

## ENVIRONMENTAL PROTECTION ADMINISTRATION

### Regulations on Vinyl Chloride Emissions for Monomer and Resin Plants

#### 1. Time Schedule

|                |      |                                                                                         |
|----------------|------|-----------------------------------------------------------------------------------------|
| March 8,       | 1975 | -Issue draft of proposed regulation, health effects, and environmental impact statement |
| March 25 & 26, | 1975 | -Review and comment on draft before National Air Pollution Advisory Committee           |
| Late June      | 1975 | -Publish regulation in Federal Register                                                 |
| July           | 1975 | -Public Hearings on Regulation                                                          |
| October        | 1975 | -Promulgate the Regulation                                                              |

#### 2. Basis

The EPA Administrator is going to invoke Section 112 of the Clean-Air Act by declaring VC a hazardous pollutant which permits definition of procedures, equipment, etc. so long as the public health is endangered.

Maximum period permitted for full compliance is two years.

#### 3. Regulation for PVC Plants

##### a. Fugitive Emissions - Leaks, Relief Valves, Sampling, Loading and Unloading, Cleaning Strainers

Control by equipment specification. Fixed point monitoring supplemented by portable monitoring. A formal program of leak detection must be mounted and records of such action kept. Canned pumps or pumps with double mechanical seals, Pipe line delumpers, rupture discs before relief valves, revised sample methods, etc.

##### b. Reactor Entry Emissions

Permissible emission is 0.001 lbs. /lb. of resin produced.

3. Regulation for PVC Plants (cont'd.)

2.

c. Reactor Safety Valve Discharges

None permitted through gas holder collection, auxiliary power, better instruments, etc.

d. Plant System from Reactor to Dryer

Blowdown, monomer recovery system, blend tanks, centrifuges, and the like.

Vents limited to 10 ppm VC concentration via scrubbers, adsorbers, etc.

e. Dryer, Silos, and Packaging Operations

Permissible emissions limited to following formula:

Resin to Dryer VCM conc. - Resin out VCM conc. = 400 ppm max.

f. Water Leaving Plant At Source

Maximum VCM emission 0.0043 lbs./100 lbs. resin produced.

g. No exceptions will be made for any plant or process.

4. Monomer Plants

Fugitive emissions controlled by equipment specification and formal leak detection program as per the resin plant.

All other vents - maximum permissible VCM concentration 10 ppm.

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5. Costs for 150 MM Pounds/Year Suspension Resin Plant

3.

|                                                                                     |             |
|-------------------------------------------------------------------------------------|-------------|
| Capital Cost                                                                        | \$1,638,000 |
| Operating Cost/Year -<br>includes depreciation, maintenance,<br>interest cost, etc. | (\$220,000) |

6. General for PVC Plants

Vents cleaned up by carbon adsorption, solvent absorption, or incineration.

Reactor purges, safety valves, etc. Collect in a gas holder as General Tire does.

Dryer, etc. - Improved stripping of resin slurry.

Resin Analysis - based on head space analysis - Perkin-Elmer BFG method. No averaging of resin types. Each product in 400 ppm limit.

7. Significance to UCC

- a. VCM unloading, storage, and tank-car maintenance - vent collection and scrubbing to 10 ppm.
- b. Solvent resins - probably good as planned except for monomer recovery vent which must be clean to 10 ppm.
- c. Dispersion Resins - UCC in better shape than most, but major investment is required.
- d. Suspension Resins - stripping and vent cleanup are investment problems.
- e. Non-Solvent Resins - stripping, vent cleanup, and emissions are investment problems.
- f. Latexes - present plants have no vent cleanup facilities.

8. Actions Planned

- a. B. F. Goodrich, Firestone, and UCC people will draft a white paper on the dispersion resin industry.
- b. EPA document will be reviewed and presentation via SPI will be made to NAPTAC on March 25, 1975.
- c. Ruckleshaus is considering ways to separate the plant and neighborhood cases of A. S.
- d. EPA costs on investment and operation are to be questioned.
- e. Air Products will discuss the water VCM limitation.

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