



GRETCHEN WHITMER
GOVERNOR

STATE OF MICHIGAN
DEPARTMENT OF
ENVIRONMENT, GREAT LAKES, AND ENERGY
LANSING DISTRICT OFFICE



PHILLIP D. ROOS
DIRECTOR

July 28, 2023

Jerry Greger, Plant Manager
General Shale Brick, Inc., dba Michigan Brick
3820 East Serr Road
Corunna, Michigan 48817

SRN: A6497, Shiawassee County

Dear Jerry Greger:

VIOLATION NOTICE

On April 13, 2023, the Department of Environment, Great Lakes, and Energy (EGLE), Air Quality Division (AQD), conducted an inspection of General Shale Brick, Inc., dba Michigan Brick (Michigan Brick) located at 3820 East Serr Road, Corunna, Michigan. The purpose of this inspection was to determine Michigan Brick's compliance with the requirements of the federal Clean Air Act; Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (Act 451); the Air Pollution Control Rules; and the conditions of Renewable Operating Permit (ROP) numbers MI-ROP-A6497-2015 and MI-ROP-A6497-2022a.

During the inspection, staff observed the following:

Process Description	Rule/Permit Condition Violated	Comments
FGKILNS (EUKILN01)	MI-ROP-A6497-2022a, Monitoring/Recordkeeping SC VI.3	90 recorded instances where the lime feed rate was not maintained at a rate 2.5 times, that of the stoichiometric ratio, calculated according to Appendix 7 between August 2022 and February 2023.
FGKILNS (EUKILN01)	MI-ROP-A6497-2022a, Monitoring & Recordkeeping, SC VII.1 & VII.2.	Failure to identify and report the 82 deviations where the lime feed rate was not maintained at a rate 2.5 times, that of the stoichiometric ratio during the July – December 2022 <u>semi-annual</u> reporting period.

FGKILNS (EUKILN01)	MI-ROP-A6497-2022a, Reporting, SC VII.1 & VII.3.	Failure to identify and report the 82 deviations where the lime feed rate was not maintained at a rate 2.5 times, that of the stoichiometric ratio during the January – December 2022 <u>annual</u> reporting period.
FGKILNS (EUKILN01)	MI-ROP-A6497-2022a, Reporting, SC VII.4.	Failure to identify and report the 82 lime feed rate CAM excursions, that occurred from August – December 2022
FGKILNS (EUKILN01)	MI-ROP-A6497-2022a, Monitoring & Recordkeeping, SC VI.3.	Failure to record the lime feed rate every 2 hours for 8 instances occurring between October and November 2022.
FGKILNS (EUKILN01)	MI-ROP-A6497-2022a, Reporting, SC VII.1 & VII.2	Failure to identify and report the missing lime feed rate records for October and November 2022, as deviations for the <u>semi-annual</u> period of July – December 2022.
FGKILNS (EUKILN01)	MI-ROP-A6497-2022a, Reporting, SC VII.1 & VII.3	Failure to identify and report the missing lime feed rate records for October and November 2022, as deviations for the <u>annual</u> period of January – December 2022.
FGKILNS (EUKILN01)	MI-ROP-A6497-2015, Design/Equipment Parameters, SC IV.1 and Rule 910.	The fabric filter baghouse was not operated in a satisfactory manner from May 20 – May 27, 2021, (baghouse pressure drop exceeded the upper limit of 6” w.c.).
FGKILNS (EUKILN01)	MI-ROP-A6497-2015, Monitoring & Recordkeeping, SC VI.8	The pressure drop on the fabric filter baghouse exceeded the upper limit of 6” w.c. for 8 days in a row, and was therefore,

		not restored to its normal or usual manner of operation as expeditiously as practicable, nor were any corrective actions taken to prevent a likely reoccurrence.
FGKILNS (EUKILN01)	MI-ROP-A6497-2015, Reporting, SC VII.4.	Failure to identify and report the CAM pressure drop excursions that occurred from May 20 – 27, 2021, for the semi-annual reporting period of January – June 2021.
FGKILNS (EUKILN01)	MI-ROP-A6497-2015, Reporting, SC VII.1 & SC VII.2.	Failure to identify and report baghouse pressure drop excursions for May 20 – 27, 2021, as deviations for the <u>semi-annual period</u> of January – June 2021.
FGKILNS (EUKILN01)	MI-ROP-A6497-2015, Reporting, SC VII.1 & VII.3	Failure to identify and report baghouse pressure drop excursions for May 20 – 27, 2021, as deviations for the <u>annual period</u> of January – December 2021.
FGKILNS (EUKILN01)	MI-ROP-A6497-2015, Monitoring/Recordkeeping, SC VI.2	Michigan Brick was unable to provide continuous records of the pressure drop to demonstrate proper operation of the baghouse from May 28, 2021 – August 2, 2022.
FGKILNS (EUKILN01)	MI-ROP-A6497-2022a, Monitoring/Recordkeeping, SC VI.2	Michigan Brick was unable to provide continuous records of the pressure drop to demonstrate proper operation of the baghouse from August 3, 2022 – April 12, 2023.

FGKILNS (EUKILN01)	MI-ROP-A6497-2022a, Design/Equipment Parameters, SC IV.4	Michigan Brick operated EUKILN01 from April 6 – April 12, 2023, when the pressure drop monitoring gauge was non-functional.
FGKILNS (EUKILN01)	MI-ROP-A6497-2015, Monitoring/Recordkeeping, SC VI.1.	Michigan Brick was unable to provide any temperature records for May 28, 2021 – August 2, 2022.
FGKILNS (EUKILN01)	MI-ROP-A6497-2022a, Design/Equipment Parameters SC IV.2 and Monitoring/Recordkeeping SC VI.1.	Michigan Brick was unable to provide any temperature records for August 3, 2022 – April 12, 2023.
FGKILNS (EUKILN01)	MI-ROP-A6497-2022a, Design/Equipment Parameters SC IV.3.	Michigan Brick failed to maintain and operate a temperature monitoring device to measure the temperature on a continuous basis during the operation of FGKILNS from April 6 – April 12, 2023.
FGKILNS (EUKILN01)	MI-ROP-A6497-2022a, Monitoring/Recordkeeping SC VI.9.	Michigan Brick failed to monitor the temperature of the exhaust gas to the inlet of the baghouse on a continuous basis from April 6 – April 12, 2023.
FGKILNS (EUKILN01)	MI-ROP-A6497-2015, Monitoring/Recordkeeping, SC VI.1 & VI.2.	Michigan Brick failed to continuously record the baghouse temperature and pressure drop while operating EUKILN01 from February 16 – March 3, 2022.
FGKILNS (EUKILN01)	MI-ROP-A6497-2015, Reporting, SC VII.4	Michigan Brick failed to identify and report semi-annual CAM monitor downtime events for the period of February 16 – March 3, 2022, for temperature and pressure drop monitoring downtime

		for the semi-annual period of January – June 2022.
FGKILNS (EUKILN01)	MI-ROP-A6497-2022a, Monitoring/Recordkeeping, SC VI.5	Michigan Brick failed to conduct and record daily visible emission observations at the kiln stack from August 3, 2022 – April 30, 2023.
FGKILNS (EUKILN01)	MI-ROP-A6497-2022a, Reporting, SC VII.1 & VII.2	Michigan Brick failed to identify and report deviations for failure to conduct and record daily visible emission observations at the kiln stack from August 3, 2022 – December 31, 2022, for the semi-annual period July – December 2022.
FGKILNS (EUKILN01)	MI-ROP-A6497-2022a, Reporting, SC VII.1 & VII.3	Michigan Brick failed to identify and report deviations for failure to conduct and record daily visible emission observations at the kiln stack from August 3, 2022 – December 31, 2022, for the annual period January – December 2022.
FGKILNS (EUKILN01)	Rule 910	Baghouse leaks were identified; therefore, Michigan Brick failed to maintain and operate the baghouse in a satisfactory manner from April 12 – May 17, 2023.
FGKILNS (EUKILN01)	Rule 912(4)	Failure to notify the AQD within 2 business days of the discovery of the malfunction (leaks in baghouse April 12 - May 17, 2023) for air emissions in excess of the 0% opacity standard that

		continued for more than 2 hours.
FGKILNS (EUKILN01)	Rule 912(5)	Failure to provide a written report within 30 days of the discovery of the malfunction (leaks in baghouse).

Lime Feed Rate Recordkeeping & Reporting

Lime feed rates are required to be determined according to the equations in Appendix 7 of MI-ROP-A6497-2022a and the car push rates through the kilns. Based on the daily car push rate records provided by Michigan Brick, the “Kiln Firemen” lime feed rate records (where lime feed rates are manually recorded every 2 hours), and well as Michigan Brick’s spreadsheet, which calculates the lime feed rate according to Appendix 7, the AQD determined that there were 90 instances between August 2022 and February 2023, where the lime feed rate was lower than the required lime feed rate (2.5 times the stoichiometric ratio). Because Michigan Brick is required to use a lime feed rate that is 2.5 times the stoichiometric ratio, as calculated according to Appendix 7, these 90 instances are deviations from MI-ROP-A6497-2022a. Additionally, these 90 recorded instances are also CAM excursions, as defined in MI-ROP-A6497-2022a SC VI.4.

Michigan Brick is required to report CAM excursions semi-annually and ROP deviations annually and semi-annually. The Annual and Semi-annual reports covering July 2022 – December 2022 were due by March 15, 2023. Michigan Brick submitted these reports without identifying and reporting the lime feed rate CAM excursions and the lime feed rate ROP deviations.

The aforementioned are violations of the following in MI-ROP-A6497-2022a:

- FGKILNS SC VI.3 for failure to maintain a lime feed rate that is 2.5 times that of the stoichiometric ratio, as calculated in Appendix 7, for those 90 instances.
- FGKILNS SC VII.2 and SC VII.3 for failure to identify and report these lime feed rate deviations for August 2022 – December 2022 (annual and semi-annual reports).
- FGKILNS SC VII.4 for failure to identify and report semi-annual CAM excursions for the 82 lime feed rate excursions that occurred between August 2022 and December 2022.

Additionally, Michigan Brick is required to record the lime feed rate once every 2 hours as an indicator of proper operation of the dry lime injection control. For the records review between August 2022 and February 2023, there were 7 instances in October 2022, and one instance in November 2022, where the lime feed rate was not recorded, for a total of 8 instances. This is considered a deviation from the ROP requirements. For the semi-annual reporting period of July 2022 – December 2022, Michigan Brick

submitted their report by March 15, 2023; however, they did not report the 8 instances where the lime feed rate was not recorded.

The aforementioned are violations of the following in MI-ROP-A6497-2022a:

- FGKILNS SC VI.3 for failure to record the lime feed rate every 2 hours for the October and November 2022 instances.
- FGKILNS SC VII.1, SC VII.2 and SC VII.3 for failure to identify and report the lime feed rate missing records as deviations for October and November 2022 (annual and semi-annual reports).

FGKILNS Baghouse Pressure Drop and Temperature Monitoring, Recordkeeping, and Reporting

February 2022

Michigan Brick is required to continuously monitor and record the temperature entering the baghouse and the pressure drop across the baghouse. EUKILN01 temperature and pressure drop data loss occurred from February 16, 2022 – March 3, 2022. Baghouse temperature and pressure drop data were not continuously recorded during this time; however, monitoring of the temperature and pressure drop on the PCD system was still able to be conducted. The system was upgraded on March 3, 2022, to allow for recording of data to ensue.

The aforementioned are violations of the following in MI-ROP-A6497-2015:

- FGKILNS SC VI.1 and SC VI.2 for failure to continuously record the temperature entering EUKILN01's baghouse, and for failure to continuously record the pressure drop across EUKILN01's baghouse, respectively.

Additionally, Michigan Brick is required to report all deviations annually and semi-annually. The annual report (January – December 2022) and semi-annual report (January – June 2022) submitted by March 15, 2022, did not include deviation reports for the February 16 – March 3, 2022 period, where pressure drop was not being recorded continuously.

The aforementioned are violations of the following in MI-ROP-A6497-2015:

- FGKILNS SC VII.1, VII.2 and VII.3 for failure to report the temperature and pressure drop missing records as deviations annually and semi-annually.

April 2023

During the inspection, the AQD staff was told that on April 6, 2023, a lightning storm incident impacted the temperature and pressure monitoring system. Both the data logger and on-screen PCD monitoring were destroyed with the lightning strike: the record logging and on-screen monitoring were no longer functional. All temperature and pressure records were destroyed, except for data from October 3, 2020 – May 27, 2021. This includes all data pre-October 3, 2020, and all data post-May 27, 2021. A refurbished monitoring system was installed on April 12, 2023. Michigan Brick continued to operate from April 6, 2023 – April 12, 2023, while the pressure drop and temperature monitoring and recordkeeping systems were non-functional.

I requested continuous temperature and pressure drop records for January 2021 – December 2022, and Michigan Brick was only able to provide me with October 2020 – May 29, 2021 continuous records for these two operating parameters. The records indicate that from May 20 – May 27, 2021, the pressure drop exceeded the 6" w.c. upper limit of the operating range. Bill Stevens explained during a follow-up call on June 7, 2023, that the pressure drop exceeded the 6" w.c. limit because they increased the flow through the baghouse in an attempt to "clean" the bags of particulate prior to installing new bags. He said that this is common practice prior to installing new bags.

Neither a CAM excursion report nor a deviation report was filed with the AQD for the 2021 annual and semi-annual reporting for the pressure drop excursion greater than 6" w.c.

The aforementioned are violations of the following in MI-ROP-A6497-2015 or MI-ROP-A6497-2022a:

1. Michigan Brick shall not operate a kiln if the pressure drop across the kiln fabric filter is greater than 6" w.c. The pressure drop records from October 3, 2020 – May 27, 2021, indicate that from May 20 – May 27, 2021, the EUKILN01 baghouse was operated at a pressure drop that exceeded the baghouse's 6" w.c. upper limit. This is a violation of FGKILNS SC III.2 of MI-ROP-A6497-2015. Operating the baghouse at a pressure drop greater than the upper limit is also a violation of FGKILNS SC IV of MI-ROP-A6497-2015 and Rule 910 for failure to operate the air-cleaning device (baghouse) in a satisfactory manner.
2. Michigan Brick is required to restore operation of FGKILNS to its normal or usual manner of operation as expeditiously as practicable, upon detecting an excursion in accordance with good air pollution control practices for minimizing emissions and includes taking any necessary corrective actions to restore normal operation, and to prevent the likely reoccurrence of the cause of the

excursion. Because Michigan Brick stated that the pressure drop excursions that occurred from May 20 – May 27, 2021, is common practice, the AQD believes no necessary corrective actions are in place to prevent a reoccurrence of this excursion. The AQD also believes the excursion of operating the baghouse at greater than 6” w.c. for 8 days in a row from May 20 – May 27, 2021, is not considered expeditious. This instance is therefore a violation of MI-ROP-A6497-2015 FGKILNS SC VI.8.

3. An excursion of the baghouse pressure drop range of 2 – 6 “w.c. occurred from May 20 – May 27, 2021, when the pressure drop exceeded 6” w.c. Excursions are required to be reported semi-annually under CAM. Michigan Brick did not report this excursion for the January – June 2021 semi-annual reporting period. Failure to identify and report the pressure drop excursion for the semi-annual period of January – June 2021 is a violation of FGKILNS SC VII.4 of MI-ROP-A6497-2015.
4. Michigan Brick is required to report all deviations annually and semi-annually. The annual report (January – December 2021) and semi-annual report (January – June 2021) did not include deviation reports for the May 20 – May 27, 2021, pressure drop excursions. The failure to report the May 20 – May 27, 2021, pressure drop excursions as deviations is a violation of FGKILNS SC VII.1, VII.2 and VII.3 of MI-ROP-A6497-2015.
5. Michigan Brick is required to continuously monitor and record the pressure drop as an indicator of proper operation of the fabric filter. Michigan Brick was unable to provide continuous records demonstrating that the pressure drop was continuously monitored and recorded from May 28, 2021 – April 12, 2023. This includes the pressure drop data not continuously recorded from February 16 – March 3, 2022, and April 6 – April 12, 2023. This is a violation of MI-ROP-A6497-2015 FGKILNS SC VI.2 (May 28, 2021 – August 2, 2022) and MI-ROP-A6497-2022a FGKILNS SC VI.2 (August 3, 2022 – April 12, 2023).
6. Michigan Brick is required to report all deviations annually and semi-annually. The annual report (January – December 2022) and semi-annual report (January – June 2022) did not include deviation reports for the February 16 – March 3, 2022, period where pressure drop was not being recorded continuously. The failure to identify and report this as deviations, is a violation of FGKILNS SC VII.1, VII.2 and VII.3 of MI-ROP-A6497-2015.
7. Michigan Brick shall not operate the kilns unless the gauge to measure pressure drop across the fabric filter collector is installed and operating properly. Michigan Brick operated EUKILN01 from April 6 – April 12, 2023,

when the pressure drop gauge was non-functional (pressure drop was unable to be monitored or recorded due to the monitoring system failure), and therefore not operating properly. This is a violation of MI-ROP-A6497-2022a FGKILNS SC IV.4.

8. Michigan Brick shall monitor and record the temperature entering each fabric filter for each kiln on a continuous basis. Michigan Brick was unable to provide me with the requested continuous temperature records for May 28, 2021 – December 2022. Additionally, temperature records were also not available for January – April 12, 2023. The missing data from May 28, 2021 – August 2, 2022, is a violation of FGKILNS VI.1 (MI-ROP-A6497-2015). The missing data from August 3, 2022 – April 12, 2023, is a violation of FGKILNS SC IV.2. and SC VI.1 (MI-ROP-A6497-2022a).
9. Michigan Brick is required to continuously monitor and record temperature data during operation of the kilns. Michigan Brick operated EUKILN01 from April 6 – April 12, 2023, when the baghouse temperature monitoring gauge was non-functional (temperature was unable to be monitored or recorded due to the monitoring system failure), and therefore not operating properly. This is a violation of MI-ROP-A6497-2022a FGKILNS SC IV.3. and SC VI.9.
10. Michigan Brick is required to submit semi-annual reports that include the summary information on the number, duration, and cause for CAM monitor downtime incidents. The semi-annual report submitted July 20, 2022, for the semi-annual period of January – June 2022, did not include reporting of the February 16 – March 3, 2022, temperature and pressure drop monitoring downtime. This is a violation of MI-ROP-A6497-2015, FGKILNS SC VII.4

EUKILN01 Visible Emissions

With the issuance of MI-ROP-A6497-2022a, Michigan Brick was required to begin recording daily visible emissions readings rather than monthly on FGKILNS stacks. I requested daily visible emissions records for August 3, 2022 – April 2023. Michigan Brick was unable to provide daily visible emissions records.

The aforementioned is a violation of the following in MI-ROP-A6497-2022a:

- Failure to conduct daily visible emission observations from August 3, 2022 – April 30, 2023, is a violation of FGKILNS SC VI.5.
- Failure to identify and report the deviations associated with not conducting the daily visible emission observations for the semi-annual reporting period of July – December 2022, as well as failure to identify these deviations in the annual report covering January – December 2022.

During the inspection on April 13, 2023, I observed opacity emitting from EUKILN01's stack, and attributed the opacity to the installation of a new bag on the baghouse the day prior. On May 9, 2023, during the stack test on EUKILN01, I again noted opacity from the kiln stack. Michigan Brick stated that during the April 12, 2023 baghouse failure event, they ran UV tracer through the baghouse to determine the issue, and noted, based on the UV light test, that particulate was escaping through seals at the base of the bags.

Michigan Brick continued to operate the kiln and its baghouse with the leaks at the seals, noted on April 12, through Wednesday, May 17, 2023. On May 17, 2023, Jerry Greger informed me that a special, high-heat resistant caulk, endorsed by the Gortex bags representative, was used to seal the leaking spots in the baghouse seals on May 17. He noted that they did find some of the tighteners at the top that clamp down the bags, were also loose.

Operating the baghouse while leaks in the seals and loose clamps were present from April 12, when the issue was noticed through May 17, 2023, when the caulk was applied, is a violation of Rule 910: an air-cleaning device shall be installed, maintained and operated in a satisfactory manner. The baghouse was not being maintained and operated in a satisfactory manner from April 12 – May 17, 2023.

- This is a violation of Rule 910 for failure to maintain and operate the baghouse in a satisfactory manner from April 12 – May 17, 2023.

Because there was no pressure drop data for April 6 – April 12, 2023, nor any daily kiln visible emission readings during this time, there is therefore, no data suggesting that that baghouse was properly operating from April 6, 2022, up until Michigan Brick stated that the excess opacity was seen on April 12, 2022. The AQD considers this an abnormal condition under Rule 912 with indicators that the 0% opacity visible emission standard was exceeded from April 6 – April 12, 2023.

Additionally, the leaks in the seals and loose clamps also created a situation where opacity was emitted at a threshold higher than the allowed emission standard of no visible emissions (indicator is 0% opacity) from April 12 – May 17, 2023.

Rule 912 requires that Michigan Brick notify the AQD of the abnormal condition or malfunction, resulting in air emissions in excess of a standard that continues for more than 2 hours. The notice is required no later than 2 business days after the discovery of the malfunction. The malfunction was discovered on April 12, 2023, and the AQD was not notified until the day of the stack test, May 9, 2023. This is a violation of Rule 912(4) as the notice was provided 27 days after the malfunction was discovered. Additionally, a written report is required to be submitted within 10 days after the malfunction has been corrected, or within 30 days of discovery of the malfunction,

whichever occurs first. The AQD was notified on May 17, 2023, that the malfunction was corrected. This is a violation of Rule 912(5) for failure to provide a written report to AQD within 30 days of the discovery of the malfunction (30 days from date of discovery of the malfunction would have been May 12, 2023). The AQD believes the abnormal condition occurred from April 6, 2023 – May 17, 2023. May 17, 2023, is when Michigan Brick informed AQD that the malfunction had been fixed.

- This is a violation of Rules 912(4) & (5) for failure to notify the AQD and provide a written report within the specified timeframes.

Please initiate actions necessary to correct the cited violations and submit a written response to this Violation Notice by August 18, 2023, (which coincides with 21 calendar days from the date of this letter). The written response should include the following for each violation:

- The dates the violations occurred,
- An explanation of the causes and duration of the violations,
- Whether the violations are ongoing,
- A summary of the actions that have been taken and are proposed to be taken to correct the violations and the dates by which these actions will take place,
- And what steps are being taken to prevent a reoccurrence.

In addition to the above list, Michigan Brick shall include in their response the following:

- A date by which they will submit a revised Preventative Maintenance Program which includes addressing the baghouse and monitoring system malfunctions. The revised Preventative Maintenance Program shall include items that are outlined in Rule 911 for Malfunction Abatement Plans.
- A date by which they will submit a Quality Improvement Plan, as provided under 40 CFR Part 64 for Compliance Assurance Monitoring.

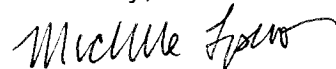
Please submit the written response to EGLE, AQD, Lansing District, at Constitution Hall, 525 West Allegan, First Floor South, Lansing, Michigan 48933 and submit a copy to Jenine Camilleri, Enforcement Unit Supervisor at EGLE, AQD, P.O. Box 30260, Lansing, Michigan 48909-7760.

If Michigan Brick believes the above observations or statements are inaccurate or do not constitute violations of the applicable legal requirements cited, please provide appropriate factual information to explain your position.

Jerry Greger
Michigan Brick
Page 13
July 28, 2023

Thank you for your attention to resolving the violations cited above and for the cooperation that was extended to me during my inspection of Michigan Brick. If you have any questions regarding the violations or the actions necessary to bring this facility into compliance, please contact me at the number listed below.

Sincerely,



Michelle Luplow
Environmental Quality Analyst
Air Quality Division
517-294-9294

cc: David McKeown, General Shale Brick, Inc.
Annette Switzer, EGLE
Christopher Ethridge, EGLE
Brad Myott, EGLE
Jenine Camilleri, EGLE
Bob Byrnes, EGLE