



State of Utah

SPENCER J. COX  
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Department of  
Environmental Quality

Kimberly D. Shelley  
*Executive Director*

DIVISION OF AIR QUALITY  
Bryce C. Bird  
*Director*

DAQE-AN104230018-24

December 3, 2024

Joseph Eck  
Interstate Brick Company  
9780 South 5200 West  
West Jordan, UT 84081-5625  
greg.stevenson@basalite.com

Dear Mr. Eck:

Re: Approval Order: Modification to Approval Order DAQE-AN104230017-16 to Account for  
Existing Operations  
Project Number: N104230018

The attached Approval Order (AO) is issued pursuant to the Notice of Intent (NOI) received on February 10, 2023. Interstate Brick Company must comply with the requirements of this AO, all applicable state requirements (R307), and Federal Standards.

The project engineer for this action is **John Jenks**, who can be contacted at (385) 306-6510 or [jjenks@utah.gov](mailto:jjenks@utah.gov). Future correspondence on this AO should include the engineer's name as well as the DAQE number shown on the upper right-hand corner of this letter. No public comments were received on this action.

Sincerely,

Bryce C. Bird  
Director

BCB:JJ:jg

cc: Salt Lake County Health Department  
EPA Region 8

**STATE OF UTAH**  
**Department of Environmental Quality**  
**Division of Air Quality**

**APPROVAL ORDER**  
**DAQE-AN104230018-24**  
**Modification to Approval Order DAQE-AN104230017-16 to**  
**Account for Existing Operations**

**Prepared By**  
**John Jenks, Engineer**  
**(385) 306-6510**  
**jjenks@utah.gov**

**Issued to**  
**Interstate Brick Company - Brick Manufacturing Plant**

**Issued On**  
**December 3, 2024**

**Issued By**

A handwritten signature in black ink, appearing to read 'Bryce C. Bird', is positioned above the printed name.

**Bryce C. Bird**  
**Director**  
**Division of Air Quality**

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## **GENERAL INFORMATION**

### **CONTACT/LOCATION INFORMATION**

**Owner Name**

Interstate Brick Company

**Source Name**

Interstate Brick Company - Brick Manufacturing Plant

**Mailing Address**

9780 South 5200 West  
West Jordan, UT 84081-5625

**Physical Address**

9780 South 5200 West  
West Jordan, UT 84081-5625

**Source Contact**

Name: Greg Stevenson  
Phone: (801) 280-5200  
Email: greg.stevenson@basalite.com

**UTM Coordinates**

413,500 m Easting  
4,491,500 m Northing  
Datum NAD27  
UTM Zone 12

**SIC code**        3251 (Brick & Structural Clay Tile)

### **SOURCE INFORMATION**

**General Description**

Interstate Brick Company (ISB) operates a brick and tile manufacturing plant in West Jordan City, Salt Lake County, Utah. The operation includes raw material (clays) storage, crushing/blending operations, and three natural gas-fired kilns used to fire the products. Crushing and screen operations are controlled with baghouses.

**NSR Classification**

Minor Modification at Major Source

**Source Classification**

Located in Salt Lake City UT PM<sub>2.5</sub> NAA, Salt Lake County SO<sub>2</sub> NAA  
Salt Lake County  
Airs Source Size: A

**Applicable Federal Standards**

Title V (Part 70) Major Source

Project Description

This modification includes:

1. The addition of emissions from crushing and screening as a result of baghouse vent reconfiguration. Previously, on-site baghouses vented internally, causing hazardous indoor conditions. As a remediation to internal dust issues, the baghouses will now vent out of the building. This change will result in an increase in PM10 and PM2.5 emissions.
2. A reduction in NO<sub>x</sub> emissions. Reductions are based on 20+ years of emission testing on Kiln #3 and Kiln #4. The new kiln lb/hr limits will be added (4.70 lb/hr for Kiln #3 and 6.40 lb/hr for Kiln #4). This reduction will remove IBS from SIP consideration; testing for these kilns will be increased from every five years to every year.
3. Site-wide conditions were updated to comply with administrative standards and updates. There were no changes to requirements as a result of these updates beyond the reduced NO<sub>x</sub> rates and increased NO<sub>x</sub>-based stack testing frequency. Speed-related requirements were removed as emissions for hauling are limited by the 20% opacity requirements for fugitive emissions.
4. ISB submitted a second notification for the inclusion of a replacement soda ash silo and controlling bin vent. This project will be consolidated into the permit modification. The replacement silo and bin vent will not increase total soda ash usage or expected emissions. The silos were labeled as "lime silos" (II.A.7) in the existing AO. This label will be updated.

### **SUMMARY OF EMISSIONS**

The emissions listed below are an estimate of the total potential emissions from the source. Some rounding of emissions is possible.

<b>Criteria Pollutant</b>	<b>Change (TPY)</b>	<b>Total (TPY)</b>
Carbon Monoxide	0	219.48
Nitrogen Oxides	-19.68	49.35
Particulate Matter - PM <sub>10</sub>	2.05	63.34
Particulate Matter - PM <sub>10</sub> (Fugitives)	0	45.68
Particulate Matter - PM <sub>2.5</sub>	2.05	63.34
Sulfur Dioxide	0	69.00
Volatile Organic Compounds	8.01	14.87

<b>Hazardous Air Pollutant</b>	<b>Change (lbs/yr)</b>	<b>Total (lbs/yr)</b>
Hydrochloric Acid (Hydrogen Chloride) (CAS #7647010)	0	14400
Hydrogen Fluoride (Hydrofluoric Acid) (CAS #7664393)	0	13400
Organic HAPs (CAS #OHAPS)	0	8600
	<b>Change (TPY)</b>	<b>Total (TPY)</b>
Total HAPs	0	18.20

## SECTION I: GENERAL PROVISIONS

I.1	All definitions, terms, abbreviations, and references used in this AO conform to those used in the UAC R307 and 40 CFR. Unless noted otherwise, references cited in these AO conditions refer to those rules. [R307-101]
I.2	The limits set forth in this AO shall not be exceeded without prior approval. [R307-401]
I.3	Modifications to the equipment or processes approved by this AO that could affect the emissions covered by this AO must be reviewed and approved. [R307-401-1]
I.4	All records referenced in this AO or in other applicable rules, which are required to be kept by the owner/operator, shall be made available to the Director or Director's representative upon request, and the records shall include the five-year period prior to the date of the request. Unless otherwise specified in this AO or in other applicable state and federal rules, records shall be kept for a minimum of five years. [R307-401-8]
I.5	At all times, including periods of startup, shutdown, and malfunction, owners and operators shall, to the extent practicable, maintain and operate any equipment approved under this AO, including associated air pollution control equipment, in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Director which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source. All maintenance performed on equipment authorized by this AO shall be recorded. [R307-401-4]
I.6	The owner/operator shall comply with R307-150 Series. Inventories, Testing and Monitoring. [R307-150]
I.7	The owner/operator shall comply with UAC R307-107. General Requirements: Breakdowns. [R307-107]

## SECTION II: PERMITTED EQUIPMENT

### II.A THE APPROVED EQUIPMENT

II.A.1	<b>Brick and Tile Manufacturing Plant</b>
II.A.2	<b>Line #1</b>  A. Tunnel Kiln #1 (not operational)
II.A.3	<b>Line #3</b>  A. Line #3 kiln with packed tower scrubber and mist eliminator Scrubber air flow - 60,000 Actual Cubic Feet per Minute (ACFM)  B. Line 3 baghouse - MikroPul

II.A.4	<b>Line #4</b> A. Line #4 kiln Wet scrubber and mist eliminator Scrubber air flow - 89,800 ACFM  B. Line #4 vacuum cleaner  C. Line #4 shapes dryer  D. Line #4 baghouse - MikroPul
II.A.5	<b>Grizzly Hopper</b>
II.A.6	<b>Primary and Secondary Crushers</b> A. Primary crusher with baghouse Crusher manufacturer - Stedman Capacity: 100 tons per hour Control: Pulse jet baghouse Installed before August 31, 1983  B. Secondary crusher/grinding Installed before August 31, 1983  C. Screens Installed before August 31, 1983
II.A.7	<b>Silos</b> Two soda ash silos Controlled by bin vent
II.A.8	<b>Clay Storage Piles</b>
II.A.9	<b>Miscellaneous Diesel Equipment</b>
II.A.10	<b>Miscellaneous Equipment</b> Extruder Vacuum Pumps, Storage Tanks, Vehicle Fueling Tanks, Space Heaters. This equipment is listed for informational purposes only.

## SECTION II: SPECIAL PROVISIONS

### II.B REQUIREMENTS AND LIMITATIONS

II.B.1	<b>Limitations and Test Procedures</b>
II.B.1.a	<p>The following limitations shall not be exceeded:</p> <ul style="list-style-type: none"> <li>A. Plant wide production/consumption limits <ul style="list-style-type: none"> <li>1) 2,880 tons raw clay consumption per rolling 24-hour period.</li> <li>2) 393,236 tons of brick produced in Line #3 and Line #4 combined per rolling 12-month period.</li> <li>3) 512,582 tons of brick produced plantwide per rolling 12-month period.</li> </ul> </li> <li>B. Tunnel Kiln #1 (Not operational until scrubber is online) 13.62 tons of product per hour averaged over a rolling 24-hour period.</li> <li>C. Tunnel Kiln #3 17.92 tons of product per hour averaged over a rolling 24-hour period.</li> <li>D. Tunnel Kiln #4 26.97 tons of product per hour averaged over a rolling 24-hour period.</li> <li>E. Clay Prep for Line 3 not Including Kiln # 3 6,240 hours of operation per rolling 12-month period.</li> <li>F. Clay Prep for Line 4 not Including Kiln # 4 6,240 hours of operation per rolling 12-month period.</li> </ul> <p>To determine compliance with a rolling 12-month total the owner/operator shall calculate a new 12-month total by the twentieth day of each month using data from the previous 12 months. Records of consumption, production and or hours of operation shall be kept for all periods when the plant is in operation. Production/consumption shall be determined by operator logs. The records of consumption/production shall be kept on a daily basis. Hours of operation shall be determined by monitoring and maintaining an operations log.</p> <p>[R307-401-8]</p>



II.B.1.b	<p>Visible emissions from the following emission points shall not exceed the following values:</p> <ul style="list-style-type: none"> <li>A. All screens - 10% opacity.</li> <li>B. All conveyor transfer points - 10% opacity.</li> <li>C. All baghouses - 10% opacity.</li> <li>D. All buildings enclosing crushers - 10% opacity.</li> <li>E. All crushers - 15%.</li> <li>F. All other points - 20% opacity.</li> </ul> <p>Opacity observations of emissions from stationary sources shall be conducted according to 40 CFR 60, Appendix A, Method 9.</p> <p>[R307-401-8]</p>
II.B.1.c	The owner/operator shall apply water to storage piles to maintain the opacity limits as required in this AO. [R307-401-8]
II.B.1.d	The owner/operator shall not operate Kiln #1 until the replacement scrubber for Kiln #1 has been approved in accordance with R307-401-8. [R307-401-8]
II.B.1.e	The owner/operator shall route all emissions from the primary crusher building through the primary crusher baghouse prior to venting to the atmosphere. [R307-401-8]
II.B.1.f	The owner/operator shall vent all process streams and exhaust air from Kiln #3 to a wet scrubber shall control process streams from Kiln #3 prior to venting to the atmosphere. [R307-401-8]
II.B.1.g	The owner/operator shall vent all process streams and exhaust air from Kiln #4 through the wet scrubber prior to venting to the atmosphere. [R307-401-8]

II.B.1.h	<p>The owner/operator shall not emit more than the following rates and concentrations from the indicated emissions unit(s):</p> <p>Scrubber Tunnel Kiln #3  NO<sub>x</sub>: 1-hr average 4.70 lb/hr  PM<sub>10</sub>: 1-hr average 8.66 lb/hr  PM<sub>2.5</sub>: 1-hr average 8.66 lb/hr  SO<sub>2</sub>: 1-hr average 8.09 lb/hr  Total Fluorides: 1-hr average 1.77 lb/hr</p> <p>Scrubber Tunnel Kiln #4  NO<sub>x</sub>: 1-hr average 6.40 lb/hr  PM<sub>10</sub>: 1-hr average 3.97 lb/hr  PM<sub>2.5</sub>: 1-hr average 3.97 lb/hr  SO<sub>2</sub>: 1-hr average 5.87 lb/hr  Total Fluorides: 1-hr average 3.25 lb/hr</p> <p>Line #3 Baghouse (dry filterable particulate only)  PM<sub>10</sub>: 1-hr average 0.18 lb/hr  Maximum Concentration: 0.016 grains/dscf  PM<sub>2.5</sub>: 1-hr average 0.18 lb/hr  Maximum Concentration: 0.016 grains/dscf</p> <p>Line #4 Baghouse (dry filterable particulate only)  PM<sub>10</sub>: 1-hr average 0.34 lb/hr  Maximum Concentration: 0.016 grains/dscf  PM<sub>2.5</sub>: 1-hr average 0.34 lb/hr  Maximum Concentration: 0.016 grains/dscf</p> <p>Primary Crusher Baghouse Vent (dry filterable particulate only)  PM<sub>10</sub>: 1-hr average 0.56 lb/hr  Maximum Concentration: 0.010 grains/dscf  PM<sub>2.5</sub>: 1-hr average 0.56 lb/hr  Maximum Concentration: 0.010 grains/dscf</p> <p>[R307-401-8]</p>
II.B.1.h.1	<p>To demonstrate compliance with the emission limitations above, the owner/operator shall conduct emission testing (stack testing) as outlined below. [R307-401-8]</p>
II.B.1.h.2	<p>Test Frequency</p> <p>The owner/operator shall conduct subsequent PM<sub>10</sub> and PM<sub>2.5</sub> emission tests within five years after the date of the most recent emission test for all units. NO<sub>x</sub> emissions from Kiln #3 and Kiln #4 shall be tested annually. The Director may require the owner/operator to perform an emission test at any time. [R307-165-2, R307-401-8]</p>

II.B.1.h.3	<p>Notification</p> <p>At least 30 days prior to conducting an emission test, the owner/operator shall submit a source test protocol to the Director. The source test protocol shall include:</p> <ul style="list-style-type: none"> <li>A. The date, time, and place of the proposed test.</li> <li>B. The proposed test methodologies.</li> <li>C. The stack to be tested.</li> <li>D. The procedures to be used.</li> <li>E. Any deviation from an EPA-approved test method.</li> <li>F. Explanation of any deviation from an EPA-approved test method.</li> </ul> <p>If directed by the Director, the owner/operator shall attend a pretest conference.</p> <p>[R307-165-2, R307-401-8]</p>
II.B.1.h.4	<p>Testing</p> <p>The owner/operator shall conduct testing according to the approved source test protocol. The Director may reject emission test data if the test did not follow the approved source test protocol or if Director was not provided an opportunity to have an observer present at the test.</p> <p>[R307-165-5, R307-401-8]</p>
II.B.1.h.5	<p>Test Conditions</p> <p>The owner/operator shall conduct all tests while the source is operating at the maximum production or combustion rate at which the source will be operated unless otherwise specified in the approved source test protocol. During the tests, the owner/operator shall burn fuels or combinations of fuels, use raw materials, and maintain process conditions representative of normal operations. In addition, the owner/operator shall operate under any other relevant conditions that the Director specifies. [R307-165-4, R307-401-8]</p>
II.B.1.h.6	<p>Standard Conditions &amp; Emission Limit Parameters</p> <ul style="list-style-type: none"> <li>A. Temperature - 68 degrees Fahrenheit (293 K).</li> <li>B. Pressure - 29.92 in Hg (101.3 kPa).</li> <li>C. Concentration (ppmdv) - 3% oxygen, dry basis.</li> <li>D. Averaging Time - As specified in the applicable test method.</li> </ul> <p>[40 CFR 60 Subpart A, 40 CFR 63 Subpart A, R307-401-8]</p>
II.B.1.h.7	<p>Reporting</p> <p>Within 60 days after completing an emission test, the owner/operator shall submit a copy of the test results to the Director. [R307-401-8]</p>
II.B.1.i	<p>Test Methods</p> <p>When performing emission testing, the owner/operator shall use the appropriate EPA-approved test methods as acceptable to the Director. Acceptable test methods for pollutants are listed below. [R307-401-8]</p>

II.B.1.i.1	<p>PM<sub>2.5</sub> Total PM<sub>2.5</sub> = Filterable PM<sub>2.5</sub> + Condensable PM<sub>2.5</sub></p> <p>Filterable PM<sub>2.5</sub> 40 CFR 60, Appendix A, Method 5; 40 CFR 51, Appendix M, Method 201A, or other EPA-approved testing method as acceptable to the Director. If other approved testing methods are used which cannot measure the PM<sub>2.5</sub> fraction of the filterable particulate emissions, all of the filterable particulate emissions shall be considered PM<sub>2.5</sub>.</p> <p>Condensable PM<sub>2.5</sub> 40 CFR 51, Appendix M, Method 202, or other EPA-approved testing method as acceptable to the Director.</p> <p>[R307-401-8]</p>
II.B.1.i.2	<p>PM<sub>10</sub> Total PM<sub>10</sub> = Filterable PM<sub>10</sub> + Condensable PM<sub>10</sub></p> <p>Filterable PM<sub>10</sub> 40 CFR 60, Appendix A, Method 5; 40 CFR 51, Appendix M, Method 201; Method 201A; or other EPA-approved testing method as acceptable to the Director. If other approved testing methods are used which cannot measure the PM<sub>10</sub> fraction of the filterable particulate emissions, all of the filterable particulate emissions shall be considered PM<sub>10</sub>.</p> <p>Condensable PM<sub>10</sub> 40 CFR 51, Appendix M, Method 202, or other EPA-approved testing method as acceptable to the Director.</p> <p>Filterable PM<sub>10</sub> 40 CFR 60, Appendix A, Method 5; 40 CFR 51, Appendix M, Method 201; Method 201A; or other EPA-approved testing method as acceptable to the Director. If other approved testing methods are used which cannot measure the PM<sub>10</sub> fraction of the filterable particulate emissions, all of the filterable particulate emissions shall be considered PM<sub>10</sub>.</p> <p>[R307-401-8]</p>
II.B.1.i.3	<p>NO<sub>x</sub> 40 CFR 60, Appendix A, Method 7; Method 7E; or other EPA-approved testing method as acceptable to the Director. [R307-401-8]</p>
II.B.1.i.4	<p>SO<sub>2</sub> 40 CFR 60, Appendix A, Method 6 or 6C, or other EPA-approved method as acceptable to the Director. [R307-165]</p>
II.B.1.i.5	<p>Total Fluorines 40 CFR 60, Appendix A, Method 13B; 40 CFR 60, Appendix A, Method 2 shall be used to determine the volumetric flow rate or other EPA-approved testing method as acceptable to the Director. [R307-401-8]</p>
II.B.1.j	<p>The moisture content of the clay shall be maintained at an average of no less than 4.0% by weight. The moisture content shall be tested if directed by the Director using the appropriate ASTM method. [R307-401-8]</p>

II.B.2	<b>Fuels</b>										
II.B.2.a	The owner/operator shall only use natural gas as a fuel and propane as a backup fuel in the kilns. [R307-401-8]										
II.B.3	<b>Monitoring - General Process</b>										
II.B.3.a	<p>The owner/operator shall install, calibrate, maintain, and operate a monitoring device for the continuous measurement of the change in pressure of the gas stream through the baghouse and scrubbers.</p> <p>A. The minimum pressure drop in inches/w.g. for the baghouse and scrubbers shall be as follows:</p> <table> <tr> <td>1) Primary crusher baghouse</td><td></td></tr> <tr> <td>    with polyester felt</td><td>2.0</td></tr> <tr> <td>    with PTFE membrane</td><td>0.4</td></tr> <tr> <td>2) Kiln 3 scrubber</td><td>0.1</td></tr> <tr> <td>3) Kiln 4 scrubber</td><td>2.0</td></tr> </table> <p>The monitoring device must be certified by the manufacturer to be accurate within plus or minus 5% of the w.g. design measuring device and must be calibrated on an annual basis in accordance with the manufacturer's instructions. When the scrubber(s) are in operation, the pressure drop shall be within the limits specified above except during start-up and shut-down of the scrubber(s). When the primary crusher baghouse is in operation; the pressure drop shall be within the limits specified above, except during a period of ten crusher operating days following the filter media replacement.</p> <p>B. Monitoring Once per operating day for each scrubber, ISB shall verify that the differential pressure is within the permitted range. All pressure gauges shall be located such that an inspector/operator can safely read the indicator at any time.</p> <p>C. Record Keeping Results of the change in pressure shall be recorded on a daily basis. Continuous recording for the monitoring device is not required.</p> <p>[R307-401-8]</p>	1) Primary crusher baghouse		with polyester felt	2.0	with PTFE membrane	0.4	2) Kiln 3 scrubber	0.1	3) Kiln 4 scrubber	2.0
1) Primary crusher baghouse											
with polyester felt	2.0										
with PTFE membrane	0.4										
2) Kiln 3 scrubber	0.1										
3) Kiln 4 scrubber	2.0										

II.B.3.b	<p>The owner/operator shall install, calibrate, maintain, and operate a monitoring device for the continuous measurement of the pH of the scrubbing solution of the gas stream through each scrubber.</p> <p>A. The pH range for the scrubbers shall be as follows:</p> <table data-bbox="537 369 773 464"> <tr> <td>1) Kiln 3</td><td>5-9</td></tr> <tr> <td>2) Kiln 4</td><td>5-9</td></tr> </table> <p>The monitoring device must be certified by the manufacturer to be accurate within plus or minus 5% of the design pH and must be calibrated on an annual basis in accordance with the manufacturer's instructions. When the scrubber(s) are in operation, the pH shall be within the ranges specified above except during start-up and shut-down of the scrubber(s).</p> <p>B. Monitoring Once per operating day for each scrubber, ISB shall verify that the pH is within the permitted range. All meters shall be located such that an inspector/operator can safely read the indicator at any time.</p> <p>C. Record Keeping Results of the pH shall be recorded on a daily basis. Continuous recording for the monitoring device is not required.</p> <p>[R307-401-8]</p>	1) Kiln 3	5-9	2) Kiln 4	5-9
1) Kiln 3	5-9				
2) Kiln 4	5-9				
II.B.3.c	<p>The owner/operator shall install, calibrate, maintain, and operate a monitoring device for the continuous measurement of the flow rate of the scrubbing solution of the gas stream through each scrubber.</p> <p>A. The minimum scrubbing liquid flow rate in gallons per minute (gpm), for the scrubbers shall be as follows:</p> <table data-bbox="537 1188 773 1283"> <tr> <td>1) Kiln 3</td><td>200</td></tr> <tr> <td>2) Kiln 4</td><td>600</td></tr> </table> <p>The monitoring device must be certified by the manufacturer to be accurate within plus or minus 5% of the design scrubbing liquid flow rate and must be calibrated on an annual basis in accordance with the manufacturer's instructions. When the scrubber(s) are in operation, the scrubbing liquid flow rate shall be no less than the flow rates specified above, except during start-up and shut-down of the scrubber(s).</p> <p>B. Monitoring Once per operating day for each scrubber, ISB shall verify that the liquid flow rate is within the permitted range. All flow gauges shall be located such that an inspector/operator can safely read the indicator at any time.</p> <p>C. Record Keeping Results of the scrubbing liquid flow rate shall be recorded on a daily basis. Continuous recording for the monitoring device is not required.</p> <p>[R307-401-8]</p>	1) Kiln 3	200	2) Kiln 4	600
1) Kiln 3	200				
2) Kiln 4	600				

II.B.4	<b>VOC and HAP Limitations</b>
II.B.4.a	<p>The plant-wide emissions of VOCs from the brick manufacturing plant and associated operations shall not exceed 14.87 tons per rolling 12-month period for VOCs.</p> <p>Compliance with the limitation shall be determined on a rolling 12-month total. Based on the twentieth day of each month, a new 12-month total shall be calculated using data from the previous 12 months.</p> <p>The VOC emissions shall be determined by maintaining a record of VOC-emitting materials used each month. The record shall include the following data for each material used:</p> <ul style="list-style-type: none"> <li>A. Name of the VOC-emitting material, such as paint, adhesive, solvent, thinner, reducers, chemical compounds, toxics, isocyanates, etc.</li> <li>B. Density of each material used (pounds per gallon).</li> <li>C. Percent by weight of all VOC in each material used.</li> <li>D. Gallons of each VOC-emitting material used.</li> <li>E. The amount of VOC emitted monthly by each material used shall be calculated by the following procedure: <math display="block">\text{VOC} = \frac{\% \text{ VOC by Weight}}{(100)} \times \frac{[\text{Density (lb)}]}{(\text{gal})} \times \frac{\text{Gal Consumed}}{2000 \text{ lb}} \times 1 \text{ ton}</math> </li> <li>F. The amount of VOC emitted monthly from all materials used.</li> <li>G. The amount of VOCs reclaimed for the month shall be similarly quantified and subtracted from the quantities calculated above to provide the monthly total VOC emissions.</li> </ul> <p>[R307-401-8]</p>

II.B.4.b	<p>The plant-wide emissions of HAPs from the brick manufacturing plant and associated operations shall not exceed:</p> <p>7.2 tons per rolling 12-month period for HCl.</p> <p>6.7 tons per rolling 12-month period for HF.</p> <p>7.0 tons per rolling 12-month period for miscellaneous HAPs.</p> <p>18.2 tons per rolling 12-month period for all HAPs combined.</p> <p>Compliance with the limitation shall be determined on a rolling 12-month total. Based on the twentieth day of each month, a new 12-month total shall be calculated using data from the previous 12 months.</p> <p>Compliance with HF and HCl limitations listed above shall be determined through a method of mass balance. The mass balance plan approved by the Director was submitted by ISB on October 22, 2009. If ISB submits any additional revised mass balance methods for determining annual emissions to the Director for approval, the plan shall include, at a minimum, the following:</p> <ul style="list-style-type: none"> <li>A. Proposed test methods and test frequency for determining the weight of the elemental fluorine contained in the clays used to manufacture brick.</li> <li>B. Proposed test methods and test frequency for determining the weight of the elemental fluorine contained in the finished product.</li> <li>C. Calculation method of determining emissions of HCL and HF, which will demonstrate compliance with the HCl and HF emission limitations listed above.</li> </ul> <p>The miscellaneous HAP emissions shall be determined by maintaining a record of HAP-emitting materials used each month. The record shall include the following data for each material used:</p> <ul style="list-style-type: none"> <li>D. Name of the HAP-emitting material, such as paint, adhesive, solvent, thinner, reducers, chemical compounds, toxics, isocyanates, etc.</li> <li>E. Density of each material used (pounds per gallon).</li> <li>F. Percent by weight of all HAP in each material used.</li> <li>G. Gallons of each HAP-emitting material used.</li> <li>H. The amount of HAP emitted monthly by each material used shall be calculated by the following procedure:</li> </ul> $\text{HAP} = \frac{\% \text{ HAP by Weight}}{(100)} \times \frac{[\text{Density (lb)}]}{(\text{gal})} \times \frac{\text{Gal Consumed} \times 1 \text{ ton}}{2000 \text{ lb}}$ <ul style="list-style-type: none"> <li>I. The amount of HAPs emitted monthly from all materials used.</li> <li>J. The amount of HAPs reclaimed for the month shall be similarly quantified and subtracted from the quantities calculated above to provide the monthly total VOC emissions.</li> </ul> <p>[R307-401-8]</p>
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II.B.5	<b>Conditions on Haul Roads</b>
II.B.5.a	<p>All roads and other operational areas that are used by mobile equipment shall be sprayed with water to control fugitive dust. Treatment shall be applied of sufficient frequency and quantity to maintain the surface material in a condition such that fugitive emissions are minimized, unless the ambient temperature could result in freezing conditions. The opacity shall not exceed 20% during all times of equipment operation. Records of water treatment shall be kept for all periods when the plant is in operation. The records shall include the following items:</p> <ul style="list-style-type: none"> <li>A. Date,</li> <li>B. Number of treatments made,</li> <li>C. Rainfall received, if any, and approximate amount, and</li> <li>D. Time of day treatments were made.</li> </ul> <p>Records of treatment shall be made available to the Director upon request and shall include a period of five years ending with the date of the request. Records shall be maintained in accordance with Condition I.4 of this AO.</p> <p>[R307-309]</p>
II.B.5.b	<p>The owner/operator shall abide by a fugitive dust control plan acceptable to the Director for control of dust from haul roads.</p> <p><b>Monitoring</b> Records of water applications shall serve as monitoring. Adherence to the most recently approved fugitive dust control plan shall be monitored to demonstrate that appropriate measures are being implemented to control fugitive dust.</p> <p><b>Recordkeeping</b> Records of fugitive dust mitigation measures shall be kept for all periods. The records shall contain, at a minimum, the date and time of water applications, number of treatments made, dilution ratio, quantity applied, any rainfall received, and approximate amount. Records shall be maintained in accordance with Condition I.4 of this AO.</p> <p>[R307-309]</p>

## PERMIT HISTORY

This Approval Order shall supersede (if a modification) or will be based on the following documents:

Supersedes  
Is Derived From  
Incorporates  
Incorporates

AO DAQE-AN104230017-16 dated October 24, 2016  
NOI dated February 10, 2023  
Additional Information dated July 20, 2023  
Additional Information dated May 10, 2024

## ACRONYMS

The following lists commonly used acronyms and associated translations as they apply to this document:

40 CFR	Title 40 of the Code of Federal Regulations
AO	Approval Order
BACT	Best Available Control Technology
CAA	Clean Air Act
CAAA	Clean Air Act Amendments
CDS	Classification Data System (used by Environmental Protection Agency to classify sources by size/type)
CEM	Continuous emissions monitor
CEMS	Continuous emissions monitoring system
CFR	Code of Federal Regulations
CMS	Continuous monitoring system
CO	Carbon monoxide
CO <sub>2</sub>	Carbon Dioxide
CO <sub>2</sub> e	Carbon Dioxide Equivalent - Title 40 of the Code of Federal Regulations Part 98, Subpart A, Table A-1
COM	Continuous opacity monitor
DAQ/UDAQ	Division of Air Quality
DAQE	This is a document tracking code for internal Division of Air Quality use
EPA	Environmental Protection Agency
FDCP	Fugitive dust control plan
GHG	Greenhouse Gas(es) - Title 40 of the Code of Federal Regulations 52.21 (b)(49)(i)
GWP	Global Warming Potential - Title 40 of the Code of Federal Regulations Part 86.1818-12(a)
HAP or HAPs	Hazardous air pollutant(s)
ITA	Intent to Approve
LB/YR	Pounds per year
MACT	Maximum Achievable Control Technology
MMBTU	Million British Thermal Units
NAA	Nonattainment Area
NAAQS	National Ambient Air Quality Standards
NESHAP	National Emission Standards for Hazardous Air Pollutants
NOI	Notice of Intent
NO <sub>x</sub>	Oxides of nitrogen
NSPS	New Source Performance Standard
NSR	New Source Review
PM <sub>10</sub>	Particulate matter less than 10 microns in size
PM <sub>2.5</sub>	Particulate matter less than 2.5 microns in size
PSD	Prevention of Significant Deterioration
PTE	Potential to Emit
R307	Rules Series 307
R307-401	Rules Series 307 - Section 401
SO <sub>2</sub>	Sulfur dioxide
Title IV	Title IV of the Clean Air Act
Title V	Title V of the Clean Air Act
TPY	Tons per year
UAC	Utah Administrative Code
VOC	Volatile organic compounds