

(Was Atmosphere Anneliving)

Gerdau Bassett St.
NO478
maatman
Fugham

McGeen, Dan (DEQ)

From: Mark Maatman <Mark.Maatman@gerdau.com>
Sent: Friday, October 02, 2015 4:42 PM
To: McGeen, Dan (DEQ)
Subject: RE: Gerdau Lansing Bassett Facility Air Quality Violation Notice
Attachments: FA360 - DEQ Acid Scrubber Low Level Alarm Set Incorrectly.pdf

Dan,

We have documented our investigation and corrective actions using our internal Failure Analysis report which I have attached a copy of.

We believe that the low level alarm limit was changed by an operator to silence the alarm while maintenance was working on an issue with the system. At conclusion of the maintenance, it was not reset to its original position. We had a periodic inspection of the alarm which was not frequent enough to catch the out of tolerance condition. A summary of our corrective/preventative actions is:

1. Put a cage around the alarm so it cannot be modified by the operators without maintenance support
2. Increase frequency of alarm limit inspection to a daily Pre-Use inspection
3. Tie our existing photohelic gauge into our continuous chart recorder so it will record when an alarm is triggered.
4. Investigate whether a different photohelic gauge can be procured that will allow output of actual "inches of water" reading to continuous chart recorder
5. Insulate and install heat tape on acid scrubber line to prevent freezing since this is a common cause of alarm conditions on the system.

I will follow up by sending you a hard copy of this written response next week.

If you have any questions or concerns, let me know.

Thanks,

Mark Maatman
Production Manager

Gerdau - Bassett St Facility
1801 Bassett St
Lansing, MI 48915
Phone: 517.908.0665
Cell: 616.406.9129
Fax: 517.485.1809
Mark.Maatman@gerdau.com

From: McGeen, Dan (DEQ) [<mailto:MCGEEND@michigan.gov>]
Sent: Wednesday, September 30, 2015 7:40 AM
To: Mark Maatman
Subject: RE: Gerdau Lansing Bassett Facility Air Quality Violation Notice

Sounds good Mark, thanks for the update.

Dan

From: Mark Maatman [<mailto:Mark.Maatman@gerdau.com>]
Sent: Tuesday, September 29, 2015 4:48 PM
To: McGeen, Dan (DEQ)
Subject: Gerdau Lansing Bassett Facility Air Quality Violation Notice

Dan,

I just wanted to get in touch with you and let you know that we received your letter last week regarding the issue that was found with the low alarm limit on the pressure gauge for acid scrubber on our coating line. We are currently working on the corrective and preventative actions and will provide a written response by the end of this week.

Thanks,

Mark Maatman
Production Manager

Gerdau - Bassett St Facility
1801 Bassett St
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IDENTIFY THE FAILURE

Title: Environmental Concern from Department of Environmental Quality
 Trigger: Environmental Incident Reported By: Ed Hauser
 Description: Per Occurrence Date: 9/29/2015
 FA Owner: Mark Maatman Time: 10:05

REMOVE SYMPTOMS

What/Where/How/Status	Who	Plan Start	Plan End	Actual End	How Much Plan Actual
Set meeting to determine root cause. Meet with operator, supervisor, and any others involved in the failure.	Lew Fortune	9/30/2015	10/1/2015	9/30/2015	\$0
Determine if failure applies to other processes, equipment or parts.	Lew Fortune	9/30/2015	10/9/2015	9/30/2015	

RECORD THE FAILURE

Classification: Environment Type: Actual SubType: Emergency
 Failure Date: 9/29/2015 Failure Time: 9:56 Shift: 2
 Downtime Duration: Requested By: Mark Maatman Task:

Failure Description: On June 23, the AQD staff observed operation of the scrubber while the pressure drop gauge was not being maintained in an acceptable manner. The low end of the scrubber's pressure drop range was set to 0.0 inches, water gauge, whereas the low end of the pressure drop range allowed by the permit is 0.5 inches, water gauge. This was corrected immediately, while AQD staff was present. The facility was in compliance, at the time AQD staff left the site. However, there was a period of time in the past, when the facility was in violation of PTI Number 473-97A, Special Condition Number 1.3, which states:

"The permittee shall not operate the EUCCOAT wet scrubber unless a gauge, which measures the pressure drop across the scrubber and sounds an alarm when the pressure drop is below 0.5 inches or exceeds 1.5 inches water, is installed, maintained, and operated in a satisfactory manner."

Evidence (Actual) / Risks (Potential): Low limit was set to zero
 Possible Cause: Operator set to zero to silence alarm
 Lost Actual: Loss Potential:

ANALYSIS OF THE FAILURE

Environment: Moderate Safety: Quality:
 Trigger Reached (Y/N)?
 Does the failure need to be analyzed (Y/N)?
 Justification: Environmental Permit Violation
 Responsible:

OBSERVE THE PHENOMENON

Will the observation/investigation have a team (Y/N)?
 Team: Lew Fortune
 Any Additional Observations of the Failure (Y/N)?
 More Details:
 Did the immediate action(s) taken eliminate the failure symptoms?
 Are all classifications of the failure indicated?

Date	Time	Team	Meeting Notes
9/29/2015	11:37	Mark Maatman, Larry Feldkamp, Lew Fortune, Mike Dauka, Jarret Nelson	Need to add a routine check to the alarm limit. Going to add to maintenance weekly inspection. Is there a different alarm where the alarm setpoints can be mistake proofed? Add photohelic reading to waste water checklist?
9/30/2015	11:00	Mark Maatman, Jarret Nelson, Corey Lounds, Larry Feldkamp, Bernie Steele	Can we get a photohelic guage that ties into the chart recorder for continuous monitoring? Low limit alarm gets turned down in the winter to silence the alarm if the lines freeze. Need to look at how to prevent the line from freezing. Could potentially wrap the lines in insulation and install heat tape. Checking the alarm was on maintenance weekly PM, but was not completed on regular basis. Add to 5S checklist as a PREUSE item. This will be tracked as a datapoint in the database once it is rolled out to the shop floor. Install cage on photohelic guage so the alarm limits cannot be changed. Suspect alarm limit was changed to silence alarm while maintenance repaired issue with scrubber and forgot to change the limits back.

ANALYSIS OF THE FAILURE

Assigned To: Mark Maatman Date: 9/30/2015 Team: Mark Maatman, Corey Lounds, Bernie Steele, Larry Feldkamp

Classification Method

1st Why Why was the low alarm set to zero? Answer: operator changed it to silence alarm

2nd Why Why? Answer: Did not want alarm sounding while maintenance repairing system

3rd Why Answer:

4th Why Answer:

5th Why Answer:

Root Cause 1 - Silenced alarm while maintenance was working on system and forgot to turn it back up.

Assigned To: Mark Maatman Date: 9/30/2015 Team: Mark Maatman, Corey Lounds, Bernie Steele, Larry Feldkamp

Classification Method

1st Why Why was the low alarm limit not detected? Answer: Alarm limit was not inspected

2nd Why Why? Answer: Not on daily inspection checklist

3rd Why Why? Answer: Was originally just on maintenance weekly inspection

4th Why Why? Answer: Originally though weekly inspection was sufficient to catch out of specification condition

5th Why Answer:

Root Cause 1 - Alarm limit was not inspected daily by coating line operators. Maintenance weekly PM not frequent enough

DEFINE AND IMPLEMENT ACTION PLAN

What/Where/How/Status	Who	Plan Start	Plan End	Actual End	How Much	
					Plan	Actual
Add alarm limit check to maintenance weekly inspection checklist Already on the weekly inspection	Mark Maatman	9/29/2015	9/30/2015	9/30/2015		
Add recording of photohelic readout to 5S checklist as PREUSE inspection item	Mark Maatman	9/30/2015				
Insulate acid scrubber line and install heat tape to prevent freezing in winter	Larry Feldkamp	9/30/2015	11/20/2015			
Tie photohelic guage into chart recorder so e-mail can be sent out when it goes into alarm state	Larry Feldkamp	9/30/2015	10/30/2015			
Investigate whether an upgraded differential pressure gauge can be installed that will provide an output to the chart recorder so the pressure can be monitored continuously.	Larry Feldkamp	9/30/2015	10/16/2015			
Install cage around photohelic gauge so the alarm limits cannot be changed without maintenance	Larry Feldkamp	9/30/2015	10/9/2015			

VERIFY EFFECTIVENESS

Verification Guideline: 30, 60, 90 Days

Describe what was done to verify effectiveness: See Action Plan Below

What/Where/How	Who	Plan Start	Plan End	Actual End	How Much		Status
					Plan	Actual	
FA 360. 30 Day Verification. Verify action plan is completed.	Lew Fortune	10/29/2015	11/13/2015		\$0		
FA 360. 60 Day Verification. Verify failure has not repeated.	Lew Fortune	11/28/2015	12/13/2015		\$0		
FA 360. 90 Day Verification. Review / communicate results of action plan with team.	Lew Fortune	12/28/2015	1/12/2016		\$0		

Verification Responsible: Date:

Are the actions effective to solve the failure and eliminate the root cause?