

Vinyl Chloride Transportation Committee

An Overview: 1991 through 1996

Chemical Manufacturers Association

September 1996

Welcome everyone to the 28th annual CHLOREP Seminar

Thank the Chlorine Institute for extending an invitation to the Vinyl Chloride Transportation Committee to speak at this years program

Welcome all of the guests at this years seminar located in the great City of Phoenix

Provide a brief overview of the Vinyl Chloride Transportation Committee.

Committee Objectives

- ◆ To promote greater safety in the transportation of vinyl chloride
- ◆ Cooperative emergency response through VCNet
- ◆ To work with US regulatory agencies and other organizations on transportation-related issues

September 1996

Vinyl Chloride Transportation Committee was formed in 1991 by manufacturers of vinyl chloride across the United States. Committee membership accounts for all but one of the vinyl chloride manufacturer's.

Committee members are: Borden Chemical & Plastics, Dow Chemical, Formosa Plastics, Geon, Occidental Chemical, Georgia Gulf, PPG Industries, and Condea Vista. Associate membership is also available to users of VC and they provide invaluable input from a user's perspective. These members are JTS Enterprises and Shintech. The committee's primary goal was greater safety in vinyl chloride tankcar transportation. This was expanded in 1994 to include all forms of transportation.

Vinyl Chloride Transportation Committee

- Borden Chemical & Plastics, Inc.
- Occidental Chemical Corp.
- The Dow Chemical Co.
- Georgia Gulf Corp.
- Formosa Plastics Corp.
- PPG Industries, Inc.
- The GEON Company
- CONDEA Vista Company

Associate Members

- JTS Enterprises
- Shintech

September 1996

With large volumes of VC transported by rail, the committee recognized the need to develop the VC transportation mutual aid network (VCNet). This network necessitated a strong demand for enhanced emergency response plans and capabilities on critical routes where actual shipper's response teams may be too far away to arrive during the first crucial hours of an incident. Patterned after other successful models, CHLOREP and Chemnet, our goal was also...

attain a cooperative relationship with the railroads,
community response teams and for-hire contractors
provide technical expertise and assistance to a scene
and work with regulatory agencies and other organizations
on transportation related issues.

Vinyl Chloride Modes of Transportation

- ◆ Railroads
- ◆ Pipelines
- ◆ Marine Vessels

The first critical operational component of VCNet that had to be developed was a map. This map would include:

rail routes used by vinyl chloride shippers

locations of manufacturers of vinyl chloride

railroad emergency response teams and

for-hire contractor emergency teams

In the event of a vinyl chloride distribution incident, this detailed map could be used by CHEMTREC's coordination center. The location of the closest appropriately equipped VCNet response team would then be deployed to the incident site if necessary and immediate technical assistance could be provided in lieu-of or in combination with the teams arrival.

Vinyl Chloride Transportation by Railroads

- ♦ The major route is by railroads. In 1995, approximately 14 billion pounds of vinyl chloride was produced in the US.
- ♦ Approximately one-half of this volume was transported by railroads.
- ♦ Approximately 3,000 cars are used in the transportation of vinyl chloride.

September 1996

At our quarterly meeting, the VCNet committee share non-proprietary information. This information is typically related to the issues around the safe handling and transportation of vinyl chloride. We discuss changes in monitoring equipment, to improvements in PPE, to loading/unloading procedures.

From manufacturing to the final distribution of vinyl chloride, VCNet's objective was, improvement in transportation. This approach has resulted in measurable improvements in safety. Safety to personnel, safety in transportation that also results in improvements in the protection of the environment.

Vinyl Chloride Transportation Mutual Aid Network (VCNet)

Mission

- ◆ To provide technical expertise and assistance by the industry experts and contractors to emergency responders at vinyl chloride transportation incidents

September 1996

Training workshops were then developed - VCNet geared those workshops towards the needs of the industry, the railroads, for-hire emergency contractors, and community emergency response personnel such as yourselves.

We have conducted 12 workshops around the nation over the past four years and these workshops have been very successful in the providing the following:

an understanding of the principles and techniques utilized in responding to vinyl chloride tankcar transportation incidents.

the chemical and physical properties of vinyl chloride

the uses of vinyl chloride

(continued)

Vinyl Chloride Transportation Mutual Aid Network (VCNet)

History

- ◆ Prepared a map that includes information on railroad transportation routes and industry, contractor, railroad, and selected community emergency response teams.
- ◆ Looked at CHLOREP and other CHEMNET models to develop VCNet.

September 1996

various forms of vinyl chloride transportation

incident response recommendations, appropriate PPE and respiratory apparatus recommendations

training of and hands on use of the emergency capping kit for vinyl chloride tankcars

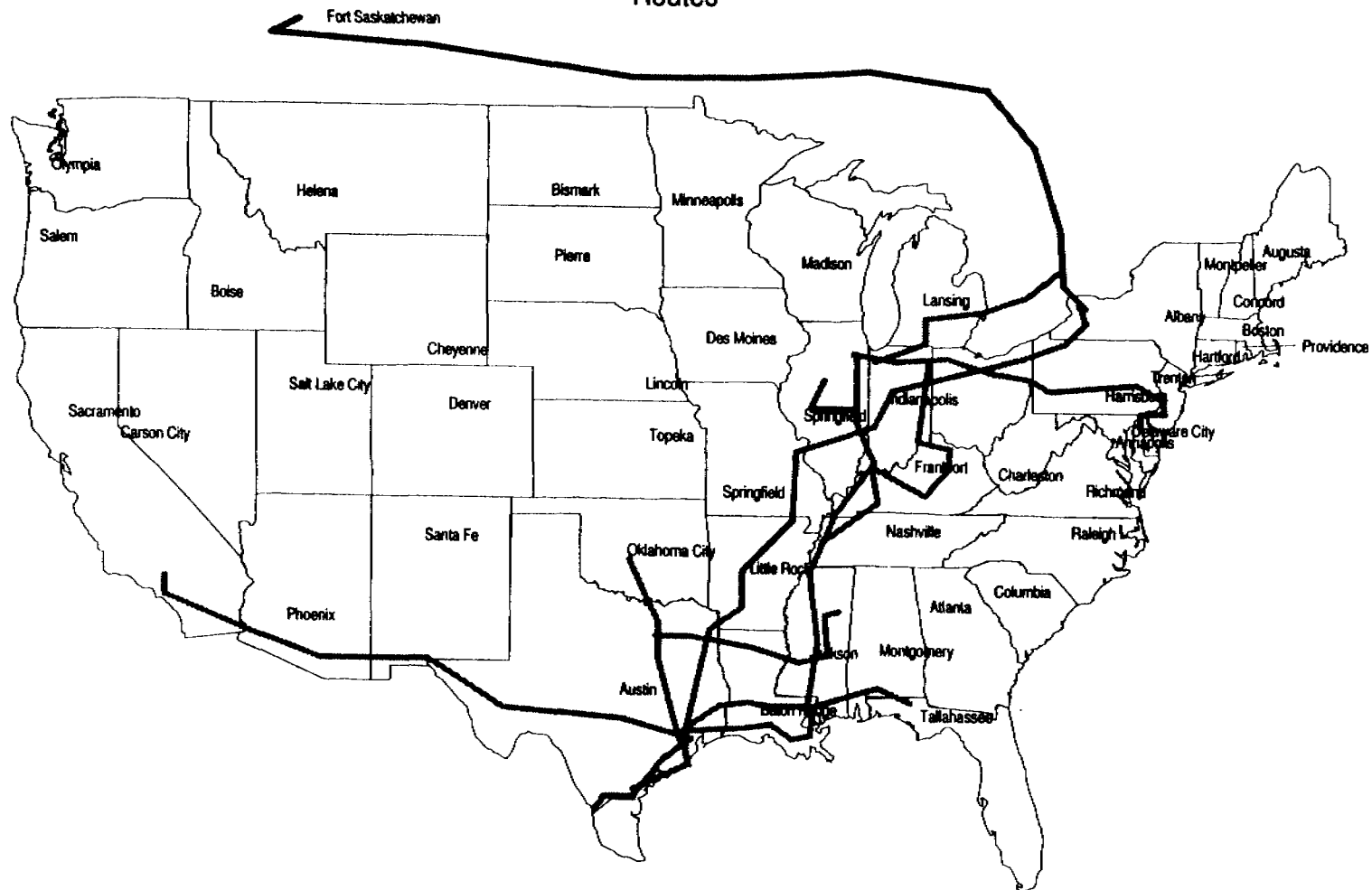
tankcar design, identification and recommended repairs to non-accident tankcar leaks

vinyl chloride detection and monitoring equipment recommendations and use of the equipment.

and generally addresses the typical issues you would incur at an incident - incident command structures and safety procedures at the incident site.

VCNet MAP

1995 Rail
Routes



CMA 110024

VCNet Operations Manual

Table of Contents

- ◆ VCNet Map
- ◆ CHEMTREC Instructions for VCNet Activation, Criteria for Prioritizing "For-Hire" Contractors
- ◆ VCNet Member Company and "For-Hire" Contractor Emergency and Non-Emergency Phone Numbers
- ◆ Response Capabilities of VCNet Members, Contractors, and Railroads

September 1996

A training manual for the workshop was also developed and is issued to each participant. The manual includes:

Information on Transportation Community Awareness and Emergency Response (Transcaer) and how you, the local emergency responder can request a Transcaer workshop in or near your area

protective cover, or dome arrangements on vinyl chloride tankcars. This will include the complete breakdown of all of the valves and other equipment you will find installed on the manway cover plate

(continued)

VCNet Operations Manual

Table of Contents *(Cont'd)*

- ♦ Vinyl Industry Policy Statement and Agreement
- ♦ VCNet Brochure
- ♦ Vinyl Chloride AAR Hazardous Materials Handling Information
- ♦ VCNet Emergency Call Report

monitoring and detection equipment utilized for vinyl chloride
use of PPE in vinyl chloride incidents

steps to take in responding to a non-accident vinyl chloride
tankcar leak and steps to avoid the use of the emergency
cap kit.

The emergency capping kit is the **LAST STEP** any
emergency responder should ever consider taking. The
capping kit will terminate all other avenues available to that
responder. The tankcar, once capped, will then require
Federal Railroad Emergency Exemption (which could take
anywhere from several hours to days to obtain), and then
there is no guarantee that the railroad will move it with this
exemption!

VCNet Drills

Periodic mock emergency response exercises are held to ensure that CHEMTREC, "for hire" contractor response teams, and company response teams are aligned and can act quickly in case of an emergency.

September 1996

VCNet also developed an Operations Manual. This is to be utilized by the member companies, the railroads and for-hire emergency response organizations. The manual includes information such as:

the map I mentioned earlier that covers rail routes and tonnage of vinyl chloride moving on those routes

CHEMTREC steps that are utilized to activate the for-hire contractors and member teams

emergency and non-emergency phone numbers for each VCNet member and for-hire contractor. This is very critical, for we can provide the emergency responder at the scene a guarantee for immediate technical expertise and support

(continued)

Future Rail Car Constructions

In 1995, the Committee requested the Association of American Railroads to docket a proposal stating that all newly constructed vinyl chloride rail tank cars are capable of accepting a capping kit.

September 1996

it also includes the response support capabilities of each team (number of personnel and equipment capabilities) a brochure that summarizes the operation of VCNet, along with some of the very basics of vinyl chloride Association of American Railroads hazardous material handling information. That is specific to vinyl chloride, and that is geared specifically to the emergency responders concerns

Vinyl Chloride Safety Awareness Training Workshop

- ◆ Directed at industry, contractor, and community emergency response personnel
- ◆ Provides a better understanding of the principles and techniques involved in responding to vinyl chloride incidents

September 1996

#12(a)

Vinyl chloride is manufactured and either consumed on the site of the manufacture for PVC production, or it is loaded into various containers for shipments.

Containers could be pipelines, where vinyl chloride is shipped off-site to other manufacturing complexes. Pipelines are utilized where the manufacturer and the consumer is located next to one another.

Containers could also be large ocean gas ships. One gas ship carrying vinyl chloride, carries the same volume as 170 tankcars (15,000 tons of vinyl chloride). These shipments of vinyl chloride are delivered to Europe, South America, Australia, and most of the Far East countries to name a few.

(continued)

Vinyl Chloride Safety Awareness

Training Workshop (Cont'd)

- ◆ Training Manual includes information on VCNet, properties, uses, toxicology, transportation, incident response procedures, emergency capping kit, and typical issues at an incident

#12(b)

However, it will be the tankcar that you the emergency responder would more than likely encounter in a day-to-day operation.

Approximately 14 billion pounds of vinyl chloride is produced each year by manufactures in the U.S.

Of the volume shipped, over half of this is shipped in tankcars to numerous locations in the U.S., Mexico and Canada in approximately 3,000 pressure tankcars. With over 40,000 tankcar shipments being are made each year.

Vinyl Chloride Safety Awareness Training Manual

- ◆ Objective
- ◆ TRANSCAER
- ◆ Vinyl Chloride Mutual Aid Network Agreement
- ◆ Properties & Toxicology of VCM
- ◆ Protective Cover Arrangement

September 1996

In an on-going effort to improve safety, VCNet reviews and recommends improvements to all forms of equipment transporting vinyl chloride. An example of that is the committees current request that the Association of American Railroads review, and accept our proposal, which recommends that all future vinyl chloride tankcar are constructed in a fashion to allow them to accept emergency capping kits.

Currently, 79% of the tankcars transporting vinyl chloride, can adequately accept an emergency capping kit.

Vinyl Chloride Safety Awareness

Training Manual (Cont'd)

- Vinyl Chloride Safety Information
- Monitoring & Detection of Hazardous Substances & Monitoring Vinyl Chloride
- Personal Protective Equipment
- Capping Leaking Containers

As our committee continues to expand in all facets of transportation of vinyl chloride, we have become very involved in the Federal regulatory process. Some examples of our involvement. We were successful in making changes in the Occupational Safety and Health Administration (OSHA) Vinyl Chloride Standard. Specifically, eliminating the confusion between the OSHA Vinyl Chloride standard and the OSHA Hazardous Material standard. These standards were in contradiction in regards to permissible exposure limits.

We were also successful in having DOT accept our definitions on Vinyl Chloride, inhibited and stabilized. And realize, there is no hazard difference between them. We will continue monitor all regulatory agencies.

Vinyl Chloride Safety Video

The Committee is in the process of preparing a video on the use of a capping kit for vinyl chloride and other pressurized tank cars of similar design.

September 1996

VCNet implemented conducting periodic mock emergency drills. Those tested in these mock emergencies were the approved for-hire contractors response teams as well as the manufacturers response teams.

CHEMTREC conducts these drills, per VCNet's request, to ensure that the phone numbers, company contacts and timeliness of the response is within our permissible limits.

Results of these drills are analyzed by the VCNet committee and if necessary, changes are recommended or made.

Monitoring Relevant Regulatory Activities

- ◆ OSHA Vinyl Chloride Standard
- ◆ DOT Proper Shipping Name Change

September 1996

The VCNet committee has in addition to these other accomplishments, just completed the script for a new safety video. This video will provide, in detail, the steps for mitigating a vinyl chloride tankcar leak. From adjustments to the packing gland, to the installation of the emergency capping kit. The safety video will be relevant only for leaks that have occurred on non-accident related tankcars.

The video is scheduled to be released in 1997, and will be available either through VCNet or the Chemical Manufacturers Association Video Library.

Incident and Safety Information Exchange

Periodically members share non-proprietary plant safety, safe handling, and transportation incident information on vinyl chloride to promote safety and to protect environmental quality.

September 1996

The VCNet committee and the Members of the Chemical Manufacturers Association, are committed to assisting the community emergency responders.

As our mission statement indicates, to provide technical expertise and assistance by the industry experts and contractors to emergency responders. And this can be accomplished directly through workshops, networking or by picking up the phone and requesting assistance.

Again, the VCNet committee appreciate all of you for attending this years Emergency Response Network.

Thank you.