

DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION
ACTIVITY REPORT: Scheduled Inspection

B173945755

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: Clay Park, Operator		ACTIVITY DATE: 08/24/2018
STAFF: Adam Shaffer	COMPLIANCE STATUS: Compliance	SOURCE CLASS: SM OPT OUT
SUBJECT: Scheduled unannounced inspection		
RESOLVED COMPLAINTS:		

Air Quality Division (AQD) staff Adam Shaffer (AS) arrived at the Rieth-Riley Construction Company, Inc. (RR) facility located in Grand Rapids, MI at 10:00am on August 24, 2018, to complete a scheduled unannounced inspection.

Facility Description

Prior to entering the facility, off-site odor and visible emissions observations were completed. The weather conditions were high 60°s F, partly cloudy and winds from the south at 5-10mph. An asphalt odor was observed to the north and east of the site, however, no recent odor complaints have been received regarding this facility. Fugitive dust was noted during offsite observations and will be discussed further in this report.

Upon arrival, AQD staff AS met with Mr. Clay Park, Area Plant Supervisor, who provided a tour of the facility, answered site specific questions, and provided select records. All remaining items following the inspection were provided by Mr. John Berscheit, Technical Services Manager.

RR 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. Since the plant does operate with silos, loadout control is required and will be discussed later in this report. The facility is in operation with one Opt-Out Permit to Install (PTI) No. 96-96A 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 Subparts A and I. Conditions for these standards will be discussed further in this report.

A notable change since the 2015 inspection was the installation of an additional hot/warm mix asphalt storage silo under the Rule 289(2)(c) exemption. Documentation dated May 23, 2017, supporting the exemption was provided to AQD staff. Emission controls for all silos on site are discussed further in this report. After further review, the exemption appears to be applicable.

EUHMAPLANT

This emission unit is for the Hot/Warm Mix Asphalt (HWMA) equipment including: Aggregate conveyors, and 500 TPH counter flow unified drying/mixing drum. 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*
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 x 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 x 10 ⁻⁶ lb per ton ^b	Test Protocol*
Nickel	1.0 x 10 ⁻⁴ lb per ton ^b	Test Protocol*
Manganese	3.1 x 10 ⁻⁵ lb per ton ^b	Test Protocol*
<p>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.</p>		

All emission limits for all criteria pollutants and HAPs, except for the 12-month rolling limit for CO, are based on testing. The most recent stack test was completed on August 4, 2015, to verify compliance of PM, CO and opacity. The stack test verified that RR 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 all emission limits previously mentioned will be through continued satisfactory operation of the baghouse and proper combustion.

During the inspection, it was concluded that RR only uses natural gas for EUHWMAPLANT and does not use any asbestos tailings or waste materials containing asbestos.

RR is limited during the asphalt mixing process by EUHWMAPLANT to a maximum of 50% mass of combined RAP and RAS based on a monthly average in the mix produced. Monthly calculations were reviewed from June 2017 through June 2018 with the highest amount of RAP or RAS in the mix produced being 29.21% in June 2017, which is well within the permitted limit.

Per Special Condition (SC) 2.5 and 2.6, RR is not allowed to process more than 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 month of June 2018, 86,740 tons of hot mix asphalt was produced and the 12-month rolling total was 492,459 tons of hot mix asphalt, which is well within the permitted limit. Previous 12-month rolling totals back to June 2017 were reviewed and within the permitted limits. Daily production totals of HWMA paving materials were reviewed for select days in the 2017 and 2018 paving season. The highest observed daily average was 374.02 tons per hour

- appeared to be properly covered.
- No overfilling of hoppers was observed.

EUACTANKS

The vapor condensation and recovery system was 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 satisfactory manner. RR had been previously issued a Violation Notice (VN) dated May 26, 2015, for failing to properly operate the silo load out control. Since then RR has upgraded the load out to where during operation while one silo is loading a vehicle, 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. During the inspection, emissions were observed coming from the sides around the side panels. After further review, it was concluded to not be significant enough for a violation. This was discussed with RR staff and moving forward additional measures shall be implemented if the sides of the enclosure are observed in the future to no longer adequately be containing the emissions. Emissions collected from the load out area were observed being transported to the burning zone of EUHWMAPLANT.

FGFACILITY

RR is subject to a CO limit of 89.9 tons per year (tpy) per a 12-month rolling total. Additionally, RR 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 records were reviewed for all criteria pollutants and HAPS since June 2017. The highest individual HAP observed is benzene. The benzene emissions for June 2018 were 1.0842 tons and the 12-month rolling total was 6.1557 tpy. The 12-month rolling total for aggregate HAPs for June 2018 was 11.12 tpy. Previous monthly and 12-month rolling totals were reviewed and concluded to be within permitted limits. For the month of June 2018, the CO emissions were 8.7173 tons and the 12-month rolling total was 49.49 tpy, which is well within the limit of 89.9 tpy. Previous 12-month rolling totals were reviewed back to June 2017 and concluded to also be within the permitted limits.

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

The pressure drop across the fabric filter dust collector was 3.6 inch per water column 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 2017 and 2018 paving seasons and provided. Upon review, several days were noted to have pressure drop recordings less than 2.0 inch per water column, which is the minimum value demonstrating satisfactory operation of the dust collector. When discussed with RR staff, the range demonstrating satisfactory operation of the dust collector is 1.0-9.0 inch of water column. The permit shall be modified to reflect accurate satisfactory ranges of operation with the pressure drop for the dust collector. This change had been previously stated to RR staff; however, was never completed. After further review, no violation will be issued; however, it was discussed with RR staff that a permit application for this modification to the permit should be submitted by October 19, 2018, or a VN would need to be issued for unsatisfactory operation of the baghouse.

RR 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 312°F. The setpoint for the baghouse inlet high temperature alarm is 450°F and the temperature observed was 266.5°F. The setpoint for the stack exit high temperature alarm is 330°F and the temperature observed was 236°F.

During the inspection RR 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 for the 2017 and 2018 paving season were completed on 04/05/17 and 04/11/18 respectively. Additionally, RR staff stated they have spare bags for the baghouse on site.

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

Dates of hot stops and hot starts for the 2018 paving season were provided. While touring the facility,

that was on May 22, 2017, which is well within the permitted limit of 500 tons per hour of HWMA paving materials. RR appears to be within their permitted 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 RR only utilizes natural gas for EUHWMAPLANT, the Compliance Monitoring Plan (CMP) for RUO specified in Appendix D 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 for the 2017 and 2018 paving seasons and reviewed. Testing had occurred on 04/25/17, 06/21/17, 08/11/17, 10/10/17, 04/26/18, 06/20/18 and 08/20/18. After further review, the CO data sets appeared to be adequate in length, frequency and readings.

Per SC.VI.5, RR shall keep records of all significant maintenance activities completed and all significant repairs made to EUHWMAPLANT. Records back to fall of 2014 were provided. After further review, the list of records provided appears to be acceptable.

Daily records of virgin aggregate feed rates and RAP feed rates were requested and reviewed for select days during the 2018 paving season. Additionally, records for select days were requested and provided identifying what asphalt mixes were produced that day. Target temperatures for each mix during production were provided. In a phone conversation between AQD staff AS and Mr. Berscheit on September 14, 2018, it was concluded that RR is keeping track of daily start and stop times of production for each asphalt mix. After further review, it appears that RR 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 in the 2017 / 2018 paving season. After further review, it appears that RR is adequately keeping track of daily natural gas usage rates. One stack is listed in association with EUHWMAPLANT of PTI No. 96-96A. Though the exact dimensions were not measured, they appear to be consistent with PTI No. 96-96A.

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 in the 2018 paving season. RR keeps daily dust activity control records. After further review of the records received, RR appears to be adequately keeping track of dust control activities.

- Upon arrival, fugitive dust was noted in the southern portions of the site and small amounts of track out from vehicles was noted. After entering the facility and speaking with Mr. Park on this issue, RR staff immediately began watering the site with a watering truck. When leaving the site, watering completed appeared to have addressed the fugitive emissions observed.
- After reviewing records requested and speaking with staff, it was concluded that watering of the site is completed as needed daily. Additionally, RR has Sanisweep sweep the site on a weekly basis. It was discussed with Mr. Park during the site inspection on watering of the site as needed during drier weather conditions instead of only once a day.
- Vehicles observed during the inspection appeared to be driving acceptable speeds of no greater than 10 miles per hour.
- Storage piles of materials observed appeared to be constructed to limit freefall drop distance. Additionally, no significant emissions were observed from stock piles.
- Not all roadways are paved throughout the site. As stated earlier, during the inspection, fugitive dust was noted on roadways. The fugitive dust observed was addressed before leaving the site and it was discussed with RR staff on additional watering as needed on site.
- Speaking with staff, spillage of material appeared to be removed in a timely manner.
- Based on observations made and discussions with staff, vehicles entering and leaving the site

particulate from the asphalt process was observed underneath the drying/mixing drum. RR staff stated that as needed, they take a firehose to water the particulate observed and then it is collected. While observing the asphalt plant in process no significant issues regarding cracks, openings and/or parts in need of repair were noted. RR 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 were not reviewed during this inspection.

Conclusion

Based on the review of the records provided and the facility walk through, RR appears to be in compliance with Opt Out PTI No. 96-96A and applicable air pollution control rules.

NAME Adam F. Shaughnessy DATE 09/20/18 SUPERVISOR 