

R. L. Bourget - Springfield, Mass. cc:

DATE April 17, 1974

SUBJECT Work Practices --- Issue #2

REFERENCE

TO ALL PVC PERSONNEL

A temporary standard for exposure to VCM has been issued by the Occupational Safety and Health Administration (OSHA) following an intensive, but as yet incomplete Government investigation into the VCM health concern. The standard requires a maximum exposure limit to personnel of 50 parts VCM per million parts of air (PPM) and requires the use of fresh air breathing equipment in areas where there is a potential for exceeding this limit. The temporary standard is in effect now and will remain in effect until a permanent standard is formulated and issued. The permanent standard will be based on a full and comprehensive Government investigation into all aspects of the issue.

Several short-term engineering modifications and procedural revisions have been made throughout the area to keep normal VCM concentrations below the 50 PPM ceiling. Much of the equipment in use for this purpose is temporary and will be replaced with permanent installations as soon as possible over the next several months. There are, however, a few situations which exist that require the use of fresh-air breathing equipment.

The work practices presently being released (Issue #2) are based on the original issue (3-5-74) and the new OSHA standard (4-5-74). As you will notice, several of the original work practices have been retained, some deleted, and others made optional. This is consistent with my earlier statement that changes will occur as new information is developed. Several new mandatory practices have been added which relate principally to the new Federal Law (OSHA). Again, however, I must point out that these practices are subject to additional changes, particularly as OSHA works toward the permanent standard.

Each of these practices will be explained to you by a member of supervision. They are effective immediately, but for them to remain effective in achieving what they are designed to do - protect worker health - we will need your cooperation. I am confident that I can count on your support.

RSV 0020197

R. L. Bourget

RLB/SBN

April 16, 1974

MANDATORY WORK PRACTICES

A. Ventilation

General -- Ventilation changes have been made in both 88 and 84 Bldgs. to effectively reduce concentrations of VCM in the kettle floor atmospheres below 50ppm during routine operations. The following work practices describe how these new systems are to be used.

1. Whenever a kettle is open the following ventilation requirements apply.
 - a. All normal exhaust fans on.
 - b. Coppus blower exhaust system in operation on the open kettle.
 - c. In 84 Bldg. only, the Coppus fans mounted around the kettle floor will be on.
2. Continuous negative pressure ventilation is required whenever anyone is inside a kettle, slurry tank or latex tank. The backup Coppus blower will be used for this operation, with the inlet hose placed at the bottom of the vessel and the discharge hose exhausting outside the building.
3. In any operation which involves emission of VCM liquid or vapor into the kettle room, the following ventilation requirement applies.
 - a. All normal and emergency exhaust fans on.
4. Because openings in the building destroy the ventilation air flow patterns, the following will be closed at all times.
 - a. All kettle floor and lower kettle floor doors and windows in 84 Bldg.
 - b. All door and windows leading into the lower kettle floor or packout areas of 88 Bldg.
5. When preparing a kettle for entry, a Coppus blower will be used to exhaust the kettle interior through the manhole under negative pressure for at least 15 minutes prior to entry. The discharge hose will be exhausted outside the building. Once this operation has begun the fixed kettle exhaust blower may be shut off.

B. VCM Source Isolation or Dispersion

General -- Several significant sources of VCM exposure have been reduced through equipment modifications. The following work practices apply to these items of equipment.

1. All slurry tank and latex tank covers will be closed and dogged down unless absolutely necessary to have access to the tank interior. Routine level checks and inspections will be made through the sight glasses.
2. The 84 Bldg. seed strainer will be kept closed and dogged down when not in use.

Note: The walls of the RVCM compressor rooms have been removed to allow natural dispersion of VCM vapors.

C. Respiratory Protection

General -- Most of the routine situations involving potential exposures to VCM in excess of 50ppm have been dealt with in sections A. and B. above. However, any time there is a deviation from the practices outlined in sections A. and B. fresh air breathing equipment (Scott Air-Pak or bulk system) must be worn.

1. During operations which involve breaking into VCM liquid or vapor equipment, a yellow tape carrier will be erected around the job at a distance of 10 feet. Such operations include: breaking into VCM liquid or vapor lines or valves, changing filters or strainers, draining the 88 Bldg. vent knock-out tank, draining the 84 Bldg. inerts bleed knock-out tank, opening the slurry tanks, latex tank or 84 Bldg. seed strainer, removing pop valves or inserting or removing blanks in VCM lines. (Working on dump T's, slurry baskets or slurry lines are not included if they can first be flushed with water for a period of 5 minutes.)
2. All personnel within the safety tape barrier described in 1., above, will wear fresh air breathing equipment until the VCM source has been aired out and flushed with water.
3. All personnel engaged in draining water from a VCM or RVCM tank, bleeding an RVCM tank or breaking a vapor lock in 84 Bldg. VCM or RVCM pump will wear fresh air breathing equipment continuously.
4. Dust mask protection is required for BO's and EPA's while operating packout equipment, and for all personnel performing dusty housekeeping operations. This includes dust collector entry (Pangborn and Pulsaire).

5. Anyone discovering a minor VCM leak will immediately attempt to segregate leak by shutting off valves or shutting off pumps, etc. and block off the area ten feet around the leak with yellow safety tape. Continuously hose down the leak with water from outside the barrier until the leak is topped. Fresh air breathing equipment is not required for personnel outside the barrier.

D. Housekeeping

General -- Although the VCM emission potential from dried resin is slight, accumulations of resin which are allowed to stand for long periods may eventually give off significant concentrations of VCM. The following work practices are designed to prevent these emissions.

1. Minor resin spills will be cleaned up immediately. In addition, the 84 Bldg. bagger room and warehouse and the 88 Bldg. packout area will be swept once per shift.
2. All other building areas will be washed once per week.
3. All PVC will be stored in closed containers when inside building.
4. A special overhead structure cleaning effort will be made once per month.
5. The 84 Bldg. conveyor dust catcher in the warehouse will be emptied daily.

E. Personal Hygiene

General -- Food items left in contact with VCM vapor or PVC dust may absorb a significant amount of VCM. The following work practices are designed to avoid this, and to avoid exposing personnel who are not properly prepared to follow all our other work practices.

1. No food, drink or eating utensils will be used or stored in the PVC operating areas. These items are permitted in the 88 Bldg. smoking room and all offices except the 84 Bldg. office.
2. Transients (personnel not in area fulfilling assigned function) will not be permitted to enter any PVC operating area unless authorized by a member of PVC supervision.

RECOMMENDED WORK PRACTICES

General -- The following work practices, while not mandatory at this time, are strongly recommended for all personnel. These practices provide further protection against exposure to VCM.

1. Wear full coveralls while in the work area and change them twice per week.
2. Wear rubbers or other shoe covers and gloves while in the work area.
3. SDO's, BO's, EPA's, PO's and anyone cleaning a kettle should wear head covers while in the work area. All other personnel are encouraged to wear head covers.

PPE Personal Protective Equipment + Procedure:

Changing VCM Filters

1. Rope off area in 10ft radius with warning tape.
2. Vent pressure off to stack
3. Wear fresh air mask while flanges are broken and until flanges are intact ~~was filter in bag.~~
4. Place filters in P.E. bag, ~~tape bag shut~~ and deposit in dumpster outside bldg.

Changing Vent + Blood Filters

1. Rope off area in 10ft radius with warning tape.
2. Vent pressure to appropriate receiver (bldg.)
3. Wear fresh air mask while changing filters until filter in bag.
4. Place filter in loose P.E. bag and deposit in dumpster outside bldg.

Blanking VCM Lines

1. Blood vcm line to stack. Open vcm valve to Kettle (A-Eg)
2. Maintain negative pressure on Kettle via copper blower permanent tied to the Kettle nozzle and the manhole closed or open Kettle manhole with copper blower suction hose installed.
3. Rope off area in 10ft radius with warning tape.
4. Wear fresh air mask while inserting + removing blanks

Changing Kettle Pop Values

1. Maintain negative pressure on Kettle via permanent copper blower with manhole closed, or man hole opened with suction hose in Kettle and exhaust hose discharging outside bldg.
2. Rope off area in 10ft radius with warning tape.
3. Wear fresh air mask when breaking only stack flange and until stack flange is intact again.

Removing Diaphragm Valve

1. Maintain negative pressure on Kettle via permanent copper blower with manhole closed or manhole opened with suction hose in Kettle and exhaust hose discharging outside bldg.
2. No fresh air mask is required

RSV 0020202

Test

Blanking Kettle down Flange (A-E line, Sealed, pressure transmitter, etc)

1. Maintain negative pressure - - -

Test

Cleaning Sump Pumps and Sump Tanks

1. Plug to block backflow + not allow high level pressure to rise for minimum of five (5) minutes before opening.
2. No fresh air mask required.

Stop Working Changes

1. After standard Kettle entry preparation, place vapour blower action hose in manhole with the rear portion of Kettle and exhaust hose discharging outside the bldg. Blower must be in place at all times.
2. No fresh air mask required while in Kettle.

Slurry Tank Plugs

1. Rope cut man in 10ft radius with warning tape or slurry tank.
2. When fresh air mask with warning tape or slurry tank.

Slurry Line Pumps

1. Plug all slurry lines with 1/2" or a minimum of five (5) minutes before opening. No fresh air mask required for test.
2. When sludging is not possible, rope off area and wear fresh air mask.

Cleaning of River Tanks

Mask for mask required while mining River tanks.

Condenser Drilling (4th Bldg)

~~Minimum negative pressure on Kettle via permanent vapour blower and closed manhole or hose of 1/2" copper blower in open manhole with exhaust hose discharging outside building. Test before procedure change.~~

Entering Sump Collection

1. Coveralls must be worn.
2. Dust mask must be worn.
3. Hard hat must be worn.