

VINYL CHLORIDE MONOMER SAFETY RULES

Conoco Chemicals
Aberdeen Mississippi Plant
January 15, 1975

VCM SAFETY RULES

1. Personnel, including all visitors and contractors, may enter regulated areas only when required to do so by their work.
2. Responsibilities for keeping non-plant personnel out of regulated areas are as follows:
 - a. All visitors not otherwise listed - Department Head of Department visited
 - b. Conoco employees temporarily assigned to plant - Department Head of Department assigned to
 - c. Conoco Truck Drivers - J. Jackson
 - d. Food Vendors - JTW
 - e. Other vendors, if material not received by Warehouse, Maintenance, or Engineering - Department Head of Responsible department
 - f. Non-Conoco pickup, delivery, and carrier personnel of equipment, product, or supplies received or routed into/out of warehouse, yard receiving/shipping - JES
 - g. Same as f, except Maintenance receipt/routing - KWC
 - h. Same as f, except Engineering receipt/routing - TRL
 - i. Trash pickup personnel - K. Couch
 - j. Non-Conoco equipment service personnel - Department Head of department serviced
3. Anyone entering a regulated area must sign the regulated area log sheet for that area. In addition, non-Conoco personnel must record their employer's name on the log.
4. Disposable, protective coveralls or similar garments, which are approved by the Safety Department, will be worn when performing the following tasks:
 - a. Entering reactor for cleaning or maintenance
 - b. Entering any other vessel which has contained VCM, including recovery knockout tanks, receivers, etc.
 - c. Changing VC filters
5. Disposable, protective gloves, which are approved by the Safety Department, will be worn when performing the following tasks:
 - a. Entering reactor for cleaning or maintenance
 - b. Entering any other vessel which has contained VCM, including recovery knockout tanks, receivers, etc.
 - c. Cleaning dump strainers
 - d. Cleaning culls from large reactor Sweco
 - e. Changing VC Filters
6. Disposable protective clothing will be discarded at the end of the shift during which it is worn. Protective gloves will be discarded when they are wet inside or when they leak.

7. Self-contained breathing equipment must be worn when entering concentrations of VCM which is above 3,600 ppm or unknown.
8. Air line respirators with egress cylinders must be worn during the following tasks:
- Entering vinyl reactors
 - Entering any other vessel or confined area in which a build-up of VCM does, has, or can exist.
 - All VCM Tank Farm work
9. Air line respirators without egress cylinders must be worn during the following tasks:
- Venting down or changing filters in any V.C. line.
 - Opening large and small reactor manheads (wear masks until evacuation is begun on the open reactor with steam jet on large reactors or vent tube and steam vent on small reactors).
 - Sampling the large reactors.
 - Opening and cleaning closed dump strainers.
 - Dumping the large reactor (in area of Sweco while dumping a charge).
 - Opening and cleaning condensers (Maintenance Personnel).
 - Take down and clean out of recovery lines (Maintenance or Operations).
 - Any location where the measured concentration of VCM is 25 ppm or greater or where an employee detects the odor of VCM.
 - Draining the V-11 or V-12 blow-down tank.
 - Dumping a charge through the slurry dump strainer with the lid open.
 - Draining water from VCM receivers behind V-11 or V-12.
 - At the reactor manway while cleaning reactors with the water blaster.
 - At the reactor manway while rinsing out the reactor before cleaning.
 - Charging or cleaning compound blenders.
 - Cleaning Dry Blend Blenders.
 - Sampling Dry Blend Blenders.
10. The facepiece fit of all respiratory equipment worn shall be checked by the wearer each time he puts on the respirator. Respirators will not be worn unless a good fit exists. Beards are not allowed if they prevent a good facepiece fit.
11. All respiratory equipment, regardless of type, shall be cleaned and inspected according to the manufacturer's instructions at the end of each working shift if the equipment is assigned to an individual and between users if it is shared by two or more people. A respirator that is not routinely used, but is kept ready for emergency use shall be inspected and cleaned after each use and at least monthly.
12. All respiratory equipment defects are to be reported immediately to the shift supervisor of the area and under no circumstances is the equipment to be worn if defective.

13. Respiratory equipment cases or storage containers are to be kept clear of all other items.
14. Gas mask cannisters and respirator cartridges will be replaced when they reach the end of their service life or at the end of the working shift, whichever occurs first.
15. All vinyl reactor personnel are required to keep air line respirators on their person while in the reactor area. Visitors need not carry the respirators, but are to immediately leave any reactor area when conditions require the use of air line respirators.
16. High-Level Continuous Monitor Alarms
 - a. Vinyl Department - when the continuous monitor high-level alarm sounds, all visitors and operating personnel not equipped with air line respirators or Scott Air Paks will immediately leave the area. Operating personnel will immediately don air line respirators or Scott Air Paks and locate and correct the cause of the leak or other source of VCM. The respirators will be worn until the area VCM concentration is below the high level.
 - b. Compound & Dry Blend Departments
 - (1) Compound Line I - when the continuous monitor high level alarm is given, all personnel except the Mill Operator will leave the area. The Mill operator will immediately don an air line respirator. He will then dump the contents of the Banbury mixer into the skip hoist bucket and leave the area.
 - (2) Compound Line III & Dry Blend - when the continuous monitor high level alarm is given, all personnel except the Compound Line III Mill Operator and the Dry Blend Compounder will immediately leave the area. The Mill Operator and the Compounder will proceed as follows:
 - (a) Compound Line III Operator - Immediately don an air line respirator, stop the feed into the FCM, discharge the contents of the FCM onto the mill, and leave the area.
 - (b) Dry Blend Compounder - Go into the Dry Blend Control room, stop the dry blend scale system, drop the Welex batch(es), and leave the area.
 - c. Scrap Unit - When the continuous monitor high level alarm is given, all personnel except the Scrap Unit Operator will immediately leave the area. The operator will then immediately don an air line respirator, stop the feed into the extruder, empty the extruder, and leave the area.
 - d. Vinyl Bagging Machine Area - When the continuous monitor high level alarm is given, all personnel except the Vinyl Dryer Baggers will leave the area. The Baggers will then immediately don air line respirators and continue to bag product. The person giving the alarm will notify the

- A
- Vinyl Dryer Shift Supervisor, who will then locate and correct the source of VCM.
- e. East Warehouse - when the continuous monitor high level alarm is given, all personnel will immediately leave the area.
 - f. Responsibilities for Announcing High Levels
 - (1) Laboratory Lead Technician - The Laboratory Lead Technician will be responsible for announcing, via the P.A. system, all high level alarms in the following locations:
 - (a) Compound Line I
 - (b) Compound Line III & Dry Blend
 - (c) Vinyl Bagging Machine Area
 - (d) Scrap Unit Area
 - (e) East Warehouse
 - (2) Large Reactor Lead Operator - The Large Reactor Lead Operator will be responsible for announcing, via the P.A. system, all high level alarms in the breathing air system for the entire plant. For this purpose, the large reactor control room will be manned at all times.
17. Entry into unknown concentrations of VCM or concentrations greater than 36,000 ppm (lower explosive limit) may be made only for purposes of life rescue, or when failure to take action could result in a situation where life is threatened.
18. Entry into concentrations of VCM of less than 36,000 ppm, but greater than 3,600 ppm may be made only for purposes of life rescue, fire fighting, or securing equipment so as to prevent a greater hazard from release of VCM.