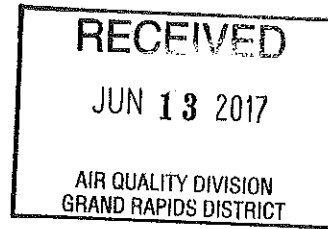


N0895
plant



June 8, 2017

Ms. April Lazzaro
Air Quality Division
Department of Environmental Quality
350 Ottawa, N.W.
Grand Rapids, MI 49503



Re: Airlane South – ROP No. MI-ROP-N0895-2012

Ms. Lazzaro:

This letter is in response to the Violation Notice dated May 12, 2107 regarding the Lacks Enterprises, Inc. Airlane South Plating facility. The violation is for failing to properly maintain air-cleaning device equipment associated with EUPS-7 (chrome plate tanks) causing liquid chrome to leak from separations in the ductwork onto the roof.

SEQUENCE OF EVENTS

On Friday, April 14, 2017 maintenance staff, under the supervision of the Plant Engineer-Plating Operations, completed the annual preventative maintenance tasks on the chrome plate composite mesh pad scrubber and associated equipment. During this event ductwork was examined and no cracks or damage were discovered. Additionally, staff verified that the transition from the ductwork to the scrubber body was properly sealed by viewing this transition from the inside of the scrubber to confirm that no light was penetrating through indicating there were no cracks.

On Sunday, May 7, 2017 between 5:04am and 9:52am there was a power outage at the facility. During this time the blower on the scrubber would have been off. We believe that this loss of suction caused the chrome to leak out of the crack in the ductwork.

On Wednesday, May 10, 2017 the chrome was discovered beneath the ductwork during an AQD inspection of the equipment during a compliance test. Testing was stopped and maintenance personnel promptly cleaned up the spill and patched all cracks and potentially weak areas in the ductwork.

On Friday, May 12, 2017 the ball packing inside the system's evaporator was inspected and found to be lower than the normal level.

On Friday, May 26, 2017 additional ball packing was added to the evaporator to bring the bed back to a sufficient level.

On Sunday, May 28, 2017 between 3:15am and 10:27am a subsequent power outage occurred at the facility, again causing the blower to shut off. Inspections following this event confirmed that the cracks had been properly sealed and no additional chrome had leaked from any portion of the ductwork.

DURATION

The duration of the violation was from Sunday, May 7th until the discovery of the chrome on May 10th, approximately 3 days.

The violation is not ongoing.

CAUSE and CORRECTIVE ACTIONS

During investigations to determine the cause of the damage to the ductwork, it was found that the ball packing inside the system's evaporator bed was lower than normal due to settling over time. A lower level of packing can cause an increase in the amount of chrome being sent through the system to the scrubber, as the solution from the top spray headers will be drawn into the airstream directly as opposed to navigating through the packed bed.

The system's ductwork above the roof has several long horizontal runs before reaching the scrubber unit. Over time the duct runs have the potential to experience slight sagging in the middle between the supports, which may not be visible to the eye due to the length of the spans. These sags or bellies could, in theory, cause excess chrome to collect in the bottom of the ductwork in these locations if the airstream was saturated enough. As more chrome collected in these areas it would cause the duct to bow even further due to the increase in weight. As a result, this would increase the accumulation of chrome pooling inside, compounding the issue.

It is our belief that the most likely cause of the cracked ductwork was due to an increase in chrome entering the airstream as a result of the lower level of evaporator packing, coupled with the layout and aged PVC duct located on the roof. Extra weight from chrome pooled inside the duct could cause it to flex enough to crack and pull away from joint locations as was discovered.

While the system is in a running state, the suction of the blower would not allow the chrome to leak out. However if the blower is off, as experienced during the extended power outage, solution trapped inside the duct would be allowed to escape through any cracks. The symptoms of the leaks seem to indicate a large amount or pool of chrome inside the duct work in that area, which would coincide with the previously stated theory.

As mentioned in the above sequence of events our initial response and corrective actions included a thorough cleaning up of the chrome as well as immediately sealing all cracks and potential areas of concern.

Long term corrective actions to prevent a reoccurrence include adding additional tasks to the weekly PM check sheet requiring maintenance personnel to thoroughly inspect ductwork and the level of the evaporator ball packing, and to note any problems or areas of potential concern. I have attached a copy of the updated weekly PM check sheet to this letter; the additional task numbers are #3 and #4 on the list. Inspection of the ductwork is also already required during the monthly and quarterly PMs.

In addition to the supplementary PMs on the ductwork and evaporator, we are exploring the feasibility of replacing the current PVC ductwork with a new fiberglass duct system which would be stronger, more rigid, and be less susceptible to weakening with age. If deemed feasible, this project would go into the capital budget for replacement in 2018.

Please contact me if you have any questions or require additional information.

Sincerely,



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Jim Green
Jim Morrissey
Nick Ponstein