

June 7, 1993
The Geon Company
Avon Lake Technical Center

Board of Inquiry
VCM Release - 55 liter Poly, Resin Pilot Plant
Experience Value

The purpose of a Board of Inquiry is to explore all possible causes of an incident, to correct safety problems, to determine disciplinary action where appropriate, and to report incidents of experience value to others.

Summary

On Tuesday, June 1, 1993, at approximately 05:27, a VCM release occurred from a 55 liter poly through the vacuum system. The equipment is located in Building 414. Approximately 36.5 pounds of VCM were released. There were no injuries or equipment damage as a result of this release.

Board of Review

A board of Inquiry was held on June 1, 1993 to discuss the facts surrounding the incident. The following were in attendance:

J. Bialko	Supervisor, Pilot Plant Operations
J. Griffin	Site SH&E Manager
M. Kelling	Environmental Engineer
C. Lee	Geon Plant Manager
	Operator
K. Reading	Eng. and PP Group Leader
A. Shah	Director, Intermed. & Resin R&D

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Description of Incident

On the morning of the incident, the operator charged 36.5 pounds of VCM to a 55 liter poly to run a polymerization. Later, the operator aborted the polymerization because there was no pressure in the poly. Jerry Bialko, the pilot plant supervisor, noticed the aborted charge and investigated to learn why there had been no pressure. He determined that the VCM had most likely been vented through the building vacuum system to the atmosphere.

Bialko contacted J. Griffin and advised him of the suspected release. Griffin called the appropriate governmental agencies.

After the appropriate agencies were notified, it was determined that the VCM must have been accidentally vented through the vacuum system due to operator error. There was no other path for the VCM to leave the poly.

Facts Surrounding the Incident

1. The operator was familiar with the equipment and procedures in his pilot plant, and had followed established SOP's, which call for isolating the poly by closing specific valves before charging VCM.
2. The pilot plant polys are run open-poly, that is, they are opened and cleaned after every charge. The poly is then pressure tested, vacuum tested, and inerted by completing three vacuum-N2 pressure cycles before a new charge is started.
3. The poly is put under vacuum before VCM is charged.
4. The operator did not remember if he had left the vacuum valve on the manifold open while charging VCM to the poly, or if he had closed the vacuum valve after charging VCM to the poly.
5. It was determined that the VCM did not exit the poly through any other process connections on the piping manifold. There were no VCM excursions detected in the building during the release, so the VCM could not have been released to the room.
6. The emergency notification procedure was followed.

Conclusions and Findings

1. The release occurred because the vacuum valve to the poly was left open during VCM charging.

Corrective Action

1. Add a checklist to the SOPs that details the step on isolating this and other pilot plant polys prior to charging VCM. (K. Reading 6/5/93)
2. Investigate mechanical means to verify the vacuum header is closed before a poly is charged. (K. Reading 7/15/93)
3. Review with the operators environmental policy E-101 regarding prompt notification of supervision when a VCM release is suspected. (J. Bialko 7/1/93)
4. Appropriate disciplinary action was taken. (J. Bialko 6/1/93)

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