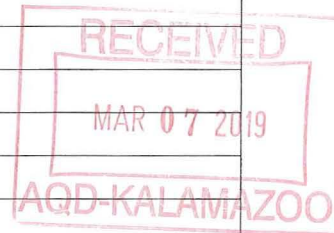


Post _____
Amanda _____

MONTHLY MERCURY EMISSION TESTING

MDI, INC.

PERMIT: 50-18, SRN: N5886



ANALYZER BRAND/ MODEL : LUMEX 915 LIGHT

SERIAL NO: 18090

NEXT CALIBRATION DUE: 1/25/2020

OPERATOR: MIKE BREWERS

DATE(S): 2/27/19 AND 3/4/19

TESTING TIME FRAME: SEE BELOW

SAMPLING TIME: SEE BELOW

NOTE: reading of <0.1 ug/m3 = 100 ng

RESULTS

EMISSION UNIT	PERMIT LIMIT (ng/m3)	UNITS PROC'D IN 30 MIN.	DATE	TIME	AVE.(of 10) (ng/m3)
SV-FILLSTATION	40,000	360	2/27/19	7:56am	5704
Frame Time: 180 sec., 30 min. Sampling Time.					
SV-WELDROOM01	150,000	60	2/27/19	11:00am	630,250***
Frame Time: 30 sec., 8 weld cycles					
SV-WELDROOM02	150,000	60	3/4/19	1:00pm	186,770***
Frame Time: 30 sec., 10 weld cycles					
SV-SOLDERSTATION	2,480	30	2/27/19	9:40am	1412
Frame Time: 180 sec., 30min. Sampling Time					
SV-CURINGOVEN	988	30	2/27/19	8:47am	2281***
SV-CURINGOVEN	988	43	3/4/19	9:20am	3034 ***
Frame Time: 180 sec., 30min. Sampling Time					
SV-EPOXYPOURING	1570	0	2/27/19	11:15am	700
this unit only : 60 sec. frame time, 5 min. sampling time					

*** indicates OVER RANGE

Mike Brewers

SV-WELDROOM01 and SV-WELDROOM02

Each welder used a Frame Time of 30 secs. Each Welder welded a switch every 30 sec.

Weld cycle time was 30 secs. The analyzer never maxed out; >3000ug .

WELDER01 ran 8 units, so few to help prevent analyzer from becoming contaminated.

The 8 units were the standard 35/60 amp units (pm101-4 can)

WELDER02 ran 10 small TS-1 switches(pm379 can)

WELDER02 had much lower readings as the surface area of the TS-1 is much smaller than the 35/60 amp units

SV-CURINGOVEN readings on 2/27/29 were normal process

The 3/4/39 readings were done in an attempt to show the increase in readings due to the Hexane present in the mold release. All readings were taken with Oven @ 200F. The first 3 readings were taken with 43 molds sitting in the oven. The next 3 were taken as the molds were "slicked", no switch was put in mold, molds sent through oven.

The final 3 readings were taken as molds were "slicked", switch inserted, mold filled with epoxy and then sent through oven. The averages of the first 3 readings was 2127ug, next 3 was 3443ug and final 4 was 3408ug. The Hexane being present seems to increase the readings significantly

Note : Prior to each time the analyzer was used the same procedure was followed.

The Lumex, in the TEST MODE, performs the Serviceability of the unit, all readings are the measured value of Mercury concentration in the test cell every second. The readings were always between 0166 to 0176, with a Relative Deviation of 0-5%.

When the ON STREAM button is pushed the unit goes through the zero check procedure over 180 secs. After the zero check has been performed the current value of the Mercury vapour concentration is displayed every second over the time frame.

2/27

**FIELD DATA LOG
MONTHLY TESTING
MDI, INC.**

Analyzer Brand/Model LUMEX 915 LIGHT
 Serial Number 18090
 Operator MB
 Date 2/27/2019
 Testing Time Frame 180 secs.

Stack ID	Permit Limit (ng/m3)	Time	Reading (ng/m3)	Stack ID	Permit Limit (ng/m3)	Time	Reading (ng/m3)
SV-SOLDERSTATION	2,480	9:40am	1380	SV-FILLSTTN	40,000	7:56am	4810
			1490				6150
30 units processed			1580	360 units			6040
in 30 minutes			1460	filled in 30 min			5990
			2470				7050
			2910				6680
			590				6010
			100				5780
			1660				4640
			480				3890
		Average	1412			Average	5704

Stack ID	Permit Limit (ng/m3)	Time	Reading (ng/m3)	Stack ID	Permit Limit (ng/m3)	Time	Reading (ng/m3)
SV-WELDROOM-01	150,000	11:00am	757000	WELDRM-02			
			720000				
Frame Time: 30 sec			554000	no welding			
Weld cycle: 30 sec.			804000				
60 welded/30 min.			686000				
note: max. reading			497000				
up to 2,200,000ng			480000				
down to 7000 during			544000				
30 sec. cycle.							
		Average	630250			Average	#DIV/0!

Stack ID	Permit Limit (ng/m3)	Time	Reading (ng/m3)	Stack ID	Permit Limit (ng/m3)	Time	Reading (ng/m3)
SV-EPOXYPOURING	1570	11:15am	640	CURINGOVENS	988	8.47am	700
			560				1080
Frame Time: 60 sec.			690	30 units			1680
Sampling Time: 5 min.			840	processed in			2270
			770	30 min.			2540
							2660
no units processed							2740
							3170
							3000
							2970
		Average	700			Average	2281

**FIELD DATA LOG
MONTHLY TESTING
MDI, INC.**

Analyzer Brand/Model LUMEX 915 LIGHT

Serial No. 18090

Operator MB

Date 3/4/2019

Testing Time Frame 30 & 180secs

3/4

Stack ID	Permit Limit (ng/m3)	Time	Reading (ng/m3)	Stack ID	Permit Limit (ng/m3)	Time	Reading (ng/m3)
SV-SOLDERSTATION	2,480			SV-FILLSTTN	40,000		
		Average	#DIV/0!			Average	#DIV/0!

Stack ID	Permit Limit (ng/m3)	Time	Reading (ng/m3)	Stack ID	Permit Limit (ng/m3)	Time	Reading (ng/m3)
SV-WELDROOM-01	150,000			WELDRM-02	150,000	1:00pm	128000
				Welding TS-1	small switches		189000
				Frame time:	30 sec		117000
				Weld cycle:	30 sec		140000
				60 switches			190000
				welded in 30mins			382000
							88700
				max 23000 down			284000
				to 18000			208000
							141000
		Average	#DIV/0!			Average	186770

Stack ID	Permit Limit (ng/m3)	Time	Reading (ng/m3)	Stack ID	Permit Limit (ng/m3)	Time	Reading (ng/m3)
SV-EPOXYPOURING	1570			CURINGOVENS	988	9:20am	2330
							1940
							2110
							3970
							3170
							3190
							3210
							3420
							3510
							3490
		Average	#DIV/0!			Average	3034