

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

N089546116

FACILITY: LACKS INDUSTRIES INC		SRN / ID: N0895
LOCATION: 4260 AIRLANE SE, KENTWOOD		DISTRICT: Grand Rapids
CITY: KENTWOOD		COUNTY: KENT
CONTACT: Karen Baweja , Supervisor of Air Quality		ACTIVITY DATE: 08/22/2018
STAFF: April Lazzaro	COMPLIANCE STATUS: Compliance	SOURCE CLASS: MAJOR
SUBJECT: Unannounced, scheduled inspection		
RESOLVED COMPLAINTS:		

Staff, April Lazzaro arrived at the facility to conduct an unannounced, scheduled inspection of the Lacks Airplane facility and met with Karen Baweja, Supervisor of Air Quality, Jesse Gerspach, Engineer, and Ken Bailey, Safety Director. We met with other Lacks staff during the inspection, including Jim Darby Maintenance Supervisor, Jason and Brandon in the lab as well as Dan Jaracz for the inspection conclusion.

**FACILITY DESCRIPTION**

The Airplane North and South facilities primarily conduct decorative chrome plating on plastic parts. The process consists of pre-treatment, alkaline cleaning, acid dipping, and strike plating of copper, copper/nickel electroplating, nickel electroplating, chromium etching and chromium electroplating. Electroless copper or nickel electroplating, conditioner, and rack stripping are controlled by wet scrubbers while the chrome plating and etching are controlled by composite mesh pad scrubbers. The facility is a major source of Hazardous Air Pollutants and equipment at the facility is regulated pursuant to MI-ROP-N0895-2018.

The Airplane Northwest and Airwest Mold facilities conduct plastic injection molding using acrylonitrile, butadiene, styrene (ABS) copolymer and ABS blended with a polycarbonate called HIPP (high impact plastic) that is more temperature and impact resistant. There are no requirements that apply to plastic injection molding support facilities in this permit.

The chrome plating operations are subject to the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Chromium emissions in Subpart N. This inspection is also being conducted to evaluate compliance with the state initiative to inspect chrome plating facilities to ensure perfluorooctane sulfonic acid (PFOS) is not in use. It was confirmed that the product used at the Kraft plating facility is PFOS free and has been since it opened. All Lacks plating operations use the same PFOS free product manufactured by MacDermid Enthone.

The four boilers are subject to the NESHAP Subpart DDDDD. One emergency generator is identified as subject to ZZZZ.

During the inspection, stack testing was being conducted on Chromium emissions from Airplane North, by Jeff Zak, Eric Danjoy and Anthony Rodrigues who only conduct Method 306A tests and it was their first time at Lacks for testing representing Scientific Control Laboratories, Inc.

**COMPLIANCE EVALUATION**

Process Unit	Control	Observed Pressure Drop (inches of H2O)	Observed Water Flow (gpm)	Water Bleed Off Rate (gpm)	Surface Tension at time of Inspection (dynes/cm)	Emission Limits	Test data
Chrome Plate North (EUPN12/AN8)	CMP	Scrubber 3.38 Evaporator 1.8	NA	NA	Tank 1 39.0 Tank 2 39.4 Tank 3 40.0	Total Chromium 0.00043 pph	8/21/18 Awaiting results
Chrome Etch North (EUPN10/AN2)	CMP	Scrubber 3.17	NA		Tank 1 40.6 Tank 2 45.6	Total Chromium	8/22/18

		Evaporator 2.1		NA	Tank 3 39.7	0.00037 pph	Awaiting results
Electroless Copper North (EUPN-6/AN4)	PBS	0.57	93.6	4.2	NA	Formaldehyde 2.72 pph Methanol 8.25 pph	10/24/17 0.04 pph 5.72 pph
Conditioner North (EUPN-11/AN1)	PBS	0.88	81.2	5.8	NA	DCP 0.84 pph	10/24/17 0.05 pph
Nitric Strip North (EUPN-13/AN9)	PBS	1.28	104.3	5.7	NA	Nitric Acid 1.23 pph	5/2001 0.0212
Nickel North (EUPN-1, 2, 3)	NA	NA	NA	NA	NA	Total Nickel 0.598 pph	10/24/17 0.0070 pph
Chrome Plate South (EUPS-7/A9)	CMP	Scrubber 2.9 Evaporator 3.1	NA	NA	Tank 1 40.4 Tank 2 41.8 Tank 3 40.2	Total Chromium 0.000489 pph	5/8/11 ND
Chrome Plate #4 South (EUCHROME4/A10)	CMP	Scrubber 4.1 Evaporator 0.81	NA	NA	Tank 4 42.6	Total Chromium 0.01 mg/dscm 0.0005 pph	5/10/17 ND ND
Chrome Etch South (EUPS-5/A2)	CMP	6.5	NA	NA	Tank 1 35.5 Tank 2 38.1	Total Chromium 0.000542 pph	ND
Conditioner South (EUPS-6/A1)	PBS	1.42	39.2	4.5	NA	DCP 0.84 pph	4/2015 0.044 pph
Electroless Copper South (EUPS-3/A4)	PBS	0.35	103.2	5.2	NA	Formaldehyde 0.6458 pph Methanol 9.12 pph	4/2015 0.092 pph 3.909 pph
Nitric Strip South (EUPS-8/A12)	PBS	1.33	122	6.1	NA	Nitric Acid 0.11 pph	5/2001 0.02 pph

#### EUCHROME4

This emission unit includes one decorative chrome electroplating tank with fume suppressant and three stage composite mesh pad scrubber system for control located at Airplane South..

Emission limits for EUCHROME4 include total chromium- 0.01 mg/dscm and total chromium- 0.0005 pound per hour (pph). Report emissions from the May 2017 testing were at the non detect level which is an average total chromium detection of 0.00069mg/dscm and 0.000055 pph. Non detect indicates compliance with the limit.

As indicated above all Lacks facilities use the same mist suppressant, and no PFOS has been used at this facility since pre-2015.

The O&M Plan requirements are contained in the facility MAP. Data to support compliance with the numerical requirements of the O&M Plan are detailed in the table above. According to Jason in the lab, there have been no surface tension exceedances in the past year at Airplane South.

#### FGN-1

This flexible group includes 13 emission units that comprise the North Plater- electroplating of copper, nickel and decorative chrome on plastic parts and is located at Airplane North.

As indicated above all Lacks facilities use the same mist suppressant, and no PFOS has been used at this facility since pre-2015.

Compliance with emission limits is established through stack testing and operational parameters. Stack test results from recent testing is detailed in the above table.

The O&M Plan requirements are contained in the facility MAP. Data to support compliance with the numerical requirements of the O&M Plan are detailed in the table above. According to Jason in the lab, there have been no surface tension exceedances in the past year at Airplane North.

Stack testing on the chrome etch (EUPN-10) was occurring during the inspection. Visual observation of the chrome etch scrubber found that the first mesh pad was covered in some sort of white material that was becoming brown due to chromic acid in the air stream. (see attached photos). As this likely would only have a negative effect on the stack testing, I allowed it to continue. Additionally, there was standing/bubbling water in the scrubber channel in stage 3 and the exhaust. No discoloration of the water was noted. I was told by Mr. Jaracz that he thinks that the interior of the stack is perhaps being degraded and what is observed is shreds of fiberglass, which is what the stack is made of. He stated that they would be putting a camera inside the stack this weekend to see what is going on in there. Follow up information was requested and received from Ms. Baweja. Upon visual inspection, Lacks did not see any additional loose fiberglass to indicate an ongoing problem. The pads have been cleaned and are being monitored. A final compliance determination will be made following receipt of the stack test results on the etch process (EUPN-10).

Stack testing for the chrome plate tanks (EUPN-12) was to take place the following day, during which David Patterson, AQD Technical Programs Unit would observe. Physically this unit had a lot of patches, and the top plate of stage 1 needs a replacement. Standing water was observed in the scrubber. A final compliance determination will be made following receipt of the stack test results on the chrome plate process (EUPN-12) On Friday, September 14, 2018 I received confirmation from the company that the stage 1 top plate has been replaced.

All other control devices in FGN-1 were visually inspected while on the roof. No additional issues were identified during the visual inspection.

The Semi-Annual Report Certification postmarked September 13, 2018 was received and reviewed. There were 10 instances of surface tension exceedances in January. Lacks demonstrates compliance with the NESHAP using the control device, however the O&M Plan lists 45 dynes/cm as the upper limit range. The highest reported number was 46.1 dynes/cm. This will be closely monitored going forward, however it appears to be isolated to one tank for a short period.

#### FGS-1

This flexible group includes 10 emission units that comprise the South Plater- electroplating of copper, nickel and decorative chrome on plastic parts and is located at Airplane South.

As indicated above all Lacks facilities use the same mist suppressant, and no PFOS has been used at this facility since pre-2015.

Compliance with emission limits is established through stack testing and operational parameters. Stack test results from recent testing is detailed in the above table.

The O&M Plan requirements are contained in the facility MAP. Data to support compliance with the numerical requirements of the O&M Plan are detailed in the table above.

All control devices in FGS-1 were visually inspected on the roof. The drain on the electroless copper (EUPS-3/A4) was dripping at the time of the inspection. While not a compliance issue per se, it required attention. On Friday, September 14, 2018 I received confirmation from the company that the drain had been repaired.

EUPS-7/AN4, consists of three chrome plate tanks, one purification tanks and one evaporator/reclaim unit controlled by a composite mesh pad scrubber. The ductwork on this scrubber is lengthy, seems to shake/vibrate and makes a turn after it comes out of the roof before the scrubber. In May 2017 during stack testing, this stack had several duct work failures/cracks. One crack lead to leaking of chrome on

the roof and others near it were identified in the duct work. The other failure was where the ductwork met the scrubber body. Since this failure was after the stack test probe and air was being sucked in, creating dilution, the testing was required to be aborted and the problem fixed before proceeding. These issues were addressed through a Violation Notice for failure to properly operate a control device and associated equipment. The company's response to this degradation was to add quarterly and weekly ductwork inspections to the O&M Plan. Additionally, I was assured that Lacks staff is on the roof frequently and will pay special care to this unit to ensure it is properly maintained. The past two quarterly inspection paperwork and associated notes were requested. These reports indicated that no ductwork problems were noted. (see attached)

As we walked around the unit, an additional ductwork crack was identified. This was on the top of the ductwork, close to the point where it exits the roof. It was hard to see visually but was identified because I heard the sound of the air infiltration easily as I walked by. Later on, we were joined by Mr. Jaracz to take a closer look at the unit. We talked about the continued maintenance issues on this ductwork and how it is going to continue to decline due to age, the vibration, length of ductwork and how it is constructed. Mr. Jaracz indicated that he agrees and committed to requesting a capital expenditure to have the ductwork replaced during fiscal year 2019. On September 17, 2018, I requested a written commitment to conduct this repair via e-mail. On September 18, 2018 Lacks committed to conducting the duct replacement in fiscal year 2019 which runs January-December..

#### **FGEMERGENCYRICE-SI**

The facility maintains the emergency generator as required and following AQD request was able to provide a copy of the last annual oil change and maintenance service report. The facility is conducting the proper maintenance on the equipment, and it is equipped with a non-resettable hour meter. The maintenance record is attached.

#### **FGBOILERS**

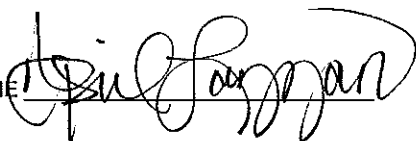
This flexible group includes 4, natural gas fired, boilers all less than 10 MMBtu/hr in size boilers subject to minimal requirements of 40 CFR Part 63, Subpart DDDDD. The first 5-year compliance report for these boilers is due no later than January 31, 2019. The USEPA CEDRI reporting system must be used.

#### **FGCOLDCLEANERS**

There are no cold cleaners currently in use.

#### **CONCLUSION**

Lacks Airplane was in compliance at the time of the inspection.

NAME 

DATE 9-19-18 SUPERVISOR 