DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION
ACTIVITY REPORT: Self Initiated Inspection

N559750287

FACILITY: Ace-Saginaw Paving Co. - Plant 4		**SRN / ID:** N5597
LOCATION: 2747 Priemer Road, UBLY		**DISTRICT:** Saginaw Bay
CITY: UBLY		**COUNTY:** HURON
CONTACT: David Gohn , Sales/Plant Manager		**ACTIVITY DATE:** 08/21/2019
STAFF: Matthew Karl	**COMPLIANCE STATUS:** Compliance	**SOURCE CLASS:** SM OPT OUT
SUBJECT: Self initiated inspection to determine compliance with PTI No. 156-95N.		
RESOLVED COMPLAINTS:		

On Wednesday (8/21/19) I (Matt Karl) conducted a compliance inspection at the Ace-Saginaw Paving Company – Plant 4 located at 2747 Priemer Road, Ubly, Michigan. The purpose of the inspection was to determine compliance with the Federal Clean Air Act; Article II, Part 55, Air Pollution Control of Natural Resources and Environmental Protection Act, 1994 Public Act 451; Michigan Department of Environment, Great Lakes and Energy, Air Quality Division (EGLE-AQD) Administrative Rules; Title V Opt-Out Permit-to-Install (PTI) No. 156-95N. Mr. Matt Seamon assisted me during my on-site inspection and Mr. David Gohn and Ms. Alicia Ramsdell assisted me by providing requested records.

Facility Description

The Ace-Saginaw Paving Company – Plant 4 facility owns and operates a portable hot mix asphalt (HMA) plant. Emission unit EU001 consists of aggregate conveyors, a rotary drum-dryer rated at 425 tons per hour (330 TPH actual), 135 MMBtu/hour recycled used oil (RUO) fired burner with a pre-heater system; a 20,000-gallon storage tank. Emissions from EU001 are controlled by a fabric filter dust collector (baghouse). Emission unit EUYARD consists of fugitive dust sources such as the plant yard and roads and material storage piles and handling operations. Emission unit EUACTANKS consist of liquid asphalt cement storage tanks. Emission unit EUSILOS consists of two HMA paving material product storage silos. The flexible group FGFACILITY covers all of the equipment at the facility and contains individual and aggregate hazardous air pollutants (HAPs) Opt-Out limits to keep the facility below the Title V Major Source thresholds.

Site Inspection

I arrived on site at approximately 2:00 pm. At the time of my inspection, the portable HMA plant was operating. I noted a detached steam plume coming from the HMA plant stack (SVHMAPLANT) which did not appear to have a particulate matter load in excess of 20% opacity. Due to the poor weather conditions (overcast and sprinkling, turning to rain) at the time of my inspection, I did not conduct a USEPA Method 9 visible emissions survey. I noted no objectionable odors as I approached the facility. I met with operator Matt Seamon in the operator booth. I shared the records request I had prepared with Matt Seamon, and he provided me access to the recordkeeping folders he had in the operator booth.

I began by reviewing the "CO Receipts Folder" records. EU001 special conditions (SC) 1.17 and 1.24 specify that the permittee shall use a handheld CO monitor to record CO emissions consisting of at least eight separate CO readings taken over a total time period of 30 minutes or longer upon the start-up of each paving season, malfunction of the drum dryer or its associated burner and after every 500 hours of operation. I've summarized the records in the "CO Receipts Folder" in the tables below.

Receipt No.	Date	Time	CO reading (ppm)	CO reference (ppm)
1	5/11/19	1:01 pm	92	167

*Incomplete record because CO monitor receipt printer malfunctioned.

Receipt No.	Date	Time	CO reading (ppm)	CO reference (ppm)
1	6/11/19	10:51 am	81	140
2	6/11/19	10:53 am	91	159
3	6/11/19	11:03 am	65	110
4	6/11/19	11:05 am	66	110
5	6/11/19	11:16 am	85	146
6	6/11/19	11:29 am	57	97
7	6/11/19	11:38 am	51	87

*Appears to be incomplete record, only 7 of 8 required receipts available.

Receipt No.	Date	Time	CO reading (ppm)	CO reference (ppm)
1	7/31/19	11:20 am	167	442
2	7/31/19	11:24 am	183	466
3	7/31/19	11:29 am	176	428
4	7/31/19	11:35 am	157	382
5	7/31/19	11:41 am	173	416
6	7/31/19	11:47 am	113	251
7	7/31/19	11:57 am	144	317
8	7/31/19	12:10 pm	114	246

I informed Matt Seamon that I would follow up with David Gohn to try to get the complete CO monitoring records and find out the relevant production data associated with the time the emissions data were collected.

Next, I discussed with Matt Seamon if any maintenance had been done recently on the fabric filter dust collector (baghouse). Matt Seamon informed me that he did not think that any maintenance had been performed on the baghouse in the 2019 season to date. He informed me that they keep an inventory of 38 replacement bags on site if maintenance is required. He also showed me the daily production recordkeeping spreadsheet template, which contains space for the "Air Permit Maintenance- REQUIRED DAILY" an example of which I've included below:

Air Permit Maintenance – REQUIRED DAILY						
	Yes	No		Time		
Stack Opacity			Emission exceeds 20% opacity			
Excess Emission			Continued for more than 2 hours			
Burner			Fine Tuning			
Baghouse			Inspection			
Bags Replaced			MUST DOCUMENT BAG LOCATION ON BAG DIAGRAM TAB			
Bag Press. Drop In/H2O			# of Bags changed		Bags in Inventory	

Matt Seamon informed me that he was not certified to perform USEPA Method 9 visible emissions surveys and admitted that he had previously mis-read the steam plume and indicated >20% opacity on previous daily production recordkeeping spreadsheets. He informed me that they had recently had internal company environmental staff visit the site to provide him some guidance on how to more accurately grade the emissions and fill out the air permit maintenance section.

Next, I reviewed the document in the "2019 Oil Analytical Folder". EU001 SC 1.3 and 1.21 specify that the permittee shall verify that they will not burn any blended fuel oil or specification RUO containing any contaminant that exceeds permitted concentrations or for which the flash point, ash content or acidity vary from the permitted standards. The permittee shall keep monthly records for the identification, type and amount of all fuel oils combusted, including the sulfur content (percent by weight), specific gravity, flash point, and higher heating value (Btu/lb) as well as other relevant production records.

The "2019 Oil Analytical Folder" contained a Summit Environmental Technologies Inc. report dated 6/19/19 for a sample collected on 6/18/19. I've summarized the report results in the table below.

Parameter	Reported Value	Permit Limit
Arsenic	<1.00 ppm	5.0 ppm
Cadmium	<0.100 ppm	2.0 ppm
Chromium	<4.00 ppm	10.0 ppm
Lead	4.49 ppm	100.0 ppm
API Gravity	31.2	-
Ash	0.58%	1.0%
BTU/gal	133,955	-
BTU/lb	18,497	17,000 BTU/lb
Total Halogen	<200 ppm	4,000 ppm
Water	0.330%	-
Specific Gravity	0.8697	-
% Sulfur	0.2090%	1.5%
Total PCBs	<1.00 ppm	1.0 ppm
pH	6.0	4 < pH < 10

Finally, I reviewed the control panel in the operator booth at approximately 2:51 pm. I've summarized my observations in the table below:

Control Panel Parameter	Control Panel Value
Production	202 TPH
Asphalt	11.2 TPH
Aggregate	150 TPH
Recycle	43 TPH
Recycle A/C	2.2 TPH
Asphalt Temperature	289 °F
Mix Temperature	311 °F
Baghouse Magnahelic	2.4 to 3.2" W.C.

I informed Matt Seamon that I would forward my records request to David Gohn. Matt Seamon provided me with an updated phone number for David Gohn. I departed the site at approximately 3:00 pm.

Records Review

I sent a records request to David Gohn via email on Thursday (8/22/19). David Gohn responded to me with several emails containing the records listed below:

CO Records	Fuel Records	Maintenance Records	Production Records
· 5-3-19.xls · 5-11-19.xls · 6-11-19.xls	· Ubly April 2019 Fuel-Log.xls · Ubly May 2019 Fuel-Log.xls · Ubly June 2019 Fuel-Log.xls · Ubly July 2019 Fuel-Log.xls · Ubly August 2019 Fuel-Log.xls	· 1-28-19.xls · 1-29-19.xls · 2-26-19.xls · 2-27-19.xls · 2-28-19.xls · 4-1-19.xls · 4-2-19.xls · 4-5-19.xls · 4-18-19.xls · 4-19-19.xls · 4-22-19.xls · 5-3-19.xls · 5-8-19.xls · 5-11-19.xls · 6-6-19.xls · 6-11-19.xls · 7-12-19.xls · 7-16-19.xls · 7-24-19.xls · 7-31-19.xls · 8-8-19.xls · 8-12-19.xls	· Ubly 2019 Production usage report.xls

I reviewed the following CO records present in the daily production records. I've included the CO reading table as it appears in the daily production record spreadsheet:

5/3/19 CO (PPM) (8 readings in minimum 30 min. time)				
Start Time:	8:00am	Stop Time:	8:20am	
#1	192	#5	215	TPH
#2	204	#6	-*	175
#3	187	#7	-*	Mix Code
#4	198	#8	-*	1686

* Incomplete record because CO monitor receipt printer malfunctioned.

5/8/19 CO (PPM) (8 readings in minimum 30 min. time)				
Start Time:	8:45am	Stop Time:	9:35am	
#1	189	#5	188	TPH
#2	196	#6	191	200
#3	192	#7	184	Mix Code
#4	204	#8	188	1785*

*It appears mix code 1686 was produced on 5/8/19, not 1785.

5/11/19 CO (PPM) (8 readings in minimum 30 min. time)				
Start Time:	12:30pm	Stop Time:	1:00pm	
#1	69	#5	90	TPH
#2	75	#6	90	210
#3	75	#7	92	Mix Code
#4	84	#8	92	1686

6/6/19 CO (PPM) (8 readings in minimum 30 min. time)				
Start Time:	8:00am	Stop Time:	9:00am	
#1	164	#5	178	TPH
#2	169	#6	167	200
#3	160	#7	172	Mix Code
#4	173	#8	170	1686

6/11/19 CO (PPM) (8 readings in minimum 30 min. time)				
Start Time:	9:30am	Stop Time:	10:30am	
#1	81	#5	85	TPH
#2	91	#6	57	200
#3	65	#7	51	Mix Code
#4	66	#8	54	1687

7/16/19 CO (PPM) (8 readings in minimum 30 min. time)				
Start Time:	11:00am	Stop Time:	11:45am	
#1	145	#5	148	TPH
#2	140	#6	152	215
#3	151	#7	152	Mix Code
#4	154	#8	151	1686

7/24/19 CO (PPM) (8 readings in minimum 30 min. time)				
Start Time:	7:30am	Stop Time:	8:30am	
#1	133	#5	132	TPH
#2	138	#6	141	225
#3	141	#7	136	Mix Code
#4	140	#8	135	1686

7/31/19 CO (PPM) (8 readings in minimum 30 min. time)				
Start Time:	11:20am	Stop Time:	12:00am*	
#1	167	#5	173	TPH
#2	183	#6	113	180
#3	176	#7	144	Mix Code
#4	157	#8	114	1785**

*Should be pm

** It appears mix code 1686 was produced on 7/31/19, not 1785.

Based on my review of the CO records, it appears that there are several areas for improvement. First, the receipts should be kept up to date and organized in the "CO Receipts Folder" present in the operator booth on site. In the daily production records, close attention should be paid to when readings are collected (i.e. am vs. pm, see 7/31/19) and the mix code being produced during readings (1785 vs 1686, see 5/8 and 7/31/19). Although an incomplete record was collected during plant start-up on 5/3/19, a complete record was collected on 5/8/19 and it appears that monitoring and recordkeeping conditions EU001 SC 1.17 and 1.24 were being met.

I reviewed the Fuel-Log records from April through August 20, 2019. These spreadsheets contain the information for the RUO to show compliance with EU001 SC 1.21. These spreadsheets contain the supplier name, amount received (gallons), amount combusted (gallons), total halogens (ppm), higher heating value, flash point (°F), and sulfur content (% wt). The company receives RUO from supplier Vesco Oil in 11,000-gallon shipments. I've included the amounts of RUO received and burned over the time period of the records reviewed in the table below.

Month-Year	Amount RUO Received (gallons)	Amount RUO Combusted (gallons)
April-2019	11,000	0
May-2019	33,000	46,623
June-2019	77,000	74,760

July-2019	77,000	78,777
August-2019	33,000	46,845

The total halogens ranged from 200 to 1,000 ppm over the period of records reviewed which are well below the EU001 SC 1.3 material limit of 4,000 ppm. The higher heating value columns contains the higher heating value in Btu per gallon and the specific gravity (S.G.), but left the column for Btu per pound blank, which should be filled in for future records. I converted the Btu per gallon to Btu per pound by dividing the Btu/gallon by the RUO S.G. multiplied by the S.G. of water (8.345 lbs./gallon). Over this time period higher heating value ranged from ~17,379-18,869 Btu/lbs. which is compliance with the Appendix C material limit of 17,000 Btu per pound minimum. The flash point ranged from 189-200 °F which are well above the minimum flash point of 100.0 °F specified in EU001 SC 1.3. The sulfur content ranged from 0.17 to 0.21 weight % which are well above the maximum sulfur content of 1.5 weight % specified in EU001 SC 1.3.

I reviewed the Production Records. The production records spanned from the plant start up on 5/3/19 through 8/20/19. I've included a summary of the production records required to show compliance with EU001 SC 1.21(c) in the table below:

Month-Year	Amount HMA produced (tons)	Amount RAP Used (tons)	% RAP
May-2019	21,938.95	4,625	21.08
June-2019	34,396	7,250	21.08
July-2019	39,044	8,231	21.08
August-2019	20,356	4,845	23.80

These records show that the requirements of EU001 SC 1.21(c) are being met. The % RAP used is also well below the material limit of 50% RAP specified in EU001 SC 1.5. Based on the Michigan Air Emissions Reporting System (MAERS) report from 2018, EU001 produced 144,290 tons of HMA, which is well below the material limit of 750,000 tons/12 month rolling time period of HMA specified in EU001 SC 1.6. In 2018, the facility had achieved 75% of the years production by the end of August 2018 (~108,217.5 tons). Based on the records received for 2019, the facility has produced 115,734.95 tons HMA and it appears that it will be well below the material limit of 750,000 tons of HMA/12 month rolling time period specified in EU001 SC 1.6. Based on the production records reviewed, EU001 processed between 128-238 tons/hour HMA, which is well below the material limit of 425 tons/hour HMA specified in EU001 SC 1.7. It appears that over the period of records reviewed the fabric filter dust collector was operated within a pressure drop range of 2.7-5.1" W.C., which is following the process/operational limit of 2-10" W.C. specified in EU001 SC 1.12.

I reviewed the MAERS 2018 report to determine compliance with the criteria pollutant and HAPs emission limits. Criteria pollutants are from the MAERS 2018 report, and HAPs were calculated based on 144,290 tons HMA produced using the EU001 SC 1.1 emission limits. Based on my review, it appears that the facility is complying with the EU001 SC 1.1 emission limits as well as the FGFACILITY SC 5.1 emission limits. I've included a summary of the emissions in the table below.

Criteria Pollutants	Reported Value (TPY)	Permit Limit (TPY)
CO	9.558	75.4
Lead (Pb)	0.001	8.9
NOx	4.100	-
PM-10	2.828	19.1
SOx	0.832	-
VOC	3.457	-
HAPs	Calculated Value (TPY)	Permit Limit (TPY)
Acrolein	0.014	8.9
Arsenic	4.040 x 10^-5	8.9
Benzene	0.028	8.9
Ethylbenzene	0.017	8.9
Formaldehyde	0.224	8.9
Manganese	0.001	8.9
Naphthalene	0.047	8.9
Nickel	0.005	8.9
Sulfuric Acid Mist (H2SO4)	0.231	8.9
Toluene	0.209	8.9
Xylene	0.026	8.9
Hydrogen Chloride	0.433	8.9
Total HAPs	1.236	22.4

I reviewed the Maintenance records for the facility from 2/26/19 through 8/12/19. The purpose was to confirm compliance with EU001 SC 1.20 which requires the owner or operator to maintain a log of all significant maintenance activities conducted and all significant repairs made to EU001. I've summarized the maintenance relevant to the fabric filter dust collector (baghouse) and drum mixer/burner below.

Date	Equipment ID	Description of work performed
2/26/19	MDR6	Cut out old flights; install new flights; weld burner tube.
2/27/19	MDR6	Finish flights in drum.
2/27/19	BUR20	Install new bracket for electrical box; install new regulating valve for RUO.
2/28/19	BUR20	Change fuel filter on boiler and direct fire burners, adjust belts, clean screen hot oil.
4/1/19	MDR6	Cut steel, install new flanges for thermal insulation on (the) inside of (the) burner.
4/2/19	MDR6	Finish insulation repair flame eyes weld and repair bolts on flights.
4/5/19	BUR20	Install gauges and repairs on hot oil heater.
4/5/19	TNK66	Install gauges and new fittings on RUO heat log.
4/18/19	MDR6	Work on burner, fire up plant and adjust burner air and nozzle.
4/19/19	BUR20	Repair fittings on boiler.
4/19/19	MDR6	Install new regulator on pilot for burner.
4/22/19	DC18	Inspect baghouse (black light inspection): bags were determined to be in good condition, no bags were changed out. Bolt down all doors on baghouse.
5/3/19		Plant Startup.
7/12/19	PLT-116	Replaced bearing on baghouse.
7/24/19	PLT-116	Replaced bearing on baghouse.
8/8/19	PLT-116	Change batcher cylinder, clean and inspect mixing drum.
8/12/19	PLT-116	Changed sprockets on the baghouse.

Based on my review of the above maintenance records it appears that the EU001 SC 1.20 recordkeeping requirement is being met.

Summary

Based on my site inspection and review of records, it appears that the Ace-Saginaw Asphalt Paving Company – Plant 4 is in compliance with the requirements of PTI No. 156-9N.

NAME Matthew N. Karl DATE 9/9/19 SUPERVISOR C. Hare