

CertainTeed	Date	To	Location and mail code
	11-27-79	C. A. Gellner	Lake Charles
Subject	From <i>BJB.</i>		Location and mail code
Meeting Minutes of the Vinyl Chloride Safety Association Meeting September 13 & 14, 1979	Bruce J. Brocka		Lake Charles

The VCSA agenda is attached. The following are brief comments on the agenda by topic.

CIIT--CHEMICAL INDUSTRY INSTITUTE OF TOXICOLOGY

1. There was no interest to CertainTeed in this topic.

RISK ANALYSIS

1. This was a very interesting item.
 - A. The risk analyst from Union Carbide stressed the idea of having three levels of safety for controlling reactors especially exothermic reactors as in PVC.
 2. It was also pointed out that rarely does a single item failure cause runaway reaction. Generally, it has been their experience that three or more events must get together to cause a failure.

TRAINING NEW PLANT FORCES FOR SAFETY

1. Diamond Shamrock, Independence, Texas.
 - A. The new plant built there was built with safety consciousness in mind, and training was stressed very thoroughly. They have a safety manual for plant operation similar in concept and in content to the Polymer Plant Accident Prevention Manual and also incorporate monthly safety meetings for their personnel as we do.
 - B. They spent two million dollars in training costs prior to start up. They have two hundred persons in non-union facility.

VINYL CHLORIDE RECOVERY SECTION EXPLOSION

1. Hüls had a December, 1978, explosion while taking a recovery system out of service. Damage was two million German marks.
 - A. They normally run 1.5 percent by volume oxygen in the compressor inlet and 6,000 ppm of other impurities in recovered monomer.
 - B. Vinyl Peroxide accumulation was found to be the cause of detonation. Vinyl Peroxide accumulation was felt to be caused by the excessive amount of oxygen in the compressor inlet.

CTL021365

CASE HISTORY OF THE VINYL CHLORIDE TANK CAR DERAILMENT AND FIRE

1. This topic was spoken about by B. F. Goodrich for a very short time. The actual events talked about were shown on video tape. The techniques used are applicable to railroad derailments but have no relevance for CertainTeed.

VINYL CHLORIDE EXCURSIONS

1. Two thirds of incidents in a three-year period were related to "Operator Error". They had found that the average years of experience of their chief operator dropped from twelve years to three years because of the growth of new plants in the Diamond Shamrock organization.
2. Great emphasis is now being placed on operator training with four days of classroom training for the newly assigned operators.
3. They did note that their safety record had shown no change after implementation of this extensive training.

DATA REPORTING ON VINYL CHLORIDE MONITORING EQUIPMENT

1. No new information was presented on methods or techniques of ambient sampling of Vinyl Chloride. (area monitoring)

SOLVENT ABSORPTION

1. This presentation on solvent absorption by B. F. Goodrich was a selling pitch in disguise.
2. It was mentioned that B. F. Goodrich considers to be in non-compliance whenever their final control device is inoperative for longer than twenty four hours.
3. An audience poll showed eleven final control devices installed. Six of the eleven locations either had or were planning to add a second control device.

CHLORIDE STRESS CORROSION CRACKING

1. An update was presented on chloride stress corrosion cracking in stainless vessels in PVC manufacturing service. Data was presented in the form of a table based on concentration of chlorides, temperature, and years of service to predict a failure.

CTL021366

AN UPDATE OF REGULATORY ACTIVITY

1. OSHA inspections.
 - A. There have been fourteen OSHA inspections in the last year resulting in two citations.
 1. Hooker, for not providing training for people in non-regulated areas. This was reversed.
 2. Pantasote, for not performing monitoring because of an exemption based on their area monitoring system. This is still in court.
2. Vinyl Chloride releases to the atmosphere from November, 1978, to June 30, 1979.
 - A. There has been an average of 43,000 pounds of Vinyl Chloride released to the atmosphere per month and 2,000 pounds of Vinyl Chloride per release. A quick summary of the causes of the releases: reactor releases have been 65 percent of the total; 30 percent have accumulated to operator error; 22 percent to mechanical failure; 5 percent to electrical failure; 17 percent to instrument failure; 20 percent to process upset; 5 percent to other causes; 5 percent unknown causes. This all totals to greater than 100 percent because of multiple causes in certain cases.
3. Information obtained from the EPA for Region 6.
 - A. On the Vinyl Chloride levels remaining in the polymer when it comes out of the autoclave or stripping vessel and also information regarding discharges to the atmosphere show two interesting items.
 1. Two companies, Georgia Pacific and Conoco at Oklahoma City, claimed that information was confidential.
 2. CertainTeed and B. F. Goodrich at Plaquemine; the EPA claimed that no report has been sent in.

TRUE CONFESSIONS

1. There were two items in the True Confessions Section of the VCSA.
 - A. The first item had to do with a transfer pump explosion at ICI. Casing of the pump shattered. Pieces flew twenty feet away. Vinyl Chloride within the pump was released and caught fire. The cause of the explosion was believed to be that the pump continued to run against a closed valve. In other words, both the suction and discharge valves were closed and within two or three minutes the incident happened. A show of hands from the audience indicated that this particular incident had also happened at two other plants.

CTL021367

2. Georgia Pacific at Plaquemine had a man fall into one of their 34,000 gallon reactors causing severe injuries and burns. The explanation was that the man was hurrying; violating basic safety regulations as far as locking out the agitator, as far as the procedure for turning equipment off. The person involved was installing an automatic reactor cleaning nozzle onto an autoclave that was just emptied. He did this without locking out the agitator and without turning off a blower which ventilates fumes from the top of the reactor, and the manway. As he was fitting this device to the manway, the suction created by the fan pulled in the automatic cleaning device and the person who was installing it was also pulled into the reactor.

ACTION POINTS

1. A means of checking the oxygen level in the Vinyl Chloride stream on the suction of degas compressor should be investigated.
2. Autoclave nozzles especially in cooler locations where HCL could condense and cause chloride stress corrosion cracking should be examined radiographically during the next turnaround or before if time permits.
3. The reemphasis on safety procedure for checklist and lockout procedures will be made as a result of the incident at Georgia Pacific related during the "True Confessions" section of the VCSA program.
4. CertainTeed must provide the report data for the EPA files called for in the EPA regulations effective October 1978.
5. The transfer pump explosion incident at ICI will be discussed in supervisor meetings and operator shift safety meetings so as to reemphasize importance of near running a pump against a closed valve.

dap

Attachment

CTL021368

VINYL CHLORIDE SAFETY ASSOCIATION MEETING AGENDA

SEPTEMBER 13 & 14, 1979

HYATT ON UNION SQUARE, SAN FRANCISCO, CALIFORNIA 94108

September 13, 1979

	<u>Time</u>	<u>Subject</u>	<u>Discussion Leader</u>
A.M.	8:00 - 9:00	Registration & Coffee Social Hour	
	9:00 - 9:30	Chairman's Welcome Official Business	Art Gellner CertainTeed
	9:30 - 10:15	CIIT - Its contribution to business which handles toxic chemicals.	Dick Fleming Ex. Vice President Air Products
	10:15 - 10:30	Coffee Break	
	10:30 - 11:15	Risk Analysis of Runaway Reaction Occurring in a Solvent Autoclave	D. C. Wobser Union Carbide
	11:15 - 12:00	Training New Plant Forces for Safety	Roy Henderson Diamond Shamrock
P.M.	12:00 - 1:30	Lunch	
	1:30 - 2:15	Explosion in VCM Recovery Compressor	B. Terwiesch Chemische Werke Hüls
	2:15 - 2:45	Placing Explosive Charge on a Burning Tank Car	H. Waltemate B. F. Goodrich
	2:45 - 3:00	Coffee Break	
	3:00 - 3:45	Major VCM Excursions & How They are Handled	Doug Frey Diamond Shamrock
	3:45 - 4:15	Data Reporting on VCM Monitoring Equipment	W. Clark
	4:15 - 4:45	Solvent Absorption as a Final Control Device	G. Schaaf B. F. Goodrich
	4:45	Adjourn	

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September 14, 1979

<u>Time</u>	<u>Subject</u>	<u>Discussion Leader</u>
A.M. 8:00 - 8:30	Chloride Stress Cracking (Update)	J. Wallace Esso
8:30 - 10:15	An Update of Regulatory Agencies Activity & Their Effect on Our Industry. Including: New Regulations Present Reporting Required Present Reporting Results Other Agencies, etc.	J. T. Barr Air Products & R. Laundrie General Tire
10:15 - 10:30	Coffee Break	
10:30 - 12:00	True Confessions	
12:00	Adjourn Meeting	

CTL021370

RECENT REGULATORY ACTIONS

OSHA

Enforcement - New Manual 4 June (unlawful?)

- Relies more heavily on General Duty Clause, including criminal charges.
- Will enforce ACGIH guidelines, NIH, etc.
- Employee representatives must be included. *AND PUNED.*
- More difficulty with blank warrants - exparte.

Rate Retention - Included in Lead Standard

- Part of standard remanded, but not rate retention.
- Limited term, depends on suitability for employment.

Carcinogen Policy - In Draft

- Said to issue this fall but perhaps not until after benzene case is settled.
- Fifth District has said that incremental cost/benefit must be considered. Appealed.

Fire Brigades - Now Proposed

- Would allow employee to refuse hazardous jobs

EPA

Carcinogen Policy - Draft Released

- Possibly to appear in FR soon.
- Requires generic leak reduction program at once, BAT as a minimum later, with decreasing goals based on residual risk. One test of one species adequate to list, if pollutant.

AIK

Vinyl Chloride Revisions - After Policy

- No change in agency attitude that overall policy will be established before any further action on amendments. If present draft stands, June 77 proposal will be consistent.
- Office of Enforcement also wants changes.
- EDF may not accept delay.
- Companies in Northeast have filed for Judicial Review.

CTL021371

Water Quality Criteria - Used Old Risk Analysis

- Proposes 52 ppb for lifetime 10^{-6} risk.
- No aquatic life criteria proposed.
- Very bad job.

*IN PROBLE
IN PROPOSAL
STAGES NOW*

Waste Disposal - RCRA likely to impact PVC

Waste streams from VC, PVC operations listed as hazardous.

FDA

PVC Packaging Sanction - No further action

- Awaits results of SOM policy, that will use acceptable risk calculations to establish residuals.
- Memo of understanding with EPA on potable water finally written.

*{ PPI "no more
than 10 ppm in
pipe water"*

DOT

Identification System - HM - 171

- Proposes 4-digit international identification system on all containers of hazardous materials.

IRLG

Identification of Carcinogens - For Comment

- First step toward uniform governmental policy.
- Uses risk assessment as tool.
- Many good features, but generally too pessimistic in approach.

IRLG/TSCA

Extensive and detailed test methods, Protocols.

FDA/HEW/TSCA

Good laboratory practices, etc.