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

| FACILITY: Cadillac Asphalt, LLC | | SRN / ID: N5778 | |
|--|-------------------------------|---------------------------|--|
| LOCATION: 15203 S TELEGRAPH, MONROE | | DISTRICT: Jackson | |
| CITY: MONROE | | COUNTY: MONROE | |
| CONTACT: Susanne Hanf, Environmental Engineer | | ACTIVITY DATE: 05/29/2024 | |
| STAFF: Diane Kavanaugh Vetort | COMPLIANCE STATUS: Compliance | SOURCE CLASS: SM OPT OUT | |
| SUBJECT: Complete scheduled full compliance evaluation (FCE) inspection SM OPT OUT facility. | | | |
| RESOLVED COMPLAINTS: | | | |

N5778 Cadillac Asphalt (former Gerken Facility) is located in the Stoneco Denniston quarry.

Contacts

Sue Hanf, Stoneco of Michigan, 734-854-2265 <u>SHanf@mipmc.com</u> Trevor Albert, Plant Manager Ethan, Stoneco Intern

Background

This facility is located at the Stoneco Denniston Quarry, which is where Cadillac Asphalt procures aggregate used in their final product. The Stoneco Quarry mangages the site/plant area for fugitive dust. Cadillac owns and operates asphalt plants across the State of Michigan. This plant is older, was acquired from Gerken as is, along with its Air Use Permit to Install No. 108-96B. Operations at this plant are seasonal, usually starting in April/May and shutting down around December.

This facility reports annually to the Michigan Air Emissions Reporting System, now MiENVIRO, to report annual emissions pursuant to limits set out in their PTI 108-96B and as a Synthetic Minor Opt-out source for Carbon Monoxide (CO) criteria pollutant and hazardous air pollutants (HAPS). This facility was last inspected on 8/13/2020 and determined to be in noncompliance at that time due to an emission limit exceedance. This was corrected through the permit revision process and the current -96B revision.

PURPOSE & PRE INSPECTION

The Michigan Department of Environment Great Lakes & Energy (EGLE) Air Quality Division (AQD) conducted a scheduled full compliance evaluation (FCE) announced inspection of the Cadillac asphalt plant facility and equipment identified in Permit to Install (PTI) 108-96B. The purpose of the inspection is to determine the facility's compliance with state and federal applicable regulations including the Michigan Air Pollution Control Act 451, Part 55, the administrative rules, the conditions of their permit, and the federal New Source Performance Standard (NSPS) 40 CFR Part 60, Subparts A & I Standards of Performance for Hot Mix Asphalt Facilities.

Upon my arrival on site at about 9:15 AM, I did not observe significant fugitive dust or track out at the entrance. I met Sue Hanf and intern Ethan in the office and stated the purpose of the inspection. We conducted a pre-inspection interview in the Stoneco Denniston main office. I then rode with Sue and Ethan down to the Cadillac plant located nearby in the quarry. From there we entered the control room at the plant and met with Trevor Albert, Plant Manger. We discussed current conditions, maintenance, and some recordkeeping. Sue, Ethan and I took a walk around the aggregate storage, the baghouse, the liquid asphalt tanks, the asphalt drum plant and the conveyor to the silos and load out area. I learned the plant produced asphalt earlier today and was currently in a "hot stop" pending additional customers. Some time later we were able to observe several trucks loading finished material (discussed below). I observed the numerous pieces of equipment comprising the plant. All equipment appeared to be in working order and was operational today.

While in the Control Room, Trevor pointed out and I observed the baghouse pressure drop gauge and the control for its operation. The baghouse was running because they produced asphalt this morning however the drum mixer was not currently running. Trevor explained they started up at @7:00 AM and they are on hot stand by/shut down due to light rain and it is unknown if/when customers will arrive for product.

PTI 108-96B EU15

This is the emission unit (EU) for the hot mix asphalt (HMA) plant #15. It has a 415 tons per hour counterflow mix drum. Each silo holds about 3000 tons of asphalt. Trevor said they have (3) mixes and currently each silo has some material in them. Operations are normally @6 AM to 10 PM. Cadillac records indicate they are in compliance with the limit of 500,000 tons of asphalt paving material per 12-month rolling time period. They track recycled asphalt pavement (RAP) blend ratio, natural gas use, and other aggregate use. The blend rate for RAP is set at a maximum of 50%, though the company appears to blend at about a 30% level. No asbestos containing waste is used in the production of their product. They are limited to 415 tons of HMA paving materials in an hour. They are not to operate more than 1250 hours per 12 month rolling time period.

Records were obtained and reviewed following the inspection. Cadillac's Raw Material 2024 (Air Log record) verifies the tons per hours (tph), RAP %, and hours per 12 month rolling time period. The highest hourly throughput in the past 12 months was September 2023 at 230 tph <415 tph. Cadillac did not crush RAP during 2022-2024 seasons. They do use 3rd parties, Thompson Recycle and Stateline Crushing, to come onsite to crush RAP. Hours of operation during prior 12 month period ending May 2024 is 393 hrs < 1250 hrs. I requested the specific RAP information from Sue following the inspection. On 6/25 she emailed this to me (see copied emails at bottom of report). Cadillac appears to be in compliance with these limits.

The Plant's burner tune-up is contracted out. And although this EU allows for the combustion of No. 2 fuel oil, the facility has only been using natural gas. During the inspection I learned that Cadillac is <u>late conducting the CO burner reading</u>. Sue explained they have two devices required to be calibrated annually and the contractor is usually hard to schedule at the beginning of the season. Following the inspection she scheduled this testing for June 7, and sent me the results on June 8. Readings indicate compliance. **This is noted as a compliance concern requiring verification next season**. Cadillac was advised to calibrate devices earlier and they will need to conduct and submit this documentation and the sampling record at the start of Season 2025 for verification.

| 1. рм | 0.04 gr/dscf | Houriy |
|--------------------|--|--------|
| 2. PM10 | 0.27 lb/ton ^{a,b} | Hourly |
| 3. CO | 0.198 lb/ton ^b | Hourly |
| 4. SO ₂ | 0.056 lb/ton | Hourly |
| 5. NO _x | 0.075 lb/ton | Hourly |
| 6. Lead | 2.02 x 10 ⁻⁶ lb/ton ^{b, 1} | Hourly |
| 7. Benzene | 0.001 lb/ton ^{b,1} | Hourly |
| 8. Toluene | 0.006 lb/ton ^{b,1} | Hourly |
| 9. Ethylbenzene | 0.001 lb/ton ^{b,1} | Hourly |
| 10. Xylene | 0.001 lb/ton ^{b,1} | Hourly |
| | | |

I observed the baghouse is installed at the plant as required by this EU to control particulate matter (PM) and numerous other pollutants. Cadillac's PTI contains the following limits:

| 11. Naphthalene | 0.001 lb/ton ^{b,1} | Hourly |
|------------------------------------|--|--------|
| 12. Formaldehyde | 0.01 lb/ton ^{b,1} | Hourly |
| 13. Acrolein | 0.0008 lb/ton ^{b,1} | Hourly |
| 14. Arsenic | 1.5x10 ⁻⁶ lb/ton ^{b,1} | Hourly |
| 15. Nickel | 0.0001 lb/ton ^{b,1} | Hourly |
| 16. H ₂ SO ₄ | 0.007 lb/ton ^{b,1} | Hourly |
| 17. Manganese | 5.0x10 ⁻⁵ lb/ton ^{b,1} | Hourly |

[Footnote a = PM2.5 emissions are restricted by PM10 emission limit. Footnote b = Pound pollutant per ton of HMA paving materials produced. Footnote 1 is for state only enforceable condition.]

When we first arrived at the plant I was informed it was in a "hot stop" in operation and a short time later began fully operating during my visit. The pressure drop gauge is set at 3-5 inches of water. PTI requires 2-11 with specific corrective action if below 2 or above 11. Per Trevor they have replacement filter bags, I observed during the prior inspection kept in a trailer on site, in the event they need to be replaced.

The permit contains (3) Appendices: A: Fugitive Dust Control Plan; B: Preventative Maintenance Control Program for the Fabric Filter Dust Collector; C: Emission Abatement for Startup Shutdown Malfunctions. It appears that the majority of the conditions of the Appendices are being adhered to. There are some concerns regarding Baghouse monitoring and maintenance recordkeeping. I sent a follow up email to Sue with specific concerns and requested recordkeeping updates (copied portions below). Sue replied and addressed these items.

The Blue Smoke filter control on the HMA storage silos and loadout were also identified to have monitoring and maintenance concerns as well. These were communicated to Sue/Cadillac in the same email(s). There are specific permit conditions related to this. It is not directly identified in the Appendices other than Appendix C: Drum Mix and Batch- normal startup procedures, Mix Temperature.

Overall some supporting record keeping items require improvement and these were communicated to Sue Hanf / Cadillac following my receipt and review of their Air Log spreadsheet.

EUYARD

This is the EU that addresses potential fugitive dust sources from facility roadways, plant yard, storage piles, and material handling. Visible emissions are being controlled on site through the use of the Fugitive Dust Program in Appendix B of the PTI. Records received indicate the logs are being kept, which includes daily visible emissions (VE) checks on all facility operations.

No VEs from the Cadillac area yard or aggregate storage piles were observed during the inspection.

EUACTANKS

This is the EU for liquid asphalt cement storage tanks. I observed that the horizontal tank has a vapor condensor. Per Sue, this is a 1996 Condensors /vapor recovery system installed on one end of the liquid asphalt horizontal storage tank, thus demonstrating compliance.

EUSILOS

This is the EU for the (3) 3000 ton capacity silos used to store asphalt paving materials produced as product from the facility. From ground level, I observed some structures on top of each silo. During truck load out I observed visible emission of what appeared to be white/blue smoke at the top of the silos. The smoke emission capture system did not appear to be operating properly. The smoke was continuous during load outs. This is connected to the asphalt material conveyor to silo loading.

At the same time, I observed on one side of the customer drive through under the silos for loading, Cadillac operates a Blue Smoke filter system. It consists of a filter box with several ducts and three pick up hoods, one at each end and one in the center of the drive through. I observed some blue smoke emission and odors while in this area. Sue said it is not meant to be 100% capture. Due to this observation I advised Cadillac to inspect and assure it is installed and operating properly. I observed that the hood on the exit is damaged (also photo attached) and I advised Sue it needs to be repaired or replaced.

Records Summary

At the closing conference I requested Cadillac's material usage, throughput and emissions records for the last two years 2022 and 2023. This is a seasonal operation and 2024 season had just begun in May 2024 with minimal operations in April. Following additional email correspondence related to records, Sue ended up also sending me the Air Records spreadsheet for the 2024 season todate. We discussed that the CO Burner testing would be scheduled as soon as possible and she would follow up with the test date and the results. We agreed that Cadillac will inspect the Blue Smoke filters at load out and on top of the silos.

Sue Hanf, Stoneco/Cadillac submitted the following records and information by email on 6/5/24: 1. Air Record Log from 2022 to present. Includes all the production records, Natural gas readings, Maintenance records, CO readings, and emission calculations. (This is an Xcel spreadsheet)

2. Daily Production Sheet: See attached sheet that contains production for the day, mix information and mix change times. Trevor will be adding times for mix changes, since we cannot print them from the computer program that runs the plant. (This was a separate sheet/chart)

3. Pictures of the Blue Smoke filter system. There are 2 systems controlling the loadout area.

- Top of silos is controlled by pulling air back into the burner of the plant through. Upon inspections the motor was not running at it should have been. They replaced the drive on the motor to improve suction. We believe that is why emissions were visible at the top of the silos.

- Blue smoke filter system that draws in from each end of the truck loadout area and at the center. Note this was working properly during your visit. The filters were checked and the system was inspected and appeared to be operating properly.

Please keep in mind that the system is not 100% control. Even at our newer facility's which have longer side enclosures - the system is not a closed system and cannot be 100% controlled. Wind direction will impact the effectiveness. Also, we cannot completely enclose the system for safety reasons - the driver needs to be able to vacate or drive out in an emergency situation.

Other items we discussed:

CO Reading at startup: The CO reading at start up is scheduled for this Friday. (June 7th)

The plant did not really get running until May 20. We have several meters that are 1-2 years old and only one was operational (because of their age, they were sent for maintenance last November). The meters have been sent out for maintenance and going forward will be sent out in November every year for maintenance/calibration, so they are ready for next year's startup. We have Mike Pettaglia, a contractor, helping us with the CO reading and he was available this Friday to come out. When you have short run times, like this plant typically does, it does not make scheduling easy. There are only 2 full time employees at this location and that can make it difficult to get the readings without the help of a third person.

I replied by email dated June 12, 2024, with the status of my review, included comments, concerns, and requests for action items, and additional information / records. The focus is on air pollution controls and support documentation of monitoring and maintenance. I determined that it is necessary for AQD to require Cadillac submit CO monitor calibrations and testing result for start up of season 2025 in order to verify ongoing compliance. AQD will also require photo of repair to blue smoke control equipment as soon as completed.

On June 13, 2024, Sue Hanf responded to my email with mark-up and additional information. Some items were addressed and others remain pending. On June 17, 2024 I replied to clarify several compliance areas and identified what has been addressed and what remains pending. I requested compliance action items be addressed or agreed to and that further conversations by phone might be preferred.

On June 24, 2024, Sue arranged a TEAMS call including Dave Gaedcke and Aaron Roll, to discuss record log and pending items. We agreed to some clarifying changes and additions to Cadillac's log. They agreed to send some verification of new monitoring device on baghouse, hood replacement on Blue Smoke filter unit, and calibration of CO devices. We agreed Cadillac will submit CO burner calibration calibration and results at start of 2025 season to verify completed timely.

On June 25, 2024, Sue submitted remaining items discussed during call with (3) pdf attached MGauge package slip 2024, 6 2024 Battaglia Calibration letter, Ecom-D Combustion Analyzer Calibration 6 2024.

"Here are three of the items I owe you.

- 1. Attached in the Magnehelic Guage receipt showing we purchased a new one and it will be installed today
- 2. RAP crusher dates below: Date is date they left arrival would have been 3-4 days prior to these dates
- 3. CO calibration Meter: See attached from the consultant"

State Line Crushing Dates

2022: 10/25/2022 (11,215 tons),

2023: 7/18/2023 (17689 tons),

Thompson Recycle Company

2022: 2/28/2022(13804 tons), 7/15/2022(13,453 tons),

2023: 10/24/2023 (8329 tons)

2024: 5/14/2024 (8932 tons)

COMPLIANCE SUMMARY

AQD has determined upon review of all information received and the mutually agreed to updates and changes to the plant and Air Log, that Cadillac Asphalt, is in substantial compliance with the applicable federal and state regulations and the conditions of their PTI No. 108-96B at this time.

All records and correspondence are attached to this report placed in the AQD plant files.



Image 1(Plant 1 5-29-24) : View from south near liquid asphalt tanks



Image 2(Plant 2 5-29-24) : View of counter flow drum mix and conveyor to storage silos and baghouse (left)



Image 3(Plant 3 5-29-24) : Asphalt storage silos and conveyor from drum mix plant



Image 4(Plant 4 5-29-24) : Wide view of entire plant

NAME <u>*diane Kavanaugh Vetort*</u> DATE <u>07/01/2024</u> SUPERVISOR_

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