

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

N138440758

FACILITY: RIETH-RILEY CONSTRUCTION CO., INC.		SRN / ID: N1384
LOCATION: 20251 E 19 MILE RD, BIG RAPIDS		DISTRICT: Grand Rapids
CITY: BIG RAPIDS		COUNTY: MECOSTA
CONTACT: John Berscheit , Technical Services Manager		ACTIVITY DATE: 06/27/2017
STAFF: Tyler Salamasick	COMPLIANCE STATUS: Non Compliance	SOURCE CLASS: SM OPT OUT
SUBJECT: FY 2017 Synthetic Minor (OPT OUT) source inspection.		
RESOLVED COMPLAINTS:		

### Background

Rieth-Riley Construction Company, Inc. (Rieth-Riley) SRN:N1384 is a hot mix asphalt (HMA) batch plant located at 20251 E. 19 Mile Road, Big Rapids, Michigan. Rieth-Riley is located in a primarily rural area with the nearest residential structure approximately 700 feet north west of the facility. The facility was inspected on June 27, 2017 by Tyler Salamasick, Environmental Quality Analyst of the Michigan Department of Environmental Quality, Air Quality Division. The intent of the inspection was to determine the facility's compliance with the Federal Clean Air Act Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act of 1994, PA 451, as amended, Michigan's Air Pollution Control Rules and PTI No. 401-86K (the permit). Rieth-Riley has had three monitoring and record keeping violations in the past five years. Rieth-Riley is a synthetic minor opt out source for hazardous air pollutants (HAPS). This facility is subject to 40 CFR Part 60, Subpart I – "Standards of Performance for Hot Mix Asphalt Facilities".

### Inspection

I conducted a pre-inspection site visit on June 21, 2017. Area Manager, Chad Waldo, was not available during my site inspection. I met with the plant operator, Mike Knuth. Mike was able to answer some of my questions about the plant and its operations but did not have significant insight into the permit, or permit requirements. Mike was also unaware of how to gain access to most of the facility's records required by PTI No. 401-86K. I went to the front office and asked the secretary for a facility contact that could provide me with the required records. She provided me with the contact information for John Bercheit and Kent Warner. John works out of Rieth-Riley's Indiana corporate headquarters. John agreed to meet with me during my full compliance evaluation.

Site arrival was at 10:15 am on June 27, 2017. I made visible emission observations near 20<sup>th</sup> Avenue and 19 Mile Road prior to entering the site. I observed that the facility was operational and I did not observe excessive opacity being emitted from the stack. Upon meeting, I presented my State of Michigan identification card, informed the facility representative of the intent of my inspection and was permitted onto the site. John Berscheit was in the plant when I arrived. John explained the process and how the asphalt plant operated. He also described how the records were recorded and the fact that the records were stored electronically at the corporate office.

### PTI No. 401-86K Requirements

#### Emission unit requirements for EUHMAPLANT

#### Emission Limits

Emission limits for EUHMAPLANT are as follows:

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Pollutant	Limit	Time Period / Operating Scenario	Reported/ Compliant
1. PM	0.04 gr/dscf	Test Protocol*	0.011 gr/dscf (at 200tph/300tph) - Compliant
2. PM	0.04 lb / ton <sup>b</sup>	Test Protocol*	See note**
3. CO	0.2 lb / ton <sup>b</sup>	Test Protocol*	See note**
4. CO	89.0 tpy <sup>a</sup>	12-month rolling time period as determined at the end of each calendar month	21.81 tons as of November 2016- Compliant
5. SO <sub>2</sub>	0.2 lb / ton <sup>b</sup>	Test Protocol*	See note**
6. SO <sub>2</sub>	89.0 tpy <sup>a</sup>	Test Protocol*	9.12 tons 12 month rolling November 2016- Compliant
7. NO <sub>x</sub>	0.12 lb / ton <sup>b</sup>	Test Protocol*	See note**
8. VOC	0.0575 lb / ton <sup>b</sup>	Test Protocol*	See note**
9. Lead	2.0×10 <sup>-6</sup> lb / ton <sup>b</sup>	Test Protocol*	See note**
10. Benzene	0.001 lb / ton <sup>b</sup>	Test Protocol*	See note**
11. Toluene	0.006 lb / ton <sup>b</sup>	Test Protocol*	See note**
12. Ethylbenzene	0.001 lb / ton <sup>b</sup>	Test Protocol*	See note**
13. Xylene	0.001 lb / ton <sup>b</sup>	Test Protocol*	See note**
14. Naphthalene	0.001 lb / ton <sup>b</sup>	Test Protocol*	See note**
15. Formaldehyde	0.01 lb / ton <sup>b</sup>	Test Protocol*	See note**
16. Acrolein	0.001 lb / ton <sup>b</sup>	Test Protocol*	See note**
17. Arsenic	1.0×10 <sup>-6</sup> lb / ton <sup>b</sup>	Test Protocol*	See note**
18. Nickel	1.0×10 <sup>-4</sup> lb / ton <sup>b</sup>	Test Protocol*	See note**
19. H <sub>2</sub> SO <sub>4</sub>	0.0032 lb / ton <sup>b</sup>	Test Protocol*	See note**
20. Manganese	5.0×10 <sup>-5</sup> lb / ton <sup>b</sup>	Test Protocol*	See note**
21. Hydrogen Chloride	0.006 lb / ton <sup>b</sup>	Test Protocol*	See note**

**\*\*Facility bases these emissions on MDEQ MAERS emission factors.**

Reith-Riley is required by the permit to demonstrate compliance with emission limits primarily through testing. Extensive testing has been conducted on asphalt plants in the past. The use of MAERS emission factors is commonly accepted as a method of showing compliance with limits set in HMA permits. The MDEQ Grand Rapids District office does however have one copy of a PM testing submitted by Rieth-Riley. Test results are generally more accepted than MAERS emission factors.

The test was conducted in 2011 on another asphalt plant owned by Rieth-Riley. The plant was similar in design and emitted one quarter of the permitted PM emissions at two thirds the maximum operating rate of the permitted facility. This appears to be an acceptable method of showing compliance. The MDEQ still retains the ability to ask Rieth-Riley to perform stack testing for the specified air contaminants.

#### Material Limits

The permit specifies that Rieth-Riley is not to burn any fuel other than liquid petroleum gas, natural gas, No. 2 through No. 6 fuel oils or Recycled Used Oil (RUO) in the EUHMAPLANT. Rieth-Riley did not have any recycled used oil on site. The plant only operates on natural gas. There was some diesel on site, but this was used to fuel the heavy equipment. The asphalt plant did not appear to have the capability of running on any fuel other than natural gas.

The material limits section requires that Rieth-Riley test any RUO for various metals and other contaminants. The facility is not using RUO at this time; therefore this requirement is not applicable.

Reith-Riley is not allowed to use any asbestos tailings or waste materials containing asbestos in EUHMAPLANT. This is a requirement of 40 CFR Part 61, Subpart M. I am a certified asbestos inspector, and did not observe any suspected regulated asbestos containing materials (RACM) in any of the aggregate piles on site.

This facility has a monthly average recycled asphalt product (RAP) content limit of 50 percent. Rieth-Riley is able to monitor the RAP content continuously on their computer. The facility was running at 26% RAP content. Mike had indicated that the facility does not normally exceed 28% RAP content. The records provided by John indicated an average 12-month rolling RAP content. The permit requires the facility to comply with a monthly average. The highest 12-month rolling RAP content reported was in May of 2016 at 25.12%. I calculated the monthly value for May and the actual RAP content was 25.21%. The facility's average 12-month rolling RAP content varies between 24 and 25 percent. It does not appear that the facility violated their 50% maximum RAP content limit, but they may need to correct their records to better show compliance with PTI No. 401-86K, Special Condition (SC) II.5. The permit does require under SC VI.7 that the facility keeps a record of the average daily RAP content and Rieth-Riley appears to meet the daily record keeping requirement. Rieth-Riley could total the daily values in order to calculate a monthly average to show compliance with SC II.5, though this does not appear to be a requirement of the PTI.

Condition six limits the facility to processing 890,000 tons of HMA paving material in EUHMAPLANT per a 12-month rolling time period. The highest 12-month production was 217,000 tons in the month of November 2016.

The permit required that Reith-Riley not process more than 350 tons of HMA paving material at

the plant based on a 24-hour rolling time period, as determined at the end of each hour. The facility is currently recording the total operational hours and the tons of material produced and calculating an average production rate per month. The highest hourly average as determined each month was in June of 2017 at 170 tons per hour. This is below the 350 tons per hour, but does not indicate a 24-hour rolling time period. Rieth Riley does not appear to be able to show compliance with PTI No. 401-86K, SC II.7. The operator had indicated that the plant cannot operate over 300 tons per hour. If this is correct, the facility may not have exceeded the 350 ton limit, but is not currently demonstrating this with record keeping. PTI No. 401-86K does not specify that Rieth-Riley must maintain records required to demonstrate compliance with this condition. I informed John that this issue will need to be addressed.

#### Process and Operational Restrictions

Rieth-Riley is required to implement the Fugitive Dust Control Plan for EUYARD as described in Appendix A of the permit. The site was damp at the entrance. The facility has water sprays that operate periodically in order to keep the paved section of the property wet. This appeared to effectively wet the main truck driving areas. I did observe some fugitive dust generated by the front-end loader, but it was not significant. The fugitive dust plan required that all areas of the facility where vehicles travel are controlled with dust suppression. In addition to the water spray area, Mike informed me that they did apply chloride as a dust suppressant. Mike also showed me where he records when they apply water. He stated that the watering is usually done in the morning, and then periodically as needed.

Another requirement of the fugitive dust plan requires that all outgoing trucks are required to cover their load prior to leaving the site. I visually observed trucks entering and leaving and they appeared to comply with this requirement.

Part of the process and operational restrictions requires that the facility implements a preventative maintenance plan. Mike showed me records of regular inspections and maintenance of the equipment. He also indicated that the facility undergoes yearly full maintenance inspections.

Rieth-Riley is also required to maintain the efficiency of the EUHMAPLANT drum mix burners in order to control CO emissions. John is responsible for conducting regular CO monitoring at the facility. Rieth-Riley also has staff that tunes the burners per a specified schedule, and as needed.

#### Design and Equipment Parameters

The permit requires that Rieth-Riley shall not operate EUHMAPLANT unless the fabric filter dust collector is installed, maintained, and operated in a satisfactory manner. Satisfactory operation of the fabric filter dust collector requires a pressure drop range between 1 and 9 inches of water column.

The permit also states that the minimum pressure drop shall not be less than 1 inch, water gauge, except when a large number of filter bags have been replaced or another reason acceptable to the AQD. At the time of my first inspection, the facility was operating while the gauge read at zero. This was true for both the differential pressure and the drum pressure gauges. I asked Mike why the pressure drop was below 1" of water column and he indicated that it was always that way. He also stated that he had let the "plant breath" otherwise the burners would not work. Operating the plant at a pressure drop of zero does not comply with the requirements of PTI No. 401-86K. I informed John of this issue prior to the follow up inspection. He had the gauge issue corrected by the time I conducted my second inspection. During my second inspection, the pressure drop was 1.4" of water. He informed me that one of the tubes in the bag house had been clogged, and he believed the bag house had been otherwise operating properly. John provided me with daily records which showed the daily baghouse pressure drop readings of zero on July 15, 2016 and June 16, 2017. In addition to this, Denise Plafcan

of the MDEQ had inspected the facility on September 15, 2015 (inspection report N138431422) and indicated that the baghouse pressure drop was deficient at 0.9 inch water. Rieth-Riley was not complying with the design and equipment parameters as specified in the permit. Rieth-Riley has demonstrated non-compliance with this condition for approximately two years. The facility will receive a violation notice seeking the facility to return to compliance, and demonstrate a plan to prevent non-compliance in the future.

#### Monitoring and Recordkeeping

The facility is required to monitor the virgin aggregate feed rate and the RAP feed rate to EUHMAPLANT on a continuous basis. Rieth-Riley does this with their computer system. The computer continually reads different belt scales as the material is batched. The facility was operating at 300 tons per hour with a 0% RAP content when I assessed this condition. The facility had just switched to a virgin aggregate feed per the requirements of a customer.

Reith-Riley is required to maintain records of CO monitoring conducted upon paving season start up, malfunction of burners, and every 500 hours. John provided me with records and it appears that the facility is complying with this condition of the permit.

The permit requires that Reith-Riley maintain records of the type of fuel used in EUHMAPLANT, the amount used, the sulfur content of fuel oil used, tons of HMA, RAP content and average percent of RAP content. The records indicated that the facility only uses natural gas. Last year the facility used 44,308,153 cubic feet in its burners, and 819,451 cubic feet for its oil heater. The facility does not use fuel oil and their records indicate the value as zero, this appears to be acceptable. Rieth-Riley's total tonnage of HMA produced was addressed in a previous section. RAP content and average RAP percentage was also addressed in a previous section.

Rieth-Riley appears to meet the remaining record requirements set by the permit, unless otherwise specified.

Emission unit requirements for EUYARD were addressed in a previous section. The previous section that covers the intent of EUYARD is Appendix A, the Fugitive Dust Control Plan. It appears that Rieth-Riley complies with the requirements of EUYARD.

#### Flexible group requirements for FGFACILITY

FGFACILITY requires that EUSILO have an emission capture system. The facility utilizes negative pressure to pull the silo smoke back into the drum. This air is then recycled back into the asphalt process. During my inspection, it appeared that there were some fugitive emissions from the stack, though I did not experience any fallout. The apparent visible emissions might have been caused by a poor sun angle. Prior to my site inspection, I have made visible emission observations, and did not observe any emissions other than what appeared to be water vapor.

#### Source wide emission limits for FGFACILITY

Rieth-Riley is limited to a single HAP emission limit of 8.9 tons per 12-month rolling time period and an aggregate HAP limit of 22.4 tons per 12-month rolling time period. The facility's highest single HAP emission was at 0.497 tons per 12-month rolling time period of toluene in November 2016. The facility's highest aggregate HAP emission was 2.3 tons per 12-month rolling time period. Rieth-Riley appears to be in compliance with their source wide HAP limits.

Conclusion

Rieth-Riley is in violation of PTI No. 401-86K, SC IV.1 under EUHMAPLANT for failing to properly maintain and operate the baghouse in a satisfactory manner. Rieth-Riley operated the baghouse with no method of showing compliance with the condition, and no method of addressing the issue. The issue potentially occurred for years without being identified.

Rieth-Riley is also not currently showing compliance with EUHMAPLANT, SC II.6, which requires the facility to meet an hourly average HMA production rate based on a 24-hour rolling time period. The permit does not require record keeping for this condition, therefore this does not appear to be a violation of the permit.

Rieth-Riley appears to show compliance with a monthly average recycled asphalt product RAP content limit of 50 percent. The records kept by Rieth-Riley indicate an average 12-month rolling RAP content while the permit requires the facility to comply with a monthly average. The permit does not specifically require the facility to maintain actual records of a monthly average though; therefore this does not appear to be a violation of PTI No. 401-86K, SC II.5.

It appears that Rieth-Riley is in compliance with all other conditions of PTI No. 401-86K; the federal Clean Air Act; Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act of 1994, PA 451, as amended; and Michigan's Air Pollution Control Rules.

NAME  DATE 7/19/17 SUPERVISOR 