

State Registration Number  
A6497

**RENEWABLE OPERATING PERMIT  
STAFF REPORT**

ROP Number  
MI-ROP-A6497-2022a

**General Shale Brick, Inc. (Plant 66) - DBA Michigan Brick**

State Registration Number (SRN): A6497

Located at

3820 East Serr Road, Corunna, Shiawassee County, Michigan 48817

Permit Number: MI-ROP-A6497-2022a

Staff Report Date: April 4, 2022

Amended Date: January 25, 2023

This Staff Report is published in accordance with Sections 5506 and 5511 of Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (Act 451). Specifically, Rule 214(1) of the administrative rules promulgated under Act 451, requires that the Michigan Department of Environment, Great Lakes, and Energy (EGLE), Air Quality Division (AQD), prepare a report that sets forth the factual basis for the terms and conditions of the Renewable Operating Permit (ROP).

## TABLE OF CONTENTS

<b>April 4, 2022 - STAFF REPORT</b>	<b>3</b>
<b>June 14, 2022- STAFF REPORT ADDENDUM</b>	<b>11</b>
<b>January 25, 2023 - STAFF REPORT FOR RULE 216(1)(a)(i)-(iv) ADMINISTRATIVE AMENDMENT</b>	<b>13</b>

State Registration Number

A6497

**RENEWABLE OPERATING PERMIT**

**April 4, 2022 - STAFF REPORT**

ROP Number

MI-ROP-A6497-2022

**Purpose**

Major stationary sources of air pollutants, and some non-major sources, are required to obtain and operate in compliance with an ROP pursuant to Title V of the federal Clean Air Act; and Michigan's Administrative Rules for Air Pollution Control promulgated under Section 5506(1) of Act 451. Sources subject to the ROP program are defined by criteria in Rule 211(1). The ROP is intended to simplify and clarify a stationary source's applicable requirements and compliance with them by consolidating all state and federal air quality requirements into one document.

This Staff Report, as required by Rule 214(1), sets forth the applicable requirements and factual basis for the draft ROP terms and conditions including citations of the underlying applicable requirements, an explanation of any equivalent requirements included in the draft ROP pursuant to Rule 212(5), and any determination made pursuant to Rule 213(6)(a)(ii) regarding requirements that are not applicable to the stationary source.

**General Information**

Stationary Source Mailing Address:	Meridian Brick - Michigan Plant 3820 East Serr Road Corunna, Michigan 48817
Source Registration Number (SRN):	A6497
North American Industry Classification System (NAICS) Code:	327120
Number of Stationary Source Sections:	1
Is Application for a Renewal or Initial Issuance?	Renewal
Application Number:	202000066
Responsible Official:	Jerry Greger, Plant Manager 989-734-3444
AQD Contact: District Inspector:	Michelle Luplow, Environmental Quality Analyst 517-294-9294
AQD Contact: ROP Writer:	Matt Karl, Environmental Quality Analyst 517-282-2126
Date Application Received:	April 14, 2020
Date Application Was Administratively Complete:	April 14, 2020
Is Application Shield in Effect?	Yes
Date Public Comment Begins:	April 4, 2022
Deadline for Public Comment:	May 4, 2022

## Source Description

### Summary:

Meridian Brick's Michigan Plant is located at 3820 Serr Road, Corunna, Michigan in Shiawassee County. The brick plant buildings are located south of Serr Road. The shale mine is located across the street, north of Serr Road. The Shiawassee River runs from northwest to southeast to the west and south of the brick plant buildings. The Shiawassee River is within ~300 meters of the westernmost brick plant buildings and within ~150 meters of the southernmost brick plant buildings. The nearest residences are ~420 meters to the south across the Shiawassee River on East King Street. There are additional residences ~865 meters to the northeast and ~875 meters to the northwest along Serr Road. There are residences ~1,000 meters to the east of the brick plant buildings along South Kerby Road. Corunna High School is approximately a mile (~1609 meters) to the west of the brick plant buildings.

Meridian Brick's Michigan Plant mines shale to manufacture bricks for building construction. The bricks are manufactured through use of the following equipment: (1) shale mining equipment and crushing, grinding, and screening equipment; (2) pug mills and mixers; (3) extruders and cutting machines; (4) two brick tunnel kilns; (5) two brick drying tunnels.

### Production Process:

The shale is mined from an open pit that is located onsite and is transported by dump truck to a stockpile. The material is removed from the stockpile by a front-end loader and transported to a primary crusher where the material is crushed to an acceptable size for the grinding plant. The material size is then further reduced with grinders to an acceptable mesh size for the pug mixers and extruders.

The material is transported via a conveyor belt system to a "stiff mud" forming process where the material is processed in a pug mixer, extruded, and cut. At this point, coloring "sprinkles" may be added to the face of the brick, depending on the desired color. The bricks are then loaded into kiln cars and fed into a dryer to drive out the water that was added during the curing processing to create a plasticity in the clay. The dried bricks are then fed into two tunnel kilns for firing (where the "chemical water," hydrous-alumino-silicate, is removed). Finished bricks are then packaged and shipped.

Most air emissions are a result of the tunnel kiln operation. Sulfur in the shale is released as sulfur dioxide when the bricks are fired in the kilns. The two tunnel kilns are controlled by baghouse collectors with lime injection for sulfur dioxide control. Currently, only one of the two tunnel kilns is operational.

The facility applied for and received PTI No.170-18 which established hazardous air pollutant (HAP) opt-out limits and was also for the replacement installation of a new baghouse for the plant equipment.

The plant equipment requires control for particulate matter generated from the 30 and 50 pug lines and the mixer and dryer systems (processes related to the shale processing). The particulate matter emissions are controlled by a dust collector baghouse with a dry filter. The dust collector baghouse replaces the previous wet cyclone control. The particulate generated from the 90 pug line is controlled by another baghouse.

The following table lists stationary source emission information as reported to the Michigan Air Emissions Reporting System (MAERS) for the year **2020**.

**TOTAL STATIONARY SOURCE EMISSIONS**

Pollutant	Tons per Year
Carbon Monoxide (CO)	43.80
Lead (Pb)	5.90 x 10 <sup>-4</sup>
Nitrogen Oxides (NO <sub>x</sub> )	12.78
Particulate Matter (PM)	22.09
Sulfur Dioxide (SO <sub>2</sub> )	125.74
Volatile Organic Compounds (VOCs)	1.08

The following table lists Hazardous Air Pollutant emissions as calculated for the year 2020 by the facility:

Individual Hazardous Air Pollutants (HAPs) **	Tons per Year
Hydrogen Chloride (HCl)	1.45
Hydrogen Fluoride (HF)	0.26
<b>Total Hazardous Air Pollutants (HAPs)</b>	<b>1.72</b>

\*\*As listed pursuant to Section 112(b) of the federal Clean Air Act.

See Parts C and D in the ROP for summary tables of all processes at the stationary source that are subject to process-specific emission limits or standards.

**Regulatory Analysis**

The following is a general description and history of the source. Any determinations of regulatory non-applicability for this source are explained below in the Non-Applicable Requirement part of the Staff Report and identified in Part E of the ROP.

The stationary source is in Shiawassee County, which is currently designated by the United States Environmental Protection Agency (USEPA) as attainment/unclassified for all criteria pollutants.

The stationary source is subject to Title 40 of the Code of Federal Regulations (CFR) Part 70, because the potential to emit of sulfur dioxide (SO<sub>2</sub>) and Particulate Matter (PM) exceeds 100 tons per year.

The stationary source is a “synthetic minor” source regarding HAP emissions because the stationary source accepted a legally enforceable permit condition limiting the potential to emit of any single HAP regulated by Section 112 of the federal Clean Air Act, to less than 10 tons per year and the potential to emit of all HAPs combined to less than 25 tons per year.

FGKILNS at the stationary source is subject to review under the Prevention of Significant Deterioration regulations of 40 CFR 52.21, because at the time of New Source Review permitting the potential to emit of sulfur dioxide was greater than 250 tons per year. As a result of PSD, the facility installed baghouse collectors with lime injection in 1994 to meet Best Available Control Technology (BACT) requirements. New Gore-tex brand bags used in the baghouse collectors have also reduced particulate matter emissions.

EUCRUSHING, EUTRUCKTRAFFIC and EUSTORAGE at the stationary source are subject to the Standards of Performance for Nonmetallic Mineral Processing Plants promulgated in 40 CFR Part 60, Subparts A and OOO.

The owner/operator of Meridian Brick's Michigan Plant has requested removal of the provisions of the National Emission Standard for Hazardous Air Pollutants for Brick and Structural Clay Products Manufacturing promulgated in 40 CFR Part 63, Subpart JJJJJ with this ROP renewal. The stationary source accepted a legally enforceable permit condition limiting the potential to emit of HAPs to below major source thresholds. The AQD has removed the provisions of 40 CFR Part 63, Subpart JJJJJ during this ROP renewal.

The monitoring conditions contained in the ROP are necessary to demonstrate compliance with all applicable requirements and are consistent with the "Procedure for Evaluating Periodic Monitoring Submittals."

EUPUG-90 and FGPLANT1 do not have emission limitations or standards that are subject to the federal Compliance Assurance Monitoring (CAM) rule pursuant to 40 CFR Part 64, because the units do not have potential pre-control emissions over the major source thresholds. EUPUG-90 has PM emissions controlled by a baghouse. A stack test was performed in 1994 to determine the pre-control device emission rate to assess PTE, which was well below major source threshold of 100 TPY at 10.9 TPY. FGPLANT1 has PM emissions controlled by a dust collector. A stack test was performed in 1994 to determine the pre-control device emission rate to assess PTE, which was well below major source threshold of 100 TPY at 24 TPY.

The following Emission Units/Flexible Groups are subject to CAM:

Emission Unit/ Flexible group ID	Pollutant/ Emission Limit	UAR(s)	Control Equipment	Monitoring (Include Monitoring Range)	EU/FG for CAM	PAM? *
FGKILNS	SO <sub>2</sub> / 241 lbs. per hour (both kilns combined)	40 CFR 52.21	Baghouse and dry lime injection	<ul style="list-style-type: none"> <li>• Baghouse pressure drop: 2-6" H<sub>2</sub>O</li> <li>• Baghouse temp. maintained 15°F below bag degradation temperature (&lt;485°F)</li> <li>• lb/hr lime feed rate determined by collecting lime from the feed every 2 hours. Lime is collected for 30 seconds, weighed, and the data extrapolated to get a lb/hr rate. The appropriate lime feed rate for controlling SO<sub>2</sub> emissions is determined based on brick sulfur content, as described in Appendix 7 of the ROP</li> </ul>	FGKILNS	No
FGKILNS	SO <sub>2</sub> / 650 tons per calendar year (both kilns combined)	40 CFR 52.21	Baghouse and dry lime injection	<ul style="list-style-type: none"> <li>• Baghouse pressure drop: 2-6" H<sub>2</sub>O</li> <li>• Baghouse temp. maintained 15°F below bag degradation temperature (&lt;485°F)</li> <li>• lb/hr lime feed rate determined by collecting lime from the feed every 2 hours. Lime is collected for 30</li> </ul>	FGKILNS	No

Emission Unit/ Flexible group ID	Pollutant/ Emission Limit	UAR(s)	Control Equipment	Monitoring (Include Monitoring Range)	EU/FG for CAM	PAM? *
				seconds, weighed, and the data extrapolated to get a lb/hr rate. The appropriate lime feed rate for controlling SO <sub>2</sub> emissions is determined based on brick sulfur content, as described in Appendix 7 of the ROP		
FGKILNS	PM/ 0.10 lbs. per 1,000 lbs. exhaust gases (each kiln)	R 336.1331(1) (c)	Baghouse	<ul style="list-style-type: none"> <li>• Baghouse pressure drop: 2-6" H<sub>2</sub>O</li> <li>• Baghouse temp. maintained 15°F below bag degradation temperature (&lt;485°F)</li> </ul>	FGKILNS	No

\*Presumptively Acceptable Monitoring (PAM)

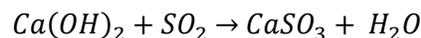
The CAM Plan contains an introduction that identifies the source, the basics of the production process, the current ROP, identifies why FGKILNS are subject to CAM, and describes the contents of the CAM plan. The CAM Plan contains a description of the lime-injection baghouse controls. The CAM Plan describes the 40 CFR Part 64 Requirements as they apply to FGKILNS, including (1) Applicability, (2) Monitoring Design Criteria, (3) Submittal Requirements, (4) Operation of Approved Monitoring, (5) Quality Improvement Plan Requirements and (6) Recordkeeping and Reporting Requirements.

The facility proposes to show compliance with the emission limits by monitoring the following: (1) daily kiln operating hours, (2) daily kiln production rate (tons), (3) green (dry) and finished (fired) brick sulfur content (%) and (4) monthly SO<sub>2</sub> emission rate calculations (lbs./hr and tons per rolling 12-month period).

Appendix 5 of the ROP contains the testing procedure the facility should follow to determine green/dry and finished/fired brick sulfur content. Appendix 7 of the ROP contains the equations to use with the above variables (operating hours, production rate in tons, and the sulfur content of green/dry and finished/fired bricks) to calculate the SO<sub>2</sub> emission rate in terms of pounds per hour (lbs./hr) and tons per rolling 12-month period.

The facility proposes to show proper operation of the control equipment and assure compliance with the emission limits by monitoring the following indicators: (1) exhaust gas temperature at the inlet to the baghouse (°F), (2) baghouse pressure drop (in. H<sub>2</sub>O), and (3) lime feed rate (lbs./hr).

The SO<sub>2</sub> emissions are controlled through the injection of hydrated lime into the exhaust gas stream. The following chemical reactions take place, reducing the amounts of SO<sub>2</sub> emitted:



Calculations from Appendix 7 of the ROP are used to determine the amount of lime to inject into the kiln. First, a statistical method known as the 95% upper confidence level method is applied to monthly % sulfur lab results for dry and fired brick using the following equations:

$$UCL_{95_{upper}} = X_{dm} + (stdev_{dry} * ndf)$$

$$UCL_{95_{lower}} = X_{fm} - (stdev_{fired} * ndf)$$

Where:

$UCL95_{upper}$  = The 95% upper confidence level upper limit for dry brick

$UCL95_{lower}$  = The 95% upper confidence level lower limit for fired brick

$X_{dm}$  = % Total sulfur of dry brick (most recent lab result)

$X_{fm}$  = % Total sulfur of fired brick (most recent lab result)

$stdev_{dry}$  = standard deviation of % sulfur content of dry bricks for past 12 months

$stdev_{fired}$  = standard deviation of % sulfur content of fired bricks for past 12 months

$ndf$  = known factor for normal distribution factor (2.201)

Next the sulfur release factor, which is the amount of sulfur that is emitted when the bricks are baked in the kiln, is determined using the following equations:

$$R = \left( I * \left( \frac{UCL95_{upper}}{100} \right) \right) * \left( K * \left( \frac{UCL95_{lower}}{100} \right) \right)$$
$$R\% = \left( \frac{R}{I * \left( \frac{UCL95_{upper}}{100} \right)} \right) * 100$$

Where:

$R$  = weight (lbs) of sulfur released when brick is fired in kiln

$R\%$  = percent (%) of sulfur from dry brick released when brick is fired in kiln

$I$  = weight (lbs) of brick used in the dry brick monthly sulfur test

$UCL95_{upper}$  = The 95% upper confidence level upper limit for dry brick

$K$  = weight (lbs) of brick used in the fired brick monthly sulfur test

$UCL95_{lower}$  = The 95% upper confidence level lower limit for fired brick

Finally, the lime feed rate in pounds per hour (lbs/hr) is calculated using the following equation, which considers the weight of bricks processed, the amount of sulfur in the brick, the amount of sulfur released by firing, and multiplying factors to make sure there is an abundance of lime to react:

$$H = Z * \left( \frac{UCL95_{upper}}{100} \right) * 2 * \left( \frac{R\%}{100} \right) * \left( \frac{U}{24} \right) * V * W$$

Where:

$H$  = Lime Feed Rate  $\left( \frac{lbs}{hr} \right)$

$Z$  = weight of brick per car (lbs)

$UCL95_{upper}$  = The 95% upper confidence level upper limit for dry brick

$R\%$  = percent (%) of sulfur from dry brick released when brick is fired in kiln

$U$  = number of brick cars expected through the kiln

$V$  = stoichiometric factor

$W$  = safety factor

The facility staff perform manual spot checks to measure the lime feed rate every two (2) hours. A staff person uses a sample tray to collect a sample from the lime injector for 30 seconds. The sample is then weighed in grams. The measured lime weight is doubled to find the amount of lime injected in grams per minute (g/min). The lime feed rate (g/min) is multiplied by 60 minutes per hour to achieve a grams per hour (g/hr) rate. The lime feed rate (g/hr) is divided by 453.6 grams per pound to convert to pounds per hour (lbs/hr). The measured lime feed rate is compared with the calculated lime feed rate to make sure the measured is greater than or equal to the calculated. This ensures that there is sufficient lime present in the exhaust stream to react with the  $SO_2$ .

Previous stack testing has shown the proper operation of the lime injection system and baghouse provides approximately 11% control for  $SO_2$  and >99.9% control for HF and HCl and >99.9% control for  $PM_{10}$ .

During the stack test the control equipment was operated with the baghouse temperature, baghouse pressure drop, and lime feed rates within the agreed upon indicator ranges.

Monitoring the baghouse inlet temperature ensures the integrity of the bags by making sure the bag degradation temperature is not exceeded. Monitoring the pressure drop across the baghouse ensures that the baghouse functioning properly. If the pressure drop across the baghouse exceeded the upper range of 6 inches of water, it indicates a problem with the reverse air pulse jet cleaning system. If the pressure drop is below the lower range of 2 inches of water, it would indicate a bag integrity failure. Monitoring the lime feed rate ensures that there is sufficient hydrated lime being added to the exhaust gas stream to react with the SO<sub>2</sub> and acid gases (HF and HCl).

Please refer to Parts B, C and D in the draft ROP for detailed regulatory citations for the stationary source. Part A contains regulatory citations for general conditions.

**Source-Wide Permit to Install (PTI)**

Rule 214a requires the issuance of a Source-Wide PTI within the ROP for conditions established pursuant to Rule 201. All terms and conditions that were initially established in a PTI are identified with a footnote designation in the integrated ROP/PTI document.

The following table lists all individual PTIs that were incorporated into previous ROPs. PTIs issued after the effective date of ROP No. MI-ROP-A6497-2015 are identified in Appendix 6 of the ROP.

PTI Number			
47-06	11-99A	9-80	216-76
56-76A	283-75B	203-73	40-72C
278-72			

**Streamlined/Subsumed Requirements**

This ROP does not include any streamlined/subsumed requirements pursuant to Rules 213(2) and 213(6).

**Non-applicable Requirements**

Part E of the ROP lists requirements that are not applicable to this source as determined by the AQD, if any were proposed in the ROP Application. These determinations are incorporated into the permit shield provision set forth in Part A (General Conditions 26 through 29) of the ROP pursuant to Rule 213(6)(a)(ii).

**Processes in Application Not Identified in Draft ROP**

The following table lists processes that were included in the ROP Application as exempt devices under Rule 212(4). These processes are not subject to any process-specific emission limits or standards in any applicable requirement.

PTI Exempt Emission Unit ID	Description of PTI Exempt Emission Unit	Rule 212(4) Citation	PTI Exemption Rule Citation
EUHEATER#1, #2, #16, #17, #27	Natural gas fired space heaters. Maximum design capacity 250,000 BTU/hr (each).	Rule 212(4)(c)	Rule 282(2)(b)(i)
EUHEATER#3, #18, #19	Natural gas fired space heaters. Maximum design capacity 212,000 BTU/hr (each).	Rule 212(4)(c)	Rule 282(2)(b)(i)
EUHEATER#4, #23, #31	Natural gas fired space heaters. Maximum design capacity 100,000 BTU/hr (each).	Rule 212(4)(c)	Rule 282(2)(b)(i)

<b>PTI Exempt Emission Unit ID</b>	<b>Description of PTI Exempt Emission Unit</b>	<b>Rule 212(4) Citation</b>	<b>PTI Exemption Rule Citation</b>
EUHEATER#5, #6, #12, #13, #14, #29, #30	Natural gas fired space heaters. Maximum design capacity 150,000 BTU/hr (each).	Rule 212(4)(c)	Rule 282(2)(b)(i)
EUHEATER#7, #8	Natural gas fired space heater. Maximum design capacity 75,000 BTU/hr (each).	Rule 212(4)(c)	Rule 282(2)(b)(i)
EUHEATER#9	Natural gas fired space heater. Maximum design capacity 195,000 BTU/hr.	Rule 212(4)(c)	Rule 282(2)(b)(i)
EUHEATER#10, #21	Natural gas fired space heaters. Maximum design capacity 200,000 BTU/hr (each)	Rule 212(4)(c)	Rule 282(2)(b)(i)
EUHEATER#11	Natural gas fired space heater. Maximum design capacity 72,000 BTU/hr.	Rule 212(4)(c)	Rule 282(2)(b)(i)
EUHEATER#15, #20	Natural gas fired space heaters. Maximum design capacity 120,000 BTU/hr (each).	Rule 212(4)(c)	Rule 282(2)(b)(i)
EUHEATER#22	Natural gas fired space heater. Maximum design capacity 80,000 BTU/hr.	Rule 212(4)(c)	Rule 282(2)(b)(i)
EUHEATER#24	Natural gas fired space heater. Maximum design capacity 170,000 BTU/hr.	Rule 212(4)(c)	Rule 282(2)(b)(i)
EUHEATER#25, #26, #28	Natural gas fired space heaters. Maximum design capacities of 30,000; 50,000 and 110,000 BTU/hr (respectively)	Rule 212(4)(c)	Rule 282(2)(b)(i)

**Draft ROP Terms/Conditions Not Agreed to by Applicant**

This draft ROP does not contain any terms and/or conditions that the AQD and the applicant did not agree upon pursuant to Rule 214(2).

**Compliance Status**

The AQD finds that the stationary source is expected to be in compliance with all applicable requirements as of the effective date of this ROP.

**Action taken by EGLE, AQD**

The AQD proposes to approve this ROP. A final decision on the ROP will not be made until the public and affected states have had an opportunity to comment on the AQD's proposed action and draft permit. In addition, the USEPA is allowed up to 45 days to review the draft ROP and related material. The AQD is not required to accept recommendations that are not based on applicable requirements. The delegated decision maker for the AQD is Christopher Ethridge, Field Operations Manager. The final determination for ROP approval/disapproval will be based on the contents of the ROP Application, a judgment that the stationary source will be able to comply with applicable emission limits and other terms and conditions, and resolution of any objections by the USEPA.

State Registration Number  
A6497

**RENEWABLE OPERATING PERMIT**  
**June 14, 2022- STAFF REPORT ADDENDUM**

ROP Number  
MI-ROP-A6497-2022

**Purpose**

A Staff Report dated April 4, 2022, was developed to set forth the applicable requirements and factual basis for the draft Renewable Operating Permit (ROP) terms and conditions as required by Rule 214(1) of the administrative rules promulgated under Act 451. The purpose of this Staff Report Addendum is to summarize any significant comments received on the draft ROP during the 30-day public comment period as described in Rule 214(3). In addition, this addendum describes any changes to the draft ROP resulting from these pertinent comments.

**General Information**

Responsible Official:	Jerry Greger, Plant Manager 989-734-3444
AQD Contact: District Inspector:	Michelle Luplow, Environmental Quality Analyst 517-294-9294
AQD Contact: ROP Writer:	Matt Karl, Environmental Quality Analyst 517-282-2126

**Summary of Pertinent Comments**

The following comments were received during the 30-day public comment period from USEPA Region 5 staff:

**USEPA Comment 1**

In Section 6 (Monitoring/Recordkeeping) of EUCRUSHING, EUTRUCKTRAFFIC, EUSTORAGE, and EUPUG-90, it states that Method 22 visible emission observations will be conducted monthly and Method 9 observations will be conducted if any visible emissions are observed during the Method 22 observation. However, it is not clear what corrective actions will be conducted if visible emissions are observed during the Method 9 observation. Please describe within the permit conditions or the off-permit plan (Abatement and Equipment Monitoring Program/Preventative Maintenance Program) what corrective actions must be taken after visible emissions are recorded with the Method 9 observation in order to ensure compliance with the opacity limits established in the permit.

**AQD Response**

Updated the Appendix 10 Fugitive Dust Plan to include specific emission unit/flexible group identification. Added "See Appendix 10" in emission unit/flexible groups with conditions to observe the opacity of visible emissions to better tie together the corrective actions that should be taken if excessive opacity visible emissions are observed. The company confirmed these proposed changes to the Appendix 10 Fugitive Dust Plan were acceptable. Revised EUCRUSHING, SC VI.1, EUTRUCKTRAFFIC, SC VI.1, EUSTORAGE, SC VI.1, and EUPUG-90, SC VI.2 to specify corrective actions if observed opacities exceed opacity limits.

## EPA Comment 2

Condition III (1) of EUPUG-90 states that the emission unit shall not operate unless the associated baghouse collector is installed and operating properly. However, there is no operating ranges established within the permit or supporting documentation. Please indicate the operating ranges (temperature and pressure drop) for this baghouse within the permit conditions or the off-permit plan (Abatement and Equipment Monitoring Program/Preventative Maintenance Program) in order to ensure practical enforceability of the PM limit established in the permit and continued integrity of the baghouse.

## AQD Response

The company informed AQD staff that the EUPUG-90 baghouse control device does not have a pressure drop gauge. Company staff perform visible emissions observations and conduct inspections to confirm the baghouse control is working properly. In the company's Preventative Maintenance Plan (PMP) under "Baghouse Collector-90 Pug Mill Semi-Annual Maintenance Check/Repairs" lists equipment, items to be inspected, the date of the inspection, comments on the condition and repairs made and operator's initials. For the baghouse, items to be inspected include condition of the bags, condition of the hangers, the side wall integrity, and the condition of the ductwork. Added EUPUG-90, SC III.2 to ensure proper operation of the baghouse.

Additionally, made corrections to FGPLANT1, SC VI.3. to clarify proper operating pressure drop range for the baghouse control.

## EPA Comment 3

Please ensure that all off-permit plans are made available as part of the public record.

## AQD Response

The AQD does not post Compliance Assurance Monitoring (CAM) plans. However, this facility also has a Preventative Maintenance Plan (PMP). It was an oversight that the PMP was not posted with the draft ROP and staff report during the public comment period. In the future, off permit plans such as the PMP will be posted during the public comment period and will be included on the AQD's website.

## **Changes to the April 4, 2022 Draft ROP**

All changes proposed by USEPA in the 30-day public comment period as addressed by the AQD responses above have been incorporated into the draft ROP.

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**RENEWABLE OPERATING PERMIT**

ROP Number  
MI-ROP-A6497-2022a

**January 25, 2023 - STAFF REPORT FOR  
RULE 216(1)(a)(i)-(iv) ADMINISTRATIVE  
AMENDMENT**

**Purpose**

On August 3, 2022, the Department of Environment, Great Lakes, and Energy (EGLE), Air Quality Division (AQD), approved and issued Renewable Operating Permit (ROP) No. MI-ROP-A6497-2022 to Meridian Brick LLC – Michigan Plant pursuant to Rule 214 of the administrative rules promulgated under Act 451. Once issued, a company is required to submit an application for changes to the ROP as described in Rule 216. The purpose of this Staff Report is to describe the changes that were made to the ROP pursuant to Rule 216(1)(a)(i-iv).

**General Information**

Responsible Official:	J. David McKeown, Director, Environmental Compliance 803-691-3121
AQD Contact:	Caryn Owens, Senior Environmental Engineer 231-878-6688
Application Number:	202200218
Date Application for Administrative Amendment was Submitted:	November 20,2022

**Regulatory Analysis**

The AQD has determined that the change requested by the stationary source meets the qualifications for an Administrative Amendment pursuant to Rule 216(1)(a)(iv).

**Description of Changes to the ROP**

This Administrative Amendment was for a transfer of ownership from Meridian Brick LLC - Michigan Plant to General Shale Brick, Inc. - Michigan Plant. The name on the ROP and Staff Report have been changed from "Meridian Brick LLC - Michigan Plant" to "General Shale Brick, Inc. (Plant 66) - DBA Michigan Brick."

**Compliance Status**

The AQD finds that the stationary source is expected to be in compliance with all applicable requirements associated with the emission unit(s) involved with the change as of the date of approval of the Administrative Amendment to the ROP.

**Action Taken by EGLE**

The AQD approved an Administrative Amendment to ROP No. MI-ROP-A6497-2022, as requested by the stationary source. The delegated decision maker for the AQD is the District Supervisor.