. Significant Title V modifications shall meet all requirements of 567 IAC Chapter 22, including those for applications, public
participation, review by affected states, and review by the administrator, as those requirements that apply to Title V issuance and renewal.

The permittee shall submit an application for a significant permit modification not later than three months after commencing operation of the changed source unless the existing Title V permit would prohibit such construction or change in operation, in which event the operation of the changed source may not commence until the department revises the permit.  

G19. Duty to Obtain Construction Permits
Unless exempted in 567 IAC 22.1(2) or to meet the parameters established in 567 IAC 22.1(1)"c", the permittee shall not construct, install, reconstruct or alter any equipment, control equipment or anaerobic lagoon without first obtaining a construction permit, or conditional permit, or permit pursuant to rule 567 IAC 22.8, or permits required pursuant to rules 567 IAC 22.4, 567 IAC 22.5, 567 IAC 31.3, and 567 IAC 33.3 as required in 567 IAC 22.1(1). A permit shall be obtained prior to the initiation of construction, installation or alteration of any portion of the stationary source or anaerobic lagoon. 567 IAC 22.1(1)

G20. Asbestos
The permittee shall comply with 567 IAC 23.1(3)"a", and 567 IAC 23.2(3)"g" when activities involve asbestos mills, surfacing of roadways, manufacturing operations, fabricating, insulating, waste disposal, spraying applications, demolition and renovation operations (567 IAC 23.1(3)"a"): training fires and controlled burning of a demolished building (567 IAC 23.2).

G21. Open Burning
The permittee is prohibited from conducting open burning, except as provided in 567 IAC 23.2. 567 IAC 23.2 except 23.2(3)"j"; 567 IAC 23.2(3)"j" - State Only

G22. Acid Rain (Title IV) Emissions Allowances
The permittee shall not exceed any allowances that it holds under Title IV of the Act or the regulations promulgated there under. Annual emissions of sulfur dioxide in excess of the number of allowances to emit sulfur dioxide held by the owners and operators of the unit or the designated representative of the owners and operators is prohibited. Exceedences of applicable emission rates are prohibited. “Held” in this context refers to both those allowances assigned to the owners and operators by USEPA, and those allowances supplementally acquired by the owners and operators. The use of any allowance prior to the year for which it was allocated is prohibited. Contravention of any other provision of the permit is prohibited. 567 IAC 22.108(7)

G23. Stratospheric Ozone and Climate Protection (Title VI) Requirements
1. The permittee shall comply with the standards for labeling of products using ozone-depleting substances pursuant to 40 CFR Part 82, Subpart E:
   a. All containers in which a class I or class II substance is stored or transported, all products containing a class I substance, and all products directly manufactured with a class I substance must bear the required warning statement if it is being introduced into interstate commerce pursuant to § 82.106.
   b. The placement of the required warning statement must comply with the requirements pursuant to § 82.108.
   c. The form of the label bearing the required warning statement must comply with the requirements pursuant to § 82.110.
   d. No person may modify, remove, or interfere with the required warning statement except as described in § 82.112.

2. The permittee shall comply with the standards for recycling and emissions reduction pursuant to 40 CFR Part 82, Subpart F, except as provided for MVACs in Subpart B:
   a. Persons opening appliances for maintenance, service, repair, or disposal must comply
with the required practices pursuant to § 82.156.
b. Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to § 82.158.
c. Persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program pursuant to § 82.161.
d. Persons disposing of small appliances, MVACs, and MVAC-like appliances must comply with reporting and recordkeeping requirements pursuant to § 82.166. ("MVAC-like appliance" as defined at § 82.152)
e. Persons owning commercial or industrial process refrigeration equipment must comply with the leak repair requirements pursuant to § 82.156.
f. Owners/operators of appliances normally containing 50 or more pounds of refrigerant must keep records of refrigerant purchased and added to such appliances pursuant to § 82.166.

3. If the permittee manufactures, transforms, imports, or exports a class I or class II substance, the permittee is subject to all the requirements as specified in 40 CFR part 82, Subpart A, Production and Consumption Controls.

4. If the permittee performs a service on motor (fleet) vehicles when this service involves ozone-depleting substance refrigerant (or regulated substitute substance) in the motor vehicle air conditioner (MVAC), the permittee is subject to all the applicable requirements as specified in 40 CFR part 82, Subpart B, Servicing of Motor Vehicle Air Conditioners. The term "motor vehicle" as used in Subpart B does not include a vehicle in which final assembly of the vehicle has not been completed. The term "MVAC" as used in Subpart B does not include the air-tight sealed refrigeration system used as refrigerated cargo, or system used on passenger buses using HCFC-22 refrigerant.

5. The permittee shall be allowed to switch from any ozone-depleting or greenhouse gas generating substances to any alternative that is listed in the Significant New Alternatives Program (SNAP) promulgated pursuant to 40 CFR part 82, Subpart G, Significant New Alternatives Policy Program. 40 CFR part 82

G24. Permit Reopenings
1. This permit may be modified, revoked, reopened, and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any permit condition. 567 IAC 22.108(9)"c"
2. Additional applicable requirements under the Act become applicable to a major part 70 source with a remaining permit term of 3 or more years. Revisions shall be made as expeditiously as practicable, but not later than 18 months after the promulgation of such standards and regulations.
   a. Reopening and revision on this ground is not required if the permit has a remaining term of less than three years;
   b. Reopening and revision on this ground is not required if the effective date of the requirement is later than the date on which the permit is due to expire, unless the original permit or any of its terms and conditions have been extended pursuant to 40 CFR 70.4(b)(10)(i) or (ii) as amended to May 15, 2001.
   c. Reopening and revision on this ground is not required if the additional applicable requirements are implemented in a general permit that is applicable to the source and the source receives approval for coverage under that general permit. 567 IAC 22.108(17)"a", 567 IAC 22.108(17)"b"
3. A permit shall be reopened and revised under any of the following circumstances:
a. The department receives notice that the administrator has granted a petition for disapproval of a permit pursuant to 40 CFR 70.8(d) as amended to July 21, 1992, provided that the reopening may be stayed pending judicial review of that determination;
b. The department or the administrator determines that the Title V permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the Title V permit;
c. Additional applicable requirements under the Act become applicable to a Title V source, provided that the reopening on this ground is not required if the permit has a remaining term of less than three years, the effective date of the requirement is later than the date on which the permit is due to expire, or the additional applicable requirements are implemented in a general permit that is applicable to the source and the source receives approval for coverage under that general permit. Such a reopening shall be complete not later than 18 months after promulgation of the applicable requirement.
d. Additional requirements, including excess emissions requirements, become applicable to a Title IV affected source under the acid rain program. Upon approval by the administrator, excess emissions offset plans shall be deemed to be incorporated into the permit.
e. The department or the administrator determines that the permit must be revised or revoked to ensure compliance by the source with the applicable requirements. 567 IAC 22.114(1)

4. Proceedings to reopen and reissue a Title V permit shall follow the procedures applicable to initial permit issuance and shall effect only those parts of the permit for which cause to reopen exists. 567 IAC 22.114(2)

5. A notice of intent shall be provided to the Title V source at least 30 days in advance of the date the permit is to be reopened, except that the director may provide a shorter time period in the case of an emergency. 567 IAC 22.114(3)

G25. Permit Shield
1. The director may expressly include in a Title V permit a provision stating that compliance with the conditions of the permit shall be deemed compliance with any applicable requirements as of the date of permit issuance, provided that:
   a. Such applicable requirements are included and are specifically identified in the permit; or
   b. The director, in acting on the permit application or revision, determines in writing that other requirements specifically identified are not applicable to the source, and the permit includes the determination or a concise summary thereof.

2. A Title V permit that does not expressly state that a permit shield exists shall be presumed not to provide such a shield.

3. A permit shield shall not alter or affect the following:
   a. The provisions of Section 303 of the Act (emergency orders), including the authority of the administrator under that section;
   b. The liability of an owner or operator of a source for any violation of applicable requirements prior to or at the time of permit issuance;
   c. The applicable requirements of the acid rain program, consistent with Section 408(a) of the Act;
   d. The ability of the department or the administrator to obtain information from the facility pursuant to Section 114 of the Act. 567 IAC 22.108 (18)

G26. Severability
The provisions of this permit are severable and if any provision or application of any provision is
found to be invalid by this department or a court of law, the application of such provision to
other circumstances, and the remainder of this permit, shall not be affected by such finding. 567
IAC 22.108 (8)

G27. Property Rights
The permit does not convey any property rights of any sort, or any exclusive privilege. 567 IAC
22.108 (9)"d"

G28. Transferability
This permit is not transferable from one source to another. If title to the facility or any part of it
is transferred, an administrative amendment to the permit must be sought consistent with the
requirements of 567 IAC 22.111(1). 567 IAC 22.111 (1)"d"

G29. Disclaimer
No review has been undertaken on the engineering aspects of the equipment or control
equipment other than the potential of that equipment for reducing air contaminant emissions.
567 IAC 22.3(3)"c"

G30. Notification and Reporting Requirements for Stack Tests or Monitor Certification
The permittee shall notify the department's stack test contact in writing not less than 30 days
before a required test or performance evaluation of a continuous emission monitor is performed
to determine compliance with applicable requirements of 567 – Chapter 23 or a permit condition.
Such notice shall include the time, the place, the name of the person who will conduct the test
and other information as required by the department. If the owner or operator does not provide
timely notice to the department, the department shall not consider the test results or performance
evaluation results to be a valid demonstration of compliance with applicable rules or permit
conditions. Upon written request, the department may allow a notification period of less than 30
days. At the department’s request, a pretest meeting shall be held not later than 15 days prior to
conducting the compliance demonstration. A testing protocol shall be submitted to the
department no later than 15 days before the owner or operator conducts the compliance
demonstration. A representative of the department shall be permitted to witness the tests. Results
of the tests shall be submitted in writing to the department's stack test contact in the form of a
comprehensive report within six weeks of the completion of the testing. Compliance tests
conducted pursuant to this permit shall be conducted with the source operating in a normal
manner at its maximum continuous output as rated by the equipment manufacturer, or the rate
specified by the owner as the maximum production rate at which the source shall be operated. In
cases where compliance is to be demonstrated at less than the maximum continuous output as
rated by the equipment manufacturer, and it is the owner's intent to limit the capacity to that
rating, the owner may submit evidence to the department that the source has been physically
altered so that capacity cannot be exceeded, or the department may require additional testing,
continuous monitoring, reports of operating levels, or any other information deemed necessary
by the department to determine whether such source is in compliance.

Stack test notifications, reports and correspondence shall be sent to:
Stack Test Review Coordinator
Iowa DNR, Air Quality Bureau
Wallace State Office Building
502 E 9th St.
Des Moines, IA  50319-0034
(515) 725-9545

Within Polk and Linn Counties, stack test notifications, reports and correspondence shall also be
directed to the supervisor of the respective county air pollution program.
567 IAC 25.1(7)"a", 567 IAC 25.1(9)
G31. Prevention of Air Pollution Emergency Episodes
The permittee shall comply with the provisions of 567 IAC Chapter 26 in the prevention of excessive build-up of air contaminants during air pollution episodes, thereby preventing the occurrence of an emergency due to the effects of these contaminants on the health of persons. 567 IAC 26.1(1)

G32. Contacts List
The current address and phone number for reports and notifications to the EPA administrator is:

Iowa Compliance Officer
Air Branch
Enforcement and Compliance Assurance Division
U.S. EPA Region 7
11201 Renner Blvd.
Lenexa, KS 66219
(913) 551-7020

The current address and phone number for reports and notifications to the department or the Director is:

Chief, Air Quality Bureau
Iowa Department of Natural Resources
Wallace State Office Building
502 E 9th St.
Des Moines, IA  50319-0034
(515) 725-8200

Reports or notifications to the DNR Field Offices or local programs shall be directed to the supervisor at the appropriate field office or local program. Current addresses and phone numbers are:

<table>
<thead>
<tr>
<th>Field Office 1</th>
<th>Field Office 2</th>
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</thead>
<tbody>
<tr>
<td>1101 Commercial Court, Suite 10</td>
<td>2300-15th St., SW</td>
</tr>
<tr>
<td>Manchester, IA 52057</td>
<td>Mason City, IA 50401</td>
</tr>
<tr>
<td>(563) 927-2640</td>
<td>(641) 424-4073</td>
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<tbody>
<tr>
<td>1900 N. Grand Ave.</td>
<td>1401 Sunnyside Lane</td>
</tr>
<tr>
<td>Spencer, IA 51301</td>
<td>Atlantic, IA 50022</td>
</tr>
<tr>
<td>(712) 262-4177</td>
<td>(712) 243-1934</td>
</tr>
</tbody>
</table>

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<th>Field Office 6</th>
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<tr>
<td>Wallace State Office Building</td>
<td>1023 West Madison Street</td>
</tr>
<tr>
<td>502 E 9th St.</td>
<td>Washington, IA 52353-1623</td>
</tr>
<tr>
<td>Des Moines, IA 50319-0034</td>
<td>(319) 653-2135</td>
</tr>
<tr>
<td>(515) 725-0268</td>
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<thead>
<tr>
<th>Polk County Public Works Dept.</th>
<th>Linn County Public Health</th>
</tr>
</thead>
<tbody>
<tr>
<td>Air Quality Division</td>
<td>Air Quality Branch</td>
</tr>
<tr>
<td>5885 NE 14th St.</td>
<td>1020 6th Street SE</td>
</tr>
<tr>
<td>Des Moines, IA 50313</td>
<td>Cedar Rapids, IA 52401</td>
</tr>
<tr>
<td>(515) 286-3351</td>
<td>(319) 892-6000</td>
</tr>
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V. Appendix A: Compliance Assurance Monitoring Plans

Compliance Assurance Monitoring (CAM) Plan
For Electrostatic Precipitator (ESP)

CertainTeed Gypsum & Ceiling Manufacturing, Inc.
Fort Dodge, Iowa

EP 015 - Electrostatic Precipitator Stack

Background
Applicability
The Electrostatic Precipitator (ESP) is used to control particulate matter (PM) emissions from the associated CAM emission units. The potential uncontrolled emissions from the emission units are greater than or equal to the major source threshold for PM. The ESP is used to achieve compliance with the emission limitations/standards.

CAM Associated Process/Emission Units
EU 4401 North Raymond Mill Crushing & Flash Drying
EU 4402 South Raymond Mill Crushing & Flash Drying
EU 4501 Calcining Kettle A w/ Hot Pit
EU 4502 Calcining Kettle B w/ Hot Pit
EU 4503 Calcining Kettle C w/ Hot Pit
EU 4507 West Hot Pit Screw Conveyor
EU 4508 East Hot Pit Screw Conveyor
EU 4509 West Hot Pit Elevator
EU 4510 East Hot Pit Elevator

Applicable Regulation, Emission Limit, and Monitoring Requirements
Regulation No.:
567 IAC 23.3(2)a
567 IAC 23.3(2)d
DNR Construction Permit 18-A-132
Emission Limit or Standard:
Opacity 40%
PM 65.72 lbs/hr, 32.00 lbs/hr
PM10 32.00 lbs/hr
Current Monitoring Requirement:
Stack Testing
Audible Precipitator Malfunction Alarm

Control Technology
Control Equipment ID Number: CE 007
Control Equipment Description: Electrostatic Precipitator
Control Equipment Manufacturer: Research Cottrell
Control Equipment Serial Number: 2584
Control Equipment Installation Date: 1957
Monitoring Approach

Indicators
Parameters to be measured include: T-R set failure and rapper control malfunction.

Measurement Approach
The audible alarm will continuously monitor T-R set failure and rapper control malfunction. Operators make daily inspections of ESP electro-mechanical operation as the monitoring method and record daily observations. Normal operation is indicated by no audible alarms.

Indicator Ranges
An excursion is defined as an audible alarm as a primary voltage lower 200 V and greater than 500 V has occurred; Abnormal conditions include: T-R set or rapper system failure, T-R set operation between 200 and 500 V primary voltage, or failure of two rappers. Excursions/abnormal conditions will trigger a corrective action that may include an investigation of the cause for the abnormal condition/excursion and necessary follow-up action. The corrective action measures in this plan will be implemented within eight (8) hours plus the period of time required to shut down the process without damaging the process equipment or control equipment.

Operating with these indicator parameters outside of normal operating ranges could indicate a change in particulate collection efficiency.

Performance Criteria
Data Representativeness
The voltage, amperage, spark rates, and arc rates are measured using the instrumentation provided with the ESP by the manufacturer. An audible alarm will continuously monitor T-R set failure and rapper control health. A voltage reading outside of its recent normal operating range could indicate a decrease in the performance of the ESP and potentially an increase in particulate emissions. Daily inspection and record of the rapper system operation, T-R set alarms, and precipitator dust hopper discharge system provides additional assurance of proper electro-mechanical operation of the electrostatic precipitator.

Verification of Operational Status
Records will be kept for five years and available upon request. A written or electronic record of all inspections and any action resulting from the inspection shall be maintained. Such records will include: Triggered alarm indicating T-R set failure and decrease in rapper control health, visible emissions observations (as necessary), operations and maintenance records, semi-annual monitoring reports, and annual compliance certification.

QA/QC Practices and Criteria
All instruments and control equipment will be calibrated, maintained, and operated according to the manufacture’s specifications. A spare parts inventory is maintained by a computerized inventory management system. Parts are automatically queued for re-order when the inventory level falls below a minimum re-order point. The corrective action measures in this plan will be implemented within eight (8) hours plus the period of time required to shut down the process without damaging the process equipment or control equipment.
Data Collection Procedures
An audible alarm will continuously monitor T-R set failure and rapper control malfunction. The operators will maintain records documenting the alarm status for each day the ESP is operating. For each instance where an alarm is triggered, the operators will document the time and resulting actions of the alarm. Maintain opacity reports, supporting data, all inspection records, and any action resulting from the inspection for 5 years and available upon request.

Justification

Background
The ESP is in the upper level of the gypsum rock milling operations. Exhaust gases containing gypsum dust are collected from three cyclones serving calcining kettles A, B, and C, east and west hot pit conveyors, east and west bucket elevators and the north and south Raymond mill systems. The Raymond mill systems are exhausted to the ESP through the concentrator cyclones by displacing products of combustion and moisture introduced to the systems by the drying process. These units are not "large" CAM sources (their post-control PM emissions are less than 100 tons per year), except for the three calcining kettles.

Rationale for Selection of Performance Indicators
An ESP is a particulate control device that uses electrical forces to move particles entrained within an exhaust stream onto collection surfaces. In an ESP, electric fields are established by applying a voltage across a pair of electrodes, a discharge electrode and a collection electrode. Particulate matter (PM) suspended in the gas stream is electrically charged by passing through the electric field around each discharge electrode (the negatively charged electrode). The negatively charged particles then migrate toward the positively charged collection electrodes. The PM is separated from the gas stream by retention on the collection electrode. PM is removed from the collection plates by shaking or rapping the plates.

The T-R set operation and rapper system operation are indicators of the proper electro-mechanical operation of the electrostatic precipitator. An audible alarm will continuously monitor T-R set failure and rapper control health. Daily inspection of the rapper system operation, T-R set operation, and precipitator dust hopper discharge system provides additional assurance of proper electro-mechanical operation of the electrostatic precipitator. Proper operation of the electrostatic precipitator is also affected by the condition of internal components such as the collection surfaces, wires and insulators. Inspections of internal components will provide assurance that the electrostatic precipitator is in good repair.

Rationale for Selection of Indicator Ranges
An excursion is defined as a drop in the primary voltage; that is when the primary voltage reading is between 200 and 500 V. The indicator range for the ESP primary voltage was selected based upon the level indicated from recent operation. A voltage reading outside its recent normal operating range could indicate a reduced performance of the ESP and a potential increase in particulate emissions.

Test Data
A compliance stack test was successfully completed 11/06/2018. The PM stack test results indicated compliance with the applicable emission standards. Normal indicator ranges were observed during the stack test. The test results are available at the facility and at Iowa DNR.