

April Safety Training

Training Dates:

**April 12
April 18
April 19
April 25
April 27**

Agenda:

8:00 – 8:45	Vinyl Chloride Safety as per 29 CFR 1910.1017(j)
8:45 – 9:15	Emergency Plan Overview 29 CFR 1910.38 (a)(5) Emphasis on Shelter in Place Practices, and incipient level response by operations personnel.
9:15 – 9:45	Safe Work Permits
9:45 – 11:30	Fire Extinguishers & Fire Water Monitors 29 CFR 1910.157 (g) Hands-on to supplement CBT lesson
11:30 – 12:00	Forklift Training 29 CFR 1910.178 (l) Hands-on to supplement CBT lesson Only for those who operate and did not complete in January.

Forklift Training Required

Maintenance: (Demonstration only)

Billy Thompson

~~Charlie Holcomb~~

~~Charlie Peden~~

~~Dale Andrews~~

~~David Nolen~~

~~Deevie Rambus~~

~~Don England~~

~~Eddie Smith~~

~~Ed Mize~~

~~Freddie Franks~~

~~Jimmy Autrey~~

~~Jimmy Brewer~~

~~Johnny Hull~~

~~J.W. Lowe~~

Jerry Minor

~~James Riggan~~

~~Jeff Seaver~~

~~Doyle Wells~~

Kenny Boozer

~~Luke Threadgill~~

~~David Barnes~~

~~Mike Sargent~~

~~David Roberts~~

~~Sam Brown~~

~~Terry Noland~~

Tommy Staten

~~Willie White~~

~~Willie Wilson~~

~~Nathan Blake~~

~~John Blaylock~~

James Jackson

Vinyl:

~~Bill King~~
~~Earnestine Carter~~
~~Clay Brownlee~~
Ken Campbell
Mike Langford
RC Towry
~~Rodney Strickland~~
Mitchell Pitts

Compound / P1:

~~Leon Gates~~
Jerry Eastman
~~Jeff Sanders~~
Ricky Reynolds
Clarence Wilson

Warehouse / Yard / Storeroom:

Brian Coon
~~Dean Honeycutt~~
~~Gordon Ostrowski~~
~~Bill Holcomb~~
~~Chris Ewing~~
~~Coleman Haynes~~
Dale Barr
Erskin Morgan
Freddie Phillips
~~Horace Lindsey~~
~~Ricky McMillian~~
James Pullium
Rubin Gates
~~Tim Corbett~~
~~Will Malone~~

Lab:

~~Carolyn Hollivay~~

~~Curtis Outlaw~~

~~Ellis Bowles~~

~~Gail Edwards~~

~~Mickey Bishop~~

~~Melvin Talley~~

~~Robert Langford~~

~~Sam Carter~~

~~Vernetta Young~~

~~William Robinson~~

~~Jerry Jenkins~~

Vinyl Chloride Monomer (VCM) Regulatory Training

Vinyl Chloride Monomer: colorless, highly flammable gas, liquid under pressure, faint sweet odor
Odor threshold = 0.25 ppm, varies from person to person

Fire Hazards: has a flash point of -108 °F Burns much like propane
Flammable Limits in Air % by Volume → Lower: 3.6 Upper: 23.0

Health Hazards

Acute (Short term) Exposure

Inhalation

- Relatively low acute toxicity
- May lead to smothering (asphyxiation)
- Inability to sense pain (anesthesia): (10,000-20,000 ppm)
- Dryness of throat, headache, mental dullness, incoordination, nausea, unconsciousness, and death: short term high level exposure

Skin

- Frostbite from liquid VCM

Ingestion

- Not a significant hazard via ingestion

Chronic (Long Term) Exposure

Inhalation

- Angiosarcoma (blood vessel tumors in the liver)
- Liver damage

Skin

- Acro-osteolysis- disease of the bone and blood vessels of the hand
- Hardening of the skin (scleroderma)

Vinyl chloride is considered a carcinogen by EPA, OSHA, IARC, NTP, and ACGIH

Established Exposure Limits: OSHA Permissible Exposure Limit (PEL) = 1 ppm for an 8-hr TWA

OSHA Short Term Exposure Limit (STEL) = 5 ppm for any 15 min period

Respiratory Protection

- Less than 1 ppm ⇒ none
- From 1 ppm to 1000 ppm ⇒ Air-line respirator
- Unknown, or greater than 1000 ppm ⇒ SCBA (Scott Air Pak)

Hazardous Operations

Plant tasks likely to involve VCM exposure to concentrations above OSHA limits:

- Loading/Unloading VCM railcars
- Changing VCM filter pack filters
- Opening any line or vessel which contains, or has contained, VCM
- Locating VCM leaks
- Emergency response during incidents involving the release of VCM
- Cleaning dump strainers, polishing strainers, and chunk catchers

Warning Signs and Labels

Regulated Areas: The plant has no OSHA-defined regulated areas (where VCM concentrations are above the OSHA-PEL: 1 ppm). However, warning signs are maintained in most areas formerly classified as regulated areas as a matter of good practice.

VCM Containers: VCM containers, including gas cylinders, storage vessels, and railcars, are labeled in accordance with the OSHA VCM standard:

**Vinyl Chloride
Extremely Flammable Gas Under Pressure
Cancer Suspect-Agent**

PVC Containers: PVC containers, including PVC wastes should be labeled:

**Polyvinyl Chloride
Contains
Vinyl Chloride
Vinyl Chloride is a Cancer-Suspect Agent**

Monitoring**Area Monitoring**

- For detecting unsafe concentrations of VCM in operating areas
- Equipment consists of 5 gas chromatograph analyzers (GCs) and 50 remote sensor collector heads (fixed point monitors)
- Levels above safe limits causes alarms to sound in the Vinyl Control Room and in Laboratory

Personal Monitoring

- For employees whose work has the potential for overexposure to VCM
- Vinyl Production, Maintenance, Yard
- Sampler consists of 3M Organic Vapor Badge passive sampler
- Samples are collected in the "breathing zone" for the duration of the shift
- Badges are sent off to an accredited laboratory for analysis

STEL (Short Term Exposure Limit) Sampling

- For tasks that take a short amount of time and potential for VCM overexposure
- Unhooking/hooking up VCM railcars
- Maintenance tasks
- Vinyl- dump strainers, polishing strainers, filter packs, chunk catchers
- Uses personal pump with charcoal tubes.

Medical Surveillance

- A comprehensive medical surveillance and health screening program is provided to all employees
- Provided every 6 months to employees having been in VCM or PVC manufacturing for 10 years or more.
- Provided annually for all others
- Employees exposed to VCM during emergency releases are offered appropriate surveillance at the time of the occurrence
- Medical records are maintained for the duration of the employment plus 20 years, or 30 years, whichever is longer. Records are available upon request.