

THE **GEON** COMPANY

TO	W. C. Fultz	FIELD POINT OR DEPT. & BLDG. NO. Pedricktown	DATE YOUR LETTER
FROM	A. M. Matyger	FIELD POINT OR DEPT. & BLDG. NO. Pedricktown	DATE THIS LETTER 9/23/93
SUBJECT			

GASKET FAILURE--VINYL CHLORIDE RELEASE

Summary

On September 14, 1993 a gasket in the charge line to Poly 22 failed during the charge step. A total of approximately 20 pounds of vinyl chloride monomer was released through this gasket failure. No exposures, injuries or damage to equipment occurred.

Board of Review

A Board of Review was held on 9/15 with the following in attendance:

A. Lehman	Shift Lead Technician
E. Henson	Charge Technician
J. Houston	Console Technician
A. Matyger	Area Manager
M. Munyan	Ogden Utilityman

Conclusion

Three bolts on the top of a 4" Keystone wafer valve were not properly torqued causing the gasket to fail during the charge sequence.

Narrative

At 1523 on 9/14/93 Poly 24 began its charging step. Charge ingredients (premix) were being pumped into this poly as per normal procedure. The equipment and piping was visually checked for problems at the start of this charging step. M. Munyan performed this check and there were no problems.

At approximately 1525 Maintenance mechanic, , heard a pop and saw what he thought was sope coming from the charge line. Charles Robinson notified Mike Munyan who was still on the first floor and Mike Munyan immediately instructed the Console Technician, Jim Houston, to fail the premix which requires the computer to close all the charge valves and turn off the pumps. The unit was failed and the valves closed at 1526.

During this time also called Ed Henson using the terryphone. He told Ed Henson what he saw and Ed sounded the gas alarm and instructed to leave the area.

All shift personnel reported to the south stairwell to deal with the spill. The console technician opened the valves to the transfer line and recovery tank to pull a vacuum on the line with the bad gasket. This was completed by 1528 and the line was under vacuum. The leak was now stopped.

REDACTED

NGC 13654

The gas chromatograph point nearest the failed gasket registered a maximum 400 ppm reading then dropped to less than 5 ppm the next time it was sampled. On the following sample cycle it was less than 1 ppm.

The outside of the building was monitored for vinyl chloride (VCM) and when none was detected the all clear was sounded.

The line was left on recovery until the recovery system pressure increased indicating air was being pulled in through the failed gasket. The area was thoroughly hosed down and the gasket replaced.

Facts Surrounding the Incident

1. The LEL detection system was tripped at 1527 hours. Point 5 was the sample point in alarm.
2. The charge being made was a 137 charge so the premix had acrylic acid in it.
3. The highest GC reading at Point 2 for vinyl chloride was 400 ppm. The next sample cycle at this point was less than 5 ppm and the following cycle at this point was less than 1 ppm.
4. The header at the point of the failed gasket should not have had premix in it during the charging of Poly 24. A block valve upstream was leaking through.

Management Systems Investigation

1. Emergency notification was done properly and in the correct time frame.
2. The top three bolts on the valve where the leak occurred were not properly torqued. The gasket was in three pieces. The valve had been in service for 3 months and was installed by an outside contractor.
3. The non asbestos containing replacement gaskets currently used weaken and tear easily.
4. The gasket and line had only been in service for 3 months.
5. Shift response to the emergency was excellent. The leak was quickly brought under control from the remote console location. Exposure to this leak was not necessary.
6. Valve 2339, the charge line block valve, was found to be broken. The pin holding the wafer to the shaft was broken allowing the wafer to open. Neither the computer nor the operator could detect this failure.

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Action Items

1. Repair 2339 to make sure it functions properly and does not leak through. Complete
2. Check all bolts on charge header and tighten any loose bolts that are not properly torqued. Complete
3. Replace the current gaskets with asbestos containing gaskets. These lines cannot accept flexitallic gaskets without modifications. 10/30/93 JM

AM

A. M. Matyger

AMM/jeb

NGC 13656

BFGoodrich**INTER-ORGANIZATION CORRESPONDENCE**

TO Distribution	FIELD POINT OR DEPT. & BLDG. NO.	DATE YOUR LETTER
FROM A. M. Matyger	FIELD POINT OR DEPT. & BLDG. NO. Pedricktown	DATE THIS LETTER 10/4/93
SUBJECT VCM OVEREXPOSURE		

REDACTEDSummary

On 6/17/93, Ogden Poly Breaker, was monitored for VCM exposure. The results of the test was a 1.22 ppm reading. Mike did not wear a respirator during the monitoring period.

Board of Review

D. O'Keefe
A. Matyger

Ogden Poly Breaker
Safety Manager
Dispersion Manuf. Manager

Conclusion

did no tasks that day to explain the cause of the high readings. The test results from the Laboratory used at this time were suspect. This Lab is no longer used for the analysis.

Narrative

The tasks performed by on 6/7 were reviewed. He did not clean any polys or open equipment in vinyl service. The building light readings for his shift indicate only 11 yellow lights (concentration between 1 and 5 ppm). There were no lights due to concentrations greater than 5 ppm.

brought supplies up to a crew opening the recovery condenser on the roof. was approximately 10-15 feet away from the condenser for 5 minutes while he coiled up a hose. He did not smell vinyl while performing this task.

Management Systems Investigation

1. Receipt of lab results was delayed because vendor was sending results along with the invoice to CDT.
2. was properly trained in respirator use and the tasks requiring respirator use.
3. The recovery condenser was properly steam swept prior to opening.
4. Some of the lab's results have not been consistent with our expected results. A different lab is being used for this analysis.

Corrective Action**NGC 13657**

1. MDS Laboratory is not to be used for analysis work. Complete
2. Review incident with all shifts in the Paste Poly Bldg. Complete