



Interoffice Communication

To : Vinyl Shift Supervisors
From : J. E. Barton
Date : April 10, 1979
Subject : EPA COMPLIANCE (REVISED)

The following items need to be done to assure EPA compliance regarding VCM emissions.

1. The date must be stamped on the Honeywell recorder charts each morning at 7:00 a.m. When the Honeywell charts are replaced the number of the Honeywell unit is to be written on the bottom of the chart. All used charts are to be turned into me.
2. All recovered VCM receivers are not to be filled above 80%.
3. The high pressure alarms on the blowdown tank in each unit will be reset to 40 psig.
4. The Emergency Kill Procedure has been revised as follows:

Emergency Shutdown

The following parameters are to be the maximum limits on a runaway reaction. The reaction should be killed with AMS if either one of the parameters is exceeded.

<u>Resin</u>	<u>Maximum Temperature</u>	<u>Maximum Pressure</u>
5385, 5425, 5465	142°F	145 PSIG
5305	162°F	175 PSIG

A runaway reaction immediately after charge and heat-up indicates that the reactor condenser may be plugged, and that the reaction must be killed.

If AMS will not kill the reaction, use the nitric oxide (N.O.) short stop system. CAUTION: N.O. is a highly poisonous orange-colored gas. A Scott Air Pack or a "Rocket Fuel" cannister mask must be worn while killing a reactor with the N.O. short stop system.

The runaway reaction must be killed immediately if either one of the pressure or temperature limits listed above are exceeded. If the reaction is allowed to exceed these limits, it may not be controllable and result in a relief valve or rupture disc discharge to the atmosphere.

5. The emergency nitric oxide kill system for all the reactors has been pressure checked to assure integrity of the systems. These systems will be pressure checked each six months with nitrogen.
6. After every coarse batch produced the reactor condenser will be inspected to determine if it is plugged. If the condenser is found to be plugged, it will be cleaned prior to charging the next batch.

If the condenser is not plugged, charge the next batch back with 1/2 gallon less catalyst. If this batch runs normal return to the original catalyst loading.

7. Copies of the procedures for the Old Unit, New Unit, and Dryers will be placed on the table between the Lead Operators' desks in the control room. There will also be copies in the Shift Supervisor's office and Operations Supervisor's office for your reference.

Please conduct a formal review with your people on the seven items above and the attached Work Practice Controls for the OSHA VCM Standard. Write the review meeting up on the safety meeting form and return it to me.

I would like to have all the meetings completed by 4/25/79.

J. E. Barton / DWH
J. E. Barton

cjt

Attachment

c: CLM, ELK, RAF, Shift Supervisors (5)

WORK PRACTICE CONTROLS

OSHA VCM STANDARD

III. REACTOR AREAS

The purpose of the vinyl reactors is to convert vinyl chloride monomer into polyvinyl chloride resin (PVC).

Several of the operator functions in the large reactor area can result in VCM exposure. The following relates to those work practices which are affected by potential VCM emissions.

A. Opening Manhead on Empty Reactor

1. Check the external pressure gauge to insure that the reactor is not under pressure.
2. Put on the continuous flow fresh air breathing mask.
3. Unlatch the manhead roll bar.
4. Radio panel operator to open evacuation jet to the reactor. This will move air inward and disperse VCM vapors.
5. Open manhead completely.
6. Inspect reactor.

NOTE: The manhead is not opened after every reaction but only periodically to check the internal condition.

B. Manual Reactor Entry

1. Open manhead using the procedure described in A.
2. Follow equipment entry procedure as described in Attachment "A" of Safety and Health Manual.
3. Close the top manhead.
4. Hydrostatically test reactor for leakage.

C. Reactor Recovery

Unreacted VCM is removed from the polymerization reactor slurry by the recovery system. The recovery system consists of vacuum pumps, compressors and condensers which remove the VCM from the reactor, compress, and condense it so that it can be recycled to the process. Operating personnel

III. REACTOR AREAS - CONTINUED

C. Reactor Recovery - Continued

are required in the recovery area during system start-up and for periodic checks during the recovery. The recovery area is monitored for VCM levels from the Control Room. The operator is alerted by radio before entering the area if the VCM level is above 1.0 ppm.

D. Reactor Dumping

Dumping of the reactor slurry occurs at the end of the VCM stripping operation. The operator observing the dump does not need to wear a CEFM under normal condition. This area is monitored from the control room and the operator is notified if the VCM level is above 1.0 ppm. Abnormal conditions requiring a CEFM are:

1. Plugged reactor dump valve or line.
2. Dumping a coarse batch.
3. Cleaning dump Sweco.
4. Inoperative Sweco exhaustor.

E. Filter Cleaning, Removal and Replacement

The following information applies to the:

Recovered VCM Filters
Fresh VCM Filters
Seal Water Filters (Compressors)

These filters come in contact with VCM and therefore are potential exposure sources.

The filter pack is steam purged and recovered to the process. The recovery system pulls a vacuum on the filter pack prior to opening.

The operator then puts on a CEFM, impervious gloves and an impervious suit.

F. Condenser, Subcooler, Line and Vessel Maintenance

The following precautions are required to prevent VCM exposure while performing maintenance on lines, vessels, subcooler and condensers.

III. REACTOR AREAS - CONTINUED

F. Condenser, Subcooler, Line and Vessel Maintenance - Continued

1. The equipment must be blinded at all inlets and outlets.
 2. The unit is to be flushed or evacuated until free of VCI as detected by the HNU OVA instrument.
- G. The reactor operating area and tank farm are continuously monitored for high VCM concentrations by the Honeywell unit located in the reactor control room.