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

B199134292		
FACILITY: GM LLC Saginaw Metal Casting Operations		SRN / ID: B1991
LOCATION: 1629 N. WASHINGTON, SAGINAW		DISTRICT: Saginaw Bay
CITY: SAGINAW		COUNTY: SAGINAW
CONTACT: Renee Mietz, Env. Engineer		ACTIVITY DATE: 04/12/2016
STAFF: Sydney Bruestle COMPLIANCE STATUS: Compliance		SOURCE CLASS: MAJOR
SUBJECT: Scheduled inspection to determine compliance with ROP-B1991-2015a and PTI 36-12 E along with all other applicable stat		
and federal air regulations.		
RESOLVED COMPLAINTS:		

I Sydney Bruestle conducted an onsite inspection of General Motors, LLC- Saginaw Metal Casting Operations (GM-SMCO) on April 12th and 13th, 2016 to evaluate compliance with MI-ROP-B1991-2015a, PTI 36-12E, and all other applicable state and federal air regulations. GM-SMCO is located at 1629 North Washington St. in Saginaw, Michigan. The facility operates an aluminum casting foundry for the production of engine blocks and heads for the automotive market. Currently, GM-SMCO operates three different cast lines; a green sand aluminum cast line, a precision sand aluminum cast line, and a semipermanent molding aluminum cast line. The site has pre-machining, sand handling and casting, aluminum melting, pouring, cooling and cast finishing.

GM-SMCO is subject to 40 CFR, part 70 because the potential to emit nitrogen oxides (NOx), carbon monoxide (CO), and volatile organic compounds (VOC), and particulate matter (PM) exceeds 100 tons. The source is also considered a major source for Hazardous Air pollutants (HAPs) because the potential to emit any single HAP is greater then 10 tons per year and the potential to emit all HAPs combined is greater than 25 tons per year. GM-SMCO is subject to Prevention of Significant Deterioration (PSD) (40 CFR 52.21) regulations because the source has the potential to emit NOx, CO, VOC and PM greater than 250 tons per year.

Onsite I met with Renee Mietz (Sr. Environmental Manager) and Karen Carlson (Senior Environmental Engineer). They presented me with emission/operation records and walked me through each process. Records were reviewed onsite. The following tables show the permit requirements for each emission unit or flexible group and how GM SMCO was in compliance at the time of my inspection. Some supporting records are attached.

Emission Unit: EU-6ML-EF-01, EU-6ML-EF-02

#6 Mold Line (1st Floor) No Control Emission EU-6ML-EF-01 Unit Equipment Actual PM10 40.5tpy VOC 22 tpy Emission PM: 0.53 tpy Limits CO 6.6 VOC: 2.19 tpy tpy CO: 0.65 tpy Actual Shall not pour more than Materials 118,800 tons of Limits Aluminum Poured: 11,723.49 tpy aluminum annually EU-6ML-EF-02 Open End duct at launder, #1 & # 2 Emission

Description: #6 Mold line Pouring Unit 1st floor, Exhaust to well #1 &2 furnace (open ended duct at Launder, #1 & #2 furnace)

Unit		furnace No Control Equipment
Emission Limits PM10 13.5 tpy		Actual
	PM10 13.5 tpy	PM: 0.53 tpy

Emission Unit: EU-PSANDALUMINUM

Emission Unit	EU-PSANDALUMINUM	Molten aluminum supply- Natural Gas fired aluminum melting/holding furnace. 40 mmbtu/hr for 6 tons/hr melt rate and 20 Mmbtu/hr for holding Pollution Control Equipment: none
		Actual
Emission Limits	Charging/Holding PM: 2.5 pph PM10: 2.16 pph PM2.5: 2.16 pph Fluxung/Drossing: PM: 5.07 pph PM10: 4.31 pph PM2.5: 4.31 pph VOC: 0.60 pph NOx: 3.92 pph 13.78 tpy CO: 3.29 pph	Charging/Holding PM: 0.012 pph PM10: 0.012 pph PM2.5: 0.12 pph Fluxing/Drossing: PM: 0.52 pph PM10: 0.52 pph PM2.5: 0.52 pph VOC: 0.12 pph NOx: 0.47 pph 2.05 tpy CO: 0.46 pph
Material Limits	6 tons per hour (monthly average melting/holding furnace) 2.5 tons per hour (monthly average stack melting/holding furnace) 11,316 pounds per year (melting/holding furnace launder and pump well)	Actual Metal Feed/chrage rate : 0.53 tons per hour Flux usage rate (total injection and broadcast flux): 1560.06 lbs/yr
	Shall not operate as a melting	Actual
Process Operational Restrictions	<i>furnace for more than 5,300 hours per 12-month rolling time period as determined at the end of each calendar month</i>	Only one shift right now: 1920 hrs/yr as melt furnace

		Actual
Design/ Equipment Parameters	The design max heat input ratings of each natural gas fired melting/holding furnace shall not exceed 40 million Btu/hr during chargind and melting or 20 MMBtu/hr when operated in holding furnace mode	GM SMCO verifies the btu rating for the burners of all furnaces annually. This was last done December 2015.
		Actual
Monitoring/Record Keeping	nours of operation as a melting furnace Natural Gas Usage rate NOx emissions rate PM,PM10, &PM2.5 emissions in pph metal feed/charge rate flux/usage rate	GM SMCO maintains all of these records

Emission Unit: EU-PSANDPROCESS

Emission Unit	EU- PSANDPROCESS	Sand Processing 220 ton new sand storage silo with bin vent filter receives sand via blower truck and two 30 ton pre-reclaim silos receive process sand recovered in the facility Control Equipment: Bag house
Emission Limits	New sand storage silo PM, PM2.5, PM10: 0.13 pph TSR: PM: 0.87 pph PM2.5, PM10: 0.23 pph VOC: 0.08 pph NOx: 1.47 pph 3.90 tpy CO: 1.24 pph	Actual New sand storage silo PM, PM2.5, PM10: 0.13 TSR: PM: 0.4 PM2.5, PM10: 0.22 VOC: 0.05 pph NOx: 0.85 pph 0.34 tpy CO: 0.71 pph
Material Limits	New and recovered core sand throughput: 73,339 tons	Actual 11,048 tons per year
	Max total heat input rate of the	Actual

Process/ Operational Restrictions	two natural gas fired fluidized bed sand reclaim process units shall not exceed 15MMbtu/hr	Verified annually
	Bag house pressure drop	Actual
Design Equipment/Parameters	range between 0.5 and 10 inches wc shall not be below 1 inch unless a large number of bags have been replaced	The emission unit and bag houses were not operating during my inspection
Checked MAP and Parameters of equipment		

Emission Unit: EU-PSANDCOREROOM

Emission Unit	EU- PSANDCOREROOM	Sand Handling and mixing (polyurethane resin) Core making (6 cold box core machines), Core box tooling maintenance, cylinder liner cleaning and heating, final mold assembly
Emission Limits	Sand hoppers and sand mixers PM, PM10, PM2.5, VOC: 1.35 pph (each) Cold Box Core machines: PM, PM10, PM2.5 0.56 pph VOC: 8.10 pph 22.0 tpy Fugitive emissions from core handling VOC: 3.24 pph 8.80 tpy cold box core machine cleaning: VOC: 14.17 tpy Core box cleaning: VOC: 1.02 tpy	Actual VOC: 1.35 pph PM, PM10, PM2.5: 1.35 pph (limited by air flow using 0.2 lb pm/1000 lb exhaust Cold Box core machines: PM, PM2.5, PM10: 0.56 pph (each) (limited by air flow 0.005 lb PM/ 1000 lbs air flow) VOC: 4.6 pph 3.31 tpy Fugitive emissions from core handling: VOC: 0.6 pph (highest) 0.78 tpy cold box core machine cleaning: VOC: 1.08 tpy Cold box cleaning: never installed this process
Material Limits	Dimethylisopropylamine (DMIPA) 481 tons per year (12 mo rolling)	Actual 0.02 tons per year (12 mo rolling)
Design/ Equipment Parameters	Acid Scrubber pressure drop 0.1-6 in wc liquid flow greater than 190 gpm pH less than 4.5	Actual Pressure drop: 2.35 in wc Liquid flow: 216 gpm pH: 2.8 Actual
	DMIPA and core sand throughput	

Monitoring/Record Keeping	emissions VOC emissions acid scrubber monitoring cartridge collector monitoring	GM SMCO maintains all of these records
Check	ed MAP and parameter	s of equipment
	CAM SUBJECT U	NIT

Emission Unit: EU-PSANDCASTLINE

Emission Unit	EU- PSANDCASTLINE	Pouring and cooling of castings in the molds, mold cooling, and chill plate cleaning Shakeout, 10 MMBtu/hr natural gas fired duct burner Control device: BH, RTO Shakeout-BH, CAM subject, MAP
Emission Limits	PM: 2.85 pph PM10/PM 2.5: 5.55 pph VOC: 4.07 pph NOx: 4.46 pph NOx: 15.21 tpy	<u>Actual</u> PM, PM10, PM2.5: 0.37 pph (each) VOC: 1.62 pph NO x: 1.17 pph 2.80 tpy
	shall not nour	Actual
Material Limits	more than 16,854 tons of aluminum annually (determined at the end of each month)	2,754 tpy 639.45 tons per month (highest)
	Max heat input	Actual
Process/ Operational Restrictions	rate RTO: 10 MMBtu/hr Max heat input rate of Nat gas duct burner: 10 MMBtu/hr	Verified annually
		Actual
Design/Equipment parameters	BH pressure drop 1.0-7.0 in wc	0.92 in wc (cartridge collector) 1.17 in wc (bag house)
	Aluminum	Actual
Monitoring/Record Keeping	throughput rate fabric filter monitoring RTO monitoring natural gas usage rate PM, PM10, PM 2.5 emissions in pph Annual NOx emissions	GM SMCO is monitoring/maintaining these records
Checked N	AP and parameter	rs of equipment
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CAM SUBJECT UNIT

Emission Limit: EU-PSANDSCCSH

Emission Unit	EU-PSANDCCSH (Spent Sand)	Solidification and Casting Cooling Sand Handling (shakeout) Control Equipment: Bag house
Emission Limits	PM: 2.36 pph PM10, PM2.5: 4.73 pph VOC: 3.99 pph	РМ: 2.36 pph РМ10: 4.73 pph РМ2.5: 4.73 pph VOC: 1.68 pph
	Shall not operate	Actual
Process/Operationa Restrictions	for more than for more than 5,300 hours per 12-month rolling time period as determined at the end of each calendar month	346 hours December 2015 2084 hours/year
Decign/Equipment	property drop	Actual
Parameters	0.1- 10 inches wc	3.31 in wc
	Hours of	Actual
Monitoring/Record Keeping	operation PM, PM10, PM2.5 emissions in pph Baghouse monitoring	GM SMCO is maintaining these records
Checked MAP and parameters of equipment		
	CAM SUBJEC	

Emission Unit: EU-FINISH

Emission Unit	EU-FINISH	Finishing (PSAND AND SPM operations)
Emission Limits	Test Protocol for PM, PM10, PM 2.5 and VOCs	PM, PM10, PM2.5: 0.86 pph VOC: 0.86 pph (based on air flow)
	Pm, PM10, and PM	Actual
Record 2.5 emissions in Keeping pph Baghouse monitoring	baghouse pressure drop 1.77 in wc	

Emission Unit: EU-SANDSEP

Emission Unit	EU-SANDSEP	Sand separator Control Equipment: 15,625 scfm bag house
Monitoring/	PM, PM10, PM2.5 emissions in pph	Actual
Record Keeping		Stopped using this unit last April 2015, not working

Emission Unit: EU-SPMALUMINUM

Emission Unit	EU-SPMALUMINUM	Molten aluminum supply-natural gas fired stack melter Control Equipment: 33,00 scfm baghouse
		Actual
Emission Limits	PM 1.13 pph VOC 1.2 pph NOx 2.75 pph 9.55tpy CO2.06 pph	PM: 0.09 pph VOC: 1.3 pph NOx: 0.73 pph 3.27 tpy CO: 0.37 pph
	metal feed/charge rate: 8	Actual
Materials Limits	tons metal per hour (monthly ave) Flux usage (total injection flux and broadcast flux: 7,332 pounds (12 month rolling)	Metal feed/charge rate: 0.4 tons per hour Total Flux: 40-60 Ibs/month 790.06 tpy
	shall not operate stack	Actual
Process/Operational Restrictions	melting/holding furnace more than 6,032 hours per 12 month rolling time period as determined at the end of each calendar month	336 hrs/month 4030 hours per 12 month rolling time period
	Max heat input rating of	Actual
Design/Equipment Parameters	one stack melting/holding furnace shall not exceed 14.5 MMBtu/hr during charging and melting 4.25 MMBtu/hr during holding	Burner heat input rating verified annually. Last verified Dec 2015
	Hours of operation as melting furnace(monthly and 12 mo rolling	Actual
	Natural Gas usage rate	
Monitoring/Record	PM, PM10, PM2.5 emissions in pph	Pressure drop for the baghouse: 1.53 in wc
······································	NO x emissions in tpy	GM SMCO is maintaining all of
	metal feed/charge	these records
	total flux usage rate	
	total flux usage rate Fabric filter monitoring	

Emission Unit: EU-SPMPROCESSAND

Sand processing- 120 ton new

Emission Unit	EU-SPMPROCESSAND	sand storage silo with in vent filter Control Equipment: Bin Vent Filter, 34,000 scfm bag house
Emission Limits	New sand storage silo: VE 0% PM, PM10, PM2.5: 0.13 pph Sand reclaim, pre-reclaim sand silo, and prepared sand silo: VE: 10% PM. PM10, PM2.5 0.05 pph VOC: 0.02 pph NOx 0.39 pph 1.18 tpy CO 0.33 pph	Actual VE done once a day, 3 times a week a parameter VE test is done PM: 0.01pph PM10: 0.01 pph Pm2.5: 0.01 pph NO x: 0.08 pph 0.05 tpy CO: 0.07 pph 0.74 tpy VOC: 0.02 pph
Materials Limits	New and recovered core sand throughput: 19,182 tons (12 mo rolling)	Actual 1,413.97 tons/month (highest) 9,194.45 tons per year
	Max heat input rate of natural gas	Actual
Process/ Operational Restrictions	fired fluidized bed sand reclaim process unit shall not exceed 4 MMBtu/hr	Verified annually
	sand throughput rate	Actual
Monitoring and Record Keeping	Natural gas usage rate PM, PM10, PM2.5 emissions in pph NO x emissions in tpy bag house monitoring Presence or absence of visible emissions from the bin vent filters during loading of sand in to the silo as determined by an observer	GM SMCO is maintaining these records
Checked MAP PARAMETERS AND EQUIPMENT		

Emission Unit: EU-SPMCOREROOM

Emission Unit	EUSPMCOREROOM	Sand handling and mixing, sand and two part epoxy mixing, core making (SO2 injection to the three cold box core machines) Control Equipment: 5,000 scfm cartridge collector, cyclone and packed tower caustic scrubber with a 20,000 scfm exhaust gas flow rate
	Sand Hoppers and	Actual
	sand mixers: PM, PM10, PM2.5: 0.17 pph VOC: 0.36 pph Core box PM,	Sand hoppers and sand mixers: PM, PM10, PM2.5: 0.17 pph (each) VOC: 0.1 pph

Emission Limits	PM10, PM2.5 : 0.45 pph VOC: 1.08 pph3.26 tpy SO2: 2.54 pph Core box core machine cleaning VOC 14.17 tpy Core handling: VOC 1.44 tpy Core making: VOC 4.34 tpy	Core Box: PM, PM10, PM2.5 0.45 pph VOC: 0.3 pph 1.38 tpy SO2: 0.07 pph (stack test) Core Box core machine cleaning VOC: 0.02 tpy Core handling: VOC: 1.44 tpy Core making: VOC 4.34 tpy
Matorial	SO2 Catalyst 135	Actual
Limits	tons SO2 per year 12 mo rolling	9.19 tons/month (highest) 47.22 tpy
		Actual
Monitoring/Record keeping	PM, PM2.5, PM10 emissions in pph SO2 and core sand throughput VOC emissions in tpy caustic scrubber monitoring cartridge collector monitoring	pressure drop: 2.34 in wc GM SMCO is maintaining these records
Checked MAP PARAMETERS AND EQUIPMENT		

Emission Unit: EU-SPMCASTLINE

Emission Unit	EU-SPMCASTLINE	Three Castlines with a max combined production rate of 106 castings per hour (53 castings per hour on any single cast line) Pollution Control: 10,000 scfm cartridge collector 60,000 scfm fabric filter collector for each cast line 10,000 scfm cartridge collector decoating emissions to 7,500 scfm cartridge collector
Emission Limits	Off line mold Prep: NO x 0.34 pph NOx 1.03 tpy Section 1& 2 all three cast lines combined including mold preheating PM, PM10, PM2.5 7.07 pph VOC 10.81 pph NOx 1.9 pph 1.41 tpy CO 12.47 pph Mold Coating PM, PM10, PM 2.5 0.68 pph	Actual Off line mold prep: NOx: 0.29 pph 0.011 tpy Section 1 & 2 all three cast lines combined including mold preheating : PM: 0.29 pph 0.31 tpy VOC: 6.0 pph 1.67 tpy NOx: 0.3 pph 0.29 tpy CO: 1.9 pph 6.71 tpy Mold coating PM: 0.68 pph 0.39 tpy

Process/ Operational Restrictions	fired equipment shall not exceed 16 MMBtu/hr Shall not operate for more than 6,032 hours per 12 month rolling time period	Verified annually 1222 hours/ month (highest month) 2736 hours (12 mo rolling time period)	
Monitoring and Record Keeping	Natural gas usage rate CO, PM, PM10, and PM2.5 emissions in pph NO x emissions in tpy Baghouse monitored as outline in MAP	Actual Presured drop BH 1: 2.21 in wc BH2: 4.94 in wc GM SMCO is maintaining proper records	
C	Checked MAP PARAMETERS AND EQUIPMENT		
CAM SUBJECT UNIT			

Emission Unit: EU-PREMACHINING

Emission Unit	EU- PREMACHINING	Multiple stations for machining to remove excess metal Pollution Control Equipment: 2,000 scfm released in plant
		Actual
Monitoring/ Record Keeping	Fugitive VOC emission rate in tpy using available emission factors	GM SMCO is maintaining records properly

Flexible Groups:

Flexible Group: FG-6ML-ALMELT

Actual	Flexible Group	FG-6ML-ALMELT	Aluminum Reverbertory Furnace #1 and #2 Emission Units: EU-6ML-GV-01 and EU- 6ML-GV-02
Holding/Charging: PM-10: 2.3 pph 9.8 tpy CO: 3.5 pph 15 tpy NO x: 4.2 pph 18 tpy VOC: 0.46 pph 2.02 tpy Charging: HCL 2.4 pph 7.2 tpy Holding/Charging: PM-10: 1.85 pph 3.89 tpy CO: 1.6 pph 3.32 tpy NO x: 0.25 pph 0.62 tpy VOC: 0.21 pph 0.54 tpy Charging: HCL 0.07 pph 0.06 tpy Chlorine: 0.6 pph 1.8 tpy Fluxing/Drossing: PM-10: 8.3 pph 1.4 tpy CO: 3.5 pph 0.64 tpy NOx: 4.2 pph 0.76 tpy Holding/Charging: PM-10: 1.85 pph 3.89 tpy CO: 0.25 pph 0.62 tpy VOC: 0.21 pph 0.54 tpy Charging: HCL 0.07 pph 0.06 tpy Chlorine: 0.6 pph 1.8 tpy Fluxing/Drossing: PM-10: 0.05 pph 0.01 tpy NOx: 4.2 pph 0.76 tpy Fluxing/Drossing: PM-10: 0.05 pph 0.01 tpy CO: 1.3 pph 0.018 tpy	Emission Limits	Holding/Charging: PM-10: 2.3 pph 9.8 tpy CO: 3.5 pph 15 tpy NO x: 4.2 pph 18 tpy VOC: 0.46 pph 2.02 tpy Charging: HCL 2.4 pph 7.2 tpy Chlorine: 0.6 pph 1.8 tpy Fluxing/Drossing: PM-10: 8.3 pph 1.4 tpy CO: 3.5 pph 0.64 tpy NOx: 4.2 pph 0.76 tpy VOC: 0.92 pph 0.17 tpy	Actual Holding/Charging: PM-10: 1.85 pph 3.89 tpy CO: 1.6 pph 3.32 tpy NO x: 0.25 pph 0.62 tpy VOC: 0.21 pph 0.54 tpy Charging: HCL 0.07 pph 0.06 tpy Chlorine: 0.06 pph 0.06 tpy Fluxing/Drossing: PM-10: 0.05 pph 0.01 tpy CO: 1.3 pph 0.0.18 tpy NOx: 0.11 pph 0.02 toy

	Cl2: 0.5 pph 0.1 tpy HF 1.9 pph 0.34 tpy	HCL: 0.07 pph 0.01 tpy Cl2: 0.06 pph 0.01 tpy HF 0.13 pph 0.02 tpy
		Actual
Material Limits	Shall not process more than 156.6 tons of injection and broadcast flux annually (12 mo rolling)	0.005 tons in Feb 2016 0.66 tpy (rolling)
	Shall only actively add flux	Actual
Process Operational restrictions	to one of the aluminum furnaces during any one hour period. Shall not flux more than 180 hours per year per furnace of FG- 6ML-ALMELT	0.005 tons in Feb 2016 ~ 2 hr / month
	Record Flux usage and	Actual
Monitoring and Record Keeping	duration in hours (rounded to 1/4 hour) of the fluxing for the aluminum furnaces Shall record the monthly natural gas usage on the aluminum furnaces	GM SMCO is maintaining all records

Flexible Group: FG-ALUM-HTSF

Flexible Group	FG-ALUM-HTSF	Heat Treat solution furnace oven 2 zones 1, 2, 3, 4, &5 EU- ALUM-EF-01 EU-ALUM-EF-02 EU-ALUM-EF-03, EU-ALUM-EF- 04, EU-ALUM-EF-05
Emission Limits	PM10 0.3 pph 0.9 tpy CO 2.4 pph 7.1 tpy NOx 2.8 pph 8.4 tpy	Actual PM 0.05 tpy CO 0.52 tpy NOx: 0.13 tpy
		Actual
Monitoring	Shall record the	

Keeping	gas usage	2,738 mcf (Feb 2016)

Flexible Group: FG-ALUM-HTAO

Flexible Group	FG-ALUM-HTAO	Aging Ovens 2 zones 1, 2, 3, & 4 EU-ALUM-EF-16 EU-ALUM-EF-18
	PM10 1.2 pph 3.6	Actual
Emission Limits	tpy CO 0.8 pph 2.5 tpy NOx 1.0 pph 3.0 tpy	РМ: 0.05 tpy CO: 0.13 tpy NOx: 0.13 tpy
Monitoring	Shall keep monthly	Actual
and Record Keeping	natural gas usage rate	1.018 mmcf

Flexible Group: FG-6MLMOLDSAND

Flexible Group	FG-6ML-MOLDSAND	Cold box exhaust, mold making and metal cleaning operations EU-6CR-EF-07-""10 & EU-6CR-DC- 69, EU-6CR-ISO-04 Control Device: Acid Scrubber (6CR-ISO- 04), wet collector 6CR-DC-69, and mist collectors (6CR-EF-09, -10)
		Actual
Emission Limits	PM10 17.8 pph 53.3 tpy VOC 125.5 pph 377 tpy	PM: 1.06 pph 0.31 tpy VOC: 32 pph 10.5 tpy
		Actual
Material Limits	shall not process more than 1,958 tons of resin annually through #6 core room based on 12 mo rolling Shall not process more than 288 tons of DMIPA annually through # 6 core room (12 mo rolling)	135.47 tpy (8-13 tons per month) 23.45 tpy DMIPA ~1-2 tons per month based on tons of sand
		Actual
Process Operational restrictions	MAP required	Maintains and follows a MAP
	Becaud manthly realing	Actual
	usage for #6 core room, total metal cleaner, and DMIPA gas	2057-2500 lbs metal cleaner pressure drop: 4.00 in wc

Monitoring and Record Keeping	usages Monitor Pressure drop of wet collector Measure pressure drop, pH and flow rate of acid scrubber	pH: 2.4 pressure drop acid scrubber: 1.9 in wc flow acid scrubber: 136 gpm
SUBJECT	TO CAM, Checked MAP PAF	AMETERS AND EQUIPMENT

Flexible Group: FG-6MLWASTESAND

L-DC-66 L-DC-78		
tpy		
6 tpy		
wc (DC		
) in wc		
n wc (DC		
SUBJECT TO CAM, Checked MAP PARAMETERS AND		

Flexible Group: FG-6ML-MOLDCNVYR

Flexible Group	FG-6ML-MOLDCNVYR	#6 mold conveyor (basement cooling conveyor, degate cells 1-5 #6 drag flask pick off. Unit #9 secondary scalping screen in basement. #6 ML mold conveyor Control Devices: 47,000 acfm wet collector (6ML-DC-67) 40,000 acfm wet collector (6ML-DC-68)
Emission Limits	EU-6ML-EF-03 and EU- 6ML-EF-04: PM 10 22.6 pph EU-6ML-DC-67/EU- 6ML-DC-68: PM10: 3.6 pph VOC: 21.5 pph EU-6ML-EF-03: VOC: 10.5 pph CO: 2.2 pph 6.6 tpy EU-6ML-EF04: VOC: 7.3 pph 2.17 tpy CO: 2.2 pph 6.6 tpy	Actual EU-6ML-EF-03 and EU-6ML-EF-04: PM10: 4.27 pph EU-6ML-DC-67/EU-6ML-DC-68 PM10: 0.83 VOC: 21.5 pph EU-6ML-EF-03: VOC: 10.5 pph CO: 2.2 pph 0.65 tpy EU-6ML-EF04: VOC: 7.3 pph 2.17 tpy CO: 2.2 pph 0.65 tpy

	Total VOC for all units: 84 tpy	Total VOC for all units: 12 tpy	
		Actual	
Process/ Operational Restrictions	Shall not operate FG- 6ML-MOLDCNVYR for more than 6,000 hours per 12 month rolling time period Throughput shall not exceed a max of 220 molds per hour (based on a monthly average)	595 hours per 12 month rolling sum molds/hr highest 79 molds/hr	
		Actual	
Monitoring and Record Keeping	monitor and record the hours of operation on a monthly basis maintain records of the hourly averaged molds processed through FG-6ML- MOLDCNVYR per hour MAP requirements	GM SMCO is maintaining all proper records for this unit	
	Checked MAP PARAMETERS AND EQUIPMENT		

Flexible Group: FG-FACILITYPM

Flexible Group	FG-FACILITYPM	Particulate emissions associated with project (SPM, PSAND, Pre- machining) and existing mold line 6 operations
Emission Limits	PM 113.72 tpy	Actual
	РМ10 123.44 tpy	PM 21.75 tpy PM 10 19.12 tpy PM 2 5 17 40 tpy
	РМ2.5 123.44 tру	F WI 2.3 17.40 LPY

Flexible Group: FG-EMERGENCYRICE

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Flexible Group	FG-EMERGENCYRICE	Emergency Generators subject to NESHAP 4Z existing compression ignition emergency RICE with max site rate of less than 500 brake HP (EU- FIREPUMP1, EU- FIREPUMP2) and greater than 500 brake HP (EU- RWTFPH, EU- PATTERNSHOP)
Process/operational restrictions	No time limit on the use of units in emergency situations 100 hour time limit for use during readiness testing and maintenance checks Time limit of 50 hours per year in non emergency situations (but these hours are to be counted towards the 100 hour limit) Units less than or equal to 500 bhp shall inspect the air cleaner every 1000 hours of operation or annually whichever comes first shall change the oil and filter every 500 hours of operation or annually whichever comes first Shall inspect hoses every 500 hours of operation or annually Start up period should be limited to 30 minutes	Actual EU-RWTFPH: hour meter at 578 hours- records attached EU-PATTERNSHOP: hour meter at 33.5 hours- records attached EU-FIREPUMP1: hour meter at 282.7 hours- useage records attached EU-FIREPUMP2: hour meter at 301.3 hours- records attached
Design Parameters	shall install a nonresettable hour meter	Actual nonresettable hour meter is installed

The RICE units are used only in emergency situations, which have not occurred in the past 2 years. They are also operated for 30 minutes each month as a test. GM changes the oil annually, they are currently planning to participate in the oil analysis option to extend the life of the oil.

At the time of my inspection it appeared GM SMCO is in compliance with MI-ROP-B1991-2015a, PTI 36-12E, and all other applicable state and federal regulations.

NAME____

date 05-02-14 supervisor C. Hul