DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION
ACTIVITY REPORT: On-site Inspection

B173963795

FACILITY: RIETH-RILEY CONSTRUCTION CO., INC.		**SRN / ID:** B1739
LOCATION: 2020 CHICAGO DRIVE SW, GRAND RAPIDS		**DISTRICT:** Grand Rapids
CITY: GRAND RAPIDS		**COUNTY:** KENT
CONTACT: John Berscheit , Technical Services Manager		**ACTIVITY DATE:** 06/22/2022
STAFF: Michael Cox	**COMPLIANCE STATUS:** Compliance	**SOURCE CLASS:** SM OPT OUT
SUBJECT: Scheduled Unannounced Inspection		
RESOLVED COMPLAINTS:		

Air Quality Division (AQD) staff Michael Cox (MTC) arrived at the Rieth-Riley Construction Company, Inc. facility located at 2020 Chicago Drive SW, Grand Rapids, MI at 9:00am on June 22, 2022, to complete a scheduled unannounced inspection.

Facility Description

Prior to entering the facility, off-site odor and visible emissions observations were completed. An asphalt odor was observed to the north of the facility. No recent odor complaints have been received regarding this facility.

Upon arrival, AQD staff MTC met with Mr. Marty Lahaie, Lab Manager, who provided a tour of the facility and answered site specific questions. Records were provided by Mr. John Berscheit, Technical Services Manager, following the inspection.

Rieth-Riley Construction Company, Inc. is a counter flow drum mixing asphalt plant. During operation, particulate matter (PM) generated from drying aggregate is collected and controlled by the fabric filter dust collector on site. Loadout control is utilized to control emissions from the plant silos and will be discussed later in this report. The facility is in operation with one Opt-Out Permit to Install (PTI) No. 96-96B and is a synthetic minor source for hazardous air pollutants (HAPs) and Carbon Monoxide (CO). The facility is also subject to New Source Performance Standards, Subpart I-Standards of Performance for Hot Mix Asphalt Facilities.

EUHMAPLANT

This emission unit is for the Hot/Warm Mix Asphalt (HWMA) equipment including Aggregate conveyors, 500 TPH counter flow unified drying/mixing drum, and fabric filter dust collector. The emission unit is permitted to process Recycled Asphalt Pavement (RAP) and Recycled Asphalt Shingles (RAS).

Various pollutant emission limits are identified for this emission unit and are provided below.

Pollutant	Limit	Time Period
PM	0.04 gr/dscf	Test Protocol*
PM	0.04 lb per ton[b]	Test Protocol*

Pollutant	Limit	Time Period
CO	0.201 lb per ton[b]	Test Protocol*
CO	89.9 tpy[a]	12-month rolling time period as determined at the end of each calendar month
SO_2	0.14 lb per ton[b]	Test Protocol*
NO_x	0.12 lb per ton[b]	Test Protocol*
Lead	2.0×10^{-6} lb per ton[b]	Test Protocol*
Benzene	0.00086 lb per ton[b]	Test Protocol*
Toluene	0.0064 lb per ton[b]	Test Protocol*
Ethylbenzene	0.00053 lb per ton[b]	Test Protocol*
Xylene	0.00044 lb per ton[b]	Test Protocol*
Naphthalene	0.0014 lb per ton[b]	Test Protocol*
Formaldehyde	0.0068 lb per ton[b]	Test Protocol*
Acrolein	0.0008 lb per ton[b]	Test Protocol*
Arsenic	1.0×10^{-6} lb per ton[b]	Test Protocol*
Nickel	1.0×10^{-4} lb per ton[b]	Test Protocol*
Manganese	3.1×10^{-5} lb per ton[b]	Test Protocol*

a Annual limits based on 895,000 tons HWMA paving material production.

b Pound pollutant per ton of HWMA paving material produced.

* Test Protocol shall specify averaging time.

Pollutant	Limit	Time Period

All emission limits except for the 12-month rolling limit for CO, are based on testing. The most recent stack test was conducted on August 4, 2015, to verify compliance of PM, CO and an opacity limit of 20%. The stack test verified that Rieth-Riley Construction Company, Inc. had met the PM limit of 0.04 gr/dscf, CO limit of 0.201 lbs/ton, and an opacity less than 20%. Continued compliance with the emission limits is assured through continued satisfactory operation of the baghouse and proper combustion.

During the inspection, it was concluded that Rieth-Riley Construction Company, Inc. only uses natural gas as fuel for EUHWMAPLANT.

EUHWMAPLANT is limited during the asphalt mixing process to a maximum of 50% mass of combined RAP and RAS based on a monthly average in the mix produced. Rieth-Riley Construction Company, Inc. does not use RAS in their process. Monthly calculations were reviewed from January 2021 through May 2022 with the highest amount of RAP in the mix produced being 33% in April 2022.

Per Special Condition (SC) 2.5 and 2.6, Rieth-Riley Construction Company, Inc. is limited to 895,000 tons of HWMA paving materials per a 12-month rolling time period and no more than 500 tons of HWMA paving materials per hour determined by dividing the total daily production by the hours of operation. Records of the 12-month rolling totals were requested and reviewed for the time period of January 2021 through May 2022. The highest 12-consecutive month rolling HWMA paving material produced occurred during the 12-month period ending in May 2021, when 582,274 HWMA paving material was produced. Daily production totals of HWMA paving materials were reviewed for select months in the 2021 and 2022 paving season. The highest observed daily average was 467 tons per hour that was on July 21, 2021, which is below the permitted limit of 500 tons per hour of HWMA paving materials. Rieth-Riley Construction Company, Inc. appears to be within their permitted 12-month rolling and daily per hour production totals of HWMA paving materials.

The Fugitive Dust Control Plan (Appendix A), the Preventative Maintenance Program for the Fabric Filter Dust Collector (Appendix B), and the Emission Abatement Plan for Startup, Shutdown, and Malfunctions (Appendix C) appeared to be implemented and will be discussed in more detail further in this report. Since Rieth-Riley Construction Company, Inc. only utilizes natural gas as fuel for EUHWMAPLANT, the Compliance Monitoring Plan (CMP) for Recycled Used Oil (RUO) specified in Appendix D is not applicable and was not reviewed during this inspection.

Per SC.VI.3, the permittee shall monitor and record CO data sets upon the start-up of each paving season, upon a malfunction and after every 500 hours of operation. CO data sets were requested and reviewed for the time period of January 2021 through May 2022 Testing was noted to have occurred on April 27, 2021, July 14, 2021, September 14, 2021, November 2, 2021, and April 26, 2022. After further review, the CO data sets appeared to be adequate.

Per SC.VI.5, Rieth-Riley Construction Company, Inc. shall keep records of all significant maintenance activities completed and all significant repairs made to EUHWMAPLANT. Records were provided and reviewed for the time period of January

2021 through May 2022. After further review, the list of records provided appears to be acceptable. It was noted that all bags were changed in the baghouse on March 23, 2022.

Daily records of virgin aggregate feed rates and RAP feed rates were requested and reviewed for select months during the 2021 and 2022 paving seasons. Target temperatures for each mix during production were provided. After further review, it appears that Rieth-Riley Construction Company, Inc. is adequately keeping track of virgin aggregate feed rates, RAP feed rates, asphalt paving material product temperatures and information sufficient to identify all components of the asphalt paving material mixture.

Daily records of fuel usage were requested and provided for select days during the 2021 and 2022 paving season. After further review, it appears that Rieth-Riley Construction Company, Inc. is adequately keeping track of daily natural gas usage rates. One stack is listed in association with EUHWMAPLANT of PTI No. 96-96B. The stack appears to be consistent with PTI No. 96-96B.

EUYARD

This emission unit is for fugitive dust sources including plant roadways, plant yard, material storage piles and material handling operations (excluding cold feed aggregate bins).

Appendix A – Fugitive Dust Control Plan

Records of dust control activities completed were requested for select days during the 2021 and 2022 paving seasons. Rieth-Riley Construction Company, Inc. keeps daily dust activity control records. After further review of the records received, Rieth-Riley Construction Company, Inc. appears to be adequately keeping track of dust control activities.

- **Upon arrival, no fugitive dust was noted on site. After entering the facility and speaking with Mr. Lahaie, Rieth-Riley Construction Company, Inc. utilizes a water truck and sprinkler system to address fugitive emissions from EUYARD. After reviewing records requested and speaking with staff, it was concluded that watering of the site is completed as needed daily. Additionally, Rieth-Riley Construction Company, Inc. contracts Sanisweep to sweep the site on a weekly basis.**

- **Trucks observed during the inspection appeared to be utilizing roll-top covers after loadout prior to exiting the facility.**

- **Storage piles of materials observed appeared to be constructed to limit freefall drop distance. Additionally, no significant emissions were observed from the storage piles.**

- **No overfilling of hoppers was observed during the inspection.**

EUACTANKS

The vapor condensation and recovery system were observed and appeared to be operating properly.

EUSILOS

The emission capture system for the top of the storage silo appeared to be operating in a satisfactorily manner. Load-out during operation consists of one silo loading a vehicle, while the remaining three silos for that specified loading area will remain closed. Additionally, side panels partially covering the sides of the load out area were noted. Emissions collected from the load out area were observed being transported to the burning zone of EUHWMAPLANT.

FGFACILITY

Rieth-Riley Construction Company, Inc. is subject to a CO limit of 89.9 tons per year (tpy) per a 12-month rolling total. Additionally, Rieth-Riley Construction Company, Inc. is subject to an individual HAP limit of less than 9.0 tpy and aggregate HAP limit of less than 22.5 tpy per a 12-month rolling total. Monthly and 12-month rolling total emission records were reviewed for the time period of May 2021 through May 2022. The highest 12-consecutive month rolling total individual HAP emission occurred during the 12-month period ending in May 2021, when 2.9113 tons of Formaldehyde was emitted. The highest 12-consecutive month rolling total emission for aggregate HAPs occurred during the 12-month period ending in May 2021 when 5.9538 tons of HAP was emitted. The highest 12-consecutive month CO emission occurred during the 12-month period ending in June 2021, when 53.58 tons of CO was emitted.

Appendix B – Preventative Maintenance Program for the Fabric Filter Dust Collector

The pressure drop across the fabric filter dust collector was noted to be 1.5 inches of water at the time of the inspection. Pressure drop readings are recorded daily on the daily plant reports. Records were requested for select days for the 2021 and 2022 paving seasons and provided. Upon review, no records of pressure drop recordings were less than 1.0 inch of water, which is the minimum value demonstrating satisfactory operation of the dust collector.

Rieth-Riley Construction Company, Inc. has in place a high temperature sensor and alarm system for the fabric filter dust collector. The high temperature alarm setpoint for the drum exit is 550°F and the temperature observed at the time of the inspection was 295°F. The setpoint for the baghouse inlet high temperature alarm is 450°F and the temperature observed was 250°F. The setpoint for the stack exit high temperature alarm is 330°F and the temperature observed was 230°F.

During the inspection Rieth-Riley Construction Company, Inc. staff showed how particulate dust from the dust collector is collected and transported back to be recycled into the asphalt process. Records were provided for black light inspections completed. Black light inspections were noted to have occurred on April 1, 2021, April 9, 2021, and April 11, 2022. Rieth-Riley Construction Company, Inc. staff stated they have spare bags for the baghouse on site and all the bags were changed out on March 23, 2022.

Appendix C – Emissions Abatement Plan for Startup, Shutdown and Malfunctions

Dates of hot stops and hot starts for the 2021 and 2022 paving season were requested, however no occurrences of hot stops or hot starts occurred during the timeframe covered by this inspection, therefore no documentation was provided. While observing the asphalt plant in operation, there did not appear to be any

significant issues such as cracks, openings, or parts in need of repair. Rieth-Riley Construction Company, Inc. has in stock spare bags as well as blacklight powder and silicone caulk.

Appendix D – Compliance Monitoring Plan (CMP) for Facilities Burning Recycled Used Oil (RUO)

Since the facility only used natural gas, the conditions associated with this appendix are not applicable and were not reviewed during this inspection.

Conclusion

Based on the review of the records provided and the facility walk through, Rieth-Riley Construction Company, Inc. appears to be in compliance with Opt Out PTI No. 96-96B and applicable air pollution control rules.

NAME Michael T. Cox DATE 7/27/2022 SUPERVISOR