

DAD

Interoffice Communication

To J. A. DeBernardi
 From C. E. Gremillion
 Date May 27, 1975
 Subject Vinyl Chloride Safety Association (VCSA)
 Trip Report, May 15 & 16, 1975

The VCSA meeting was held in Boston, Mass. A total of 74 people, representing 35 U.S. companies and 8 foreign countries were present during the 1½ day meeting.

In summary, the meeting was very informative and free interchange of information among each company prevailed. The meeting subject dealt with various aspects of each plant's operation, design, administrative and safety activities in attempt to comply with the OSHA and the upcoming EPA Federal Standards regarding PVC and VCM manufacturers. The following are some of the highlights of the meeting.

I. EPA - Speaker - Bill Madden, Firestone

The second draft of the proposed EPA vinyl standards has apparently not given much relief to the VCM industry.

1. Fugitive emissions - any vent stream has to be limited to 10 ppm without dilution allowed. However, later in the plan, N₂ is acceptable to be used for purging.
2. Specific requirements are set for loss of strip material (allowable loss of 400 ppm).
3. Water from the plant process has to be reduced to 5 ppm (weight basis) exclusion to this requirement if you use a centrifuge in the water system.
4. Pump seals shall not leak.
5. Blend tanks - not to exceed 10 ppm.
6. Oxy - chlorination vent-inceneration requirement is relaxed (100 #/100 # vent rate).
7. Sampling and recordkeeping requirements are ridiculous to comply with.
8. Dispersion allowances are discussed in greater detail (ppm/#hr).
9. EPA has removed the requirements of the use of a gas holder.
10. EPA has removed the requirements to tie in the emergency vent to PVC reactors.

Bill Madden, Coordinator - Special Products, Firestone, stated that even though some progress with the EPA had been made, industry was far from agreement in a number of significant areas. More meetings among EPA and industry is being scheduled. Bill can provide more information on the above. He can be reached at (215) 326-2000, P. O. Box 699, Pottstown, Pa. 19464.

II. OSHA Variances

A. Bob Toole - B. F. Goodrich

Bob Toole discussed a permanent variance submitted to OSHA on April 6, 1975 requesting to use the canister type unit with a $\frac{1}{2}$ face mask for up to 10 ppm maximum. (Previously only the full face piece and canister was approved for up through 25 ppm). OSHA, R. McClure, Office of Standards Compliance inquired about the reasons for this request. Mr. Toole informed him the request was primarily due to employee preference and comfort. Technical data and analysis was also available from the Atomic Energy Commission (AEC) stating that a full face piece to a one-half face piece was acceptable for toxic chemical concentrations of 25 ppm and 10 ppm respectively. McClure stated OSHA would look very favorable on variance requests of this nature when such data was based on sound technical judgement and background. McClure later stated that this variance would be changed to a clarification statement and would be approved without having to go through the red tape required of a variance. Bob Toole can be reached at (216) 524-0200, B. F. Goodrich Chemicals, 6100 Oaktree, Cleveland, Ohio 44131.

B. Joe Hager - Stauffer Chemicals (302) 834-4575, P. O. Box 320 Delaware City, Delaware 19706

Mr. Hager discussed a temporary variance they applied for to OSHA in April 1974 requesting the use of other effective means to comply with para. 1910.93q, (g) (6) of the standard that requires a continuous monitoring and alarm system be provided where VCM concentrations could exceed the air-purifying respirators in use. The variance was granted provided:

- (a) employees were more frequently monitored
- (b) verbal notification of employees when VCM concentrations exceeded the respirator devices in use.
- (c) employees were removed from the area in high concentrations until proper respiratory protection was provided and worn.

The Stauffer plant had not received or installed their VCM fixed point monitoring and alarm system at this time even though the equipment was on order.

III. Breathing Air System - Joe Mudd, General Tire - P. O. Box 68, Ashtabula, Ohio 44004

Mr. Mudd started off with compressed air cylinders but switched to air compressors due to complaints by employees of sore throats, dry nose and lips, etc. When questioned, he said approximately 20% of his people were required to wear air respirators 4 hrs/day for one to 1½ hours at a time. Approximately 6 other companies had converted over to air compressors for the same reason. Mudd went to 4 - water -sealed air compressors, 30 hp. motors with one running continuously and the other three on stand-by. Air pressure supply is 60 psi. Air intake is located in the warehouse. The air intake is analyzed each day for CO, CO₂, 20-30% humidity. The line required tracing and increased pressure during the winter months to prevent extreme cold air. Carbon steel lines are used with a bleed for moisture slug removal.

IV. Short Term Shutdown

A. Ray Asti - Stauffer Chemical (302) 834-4575, P. O. Box 320, Delaware City, Del.

Ray related experience he had with shutdowns every one-two weeks. He found that numerous VCM leaks had developed during each new start-up. After investigation, he found that maintenance has not properly tightened flanges, installed valves securely to prevent leaking or re-installed bonnet bolts very well. Ray has incorporated the use of torque wrenches and impressed better work practices when tightening flanges, etc. to prevent uneven surface contact.

B. Bob Babbitt - Georgia-Pacific - P. O. Box 629, Plaquemine, La. (504)687-432

Bob stated that he found in starting up a new PVC plant, the use of water as fluid medium instead of VCM worked extremely well and prevented excessive VCM exposures due to leaks, venting, etc.

V. Norsk Hydro Update - Mr. Johnston, Porsgrunn Fabrikker, Porsgrunn, Norway
035-51120

Mr. Johnston mentioned that the government of Norway shut them down due to VCM exposures. They estimate the shutdown will result in a \$12 million loss. Several safety items are presently in work or completed.

VCM exposure of employees at 40% operating capacity has indicated a mean of 41 ppm.

A control group study of 350 people in and around the city were involved in chromosome medical studies. Tentative results of the study indicate deviations of 21 cases or 17% of the population. There is no sound proof that such results are attributed to VCM exposure. Tests were run also to determine if VCM had any effect on women of child bearing age. No conclusions yet have been reached.

VI. OSHA Program Directive

A. John Barr - Speaker
Air Products & Chemicals
656 E. Swedesford Rd., Wayne Pa. 19087
(215) 687-6150

1. They built a 4 feet fence around the regulated areas with gates and use a card reader tied into their computer system.
2. Computer system also handles all medical programming - when employee is due for testing, recordkeeping, grouping of people's SGOT or BUN readouts are recalled as needed.
3. Computer system also records the man's exposures, TLV's, dates, etc. The computer is tied into their Bendix F.I.D. G.C. for area (fixed point) monitoring and personnel dosimeter monitoring (Sipin) data is also punched into the computer so as to monitor the areas by points, by area and by personnel.
4. Signs & labels - they are labeling transportation items per the SPI transportation AD-HOC Committee letter. In addition, they are labeling more equipment inside the plant but he didn't go into detail.
5. Respiratory Protection - all employees going into a regulated area must have a respiratory on his person ($\frac{1}{2}$ face-piece continuous flow air lined respirator). They have an alarm system and a light that comes on in the area if the VCM concentration exceed 20 ppm.
6. Employees sign letters each day stating how long they have worn a respirator that day, times, etc. for recordkeeping purposes.
7. If an employee chooses to wear a respirator this year, a red strip of tape is put on his hard hat. From that point on, if he is found with the respirator in a regulated area or other hazardous areas suspected of being above 1 ppm, it is a dischargeable offense.
8. Their medical program consists of a hands-on-exam, complete blood and urine analysis, X-rays - chest and hands, pulmonary function test and history. New employees will have to be normal in all respects before hired in future.
9. They attempt to give medical tests and exams before an employee enters a regulated area or at least within 3-4 weeks after employment. Contractors (resident) are provided the medical program.
10. Six (6) people to date have been tested to the extent that biopsies were given.
11. Only 2 poeple to date were removed from their PVC plant. They were transferred to other units in the Co. Company doctors have not eliminated anyone as not suitable for using respiratory protection.

12. Records will be kept and retrieved by the computer. None will be filed or stored in the plant.
13. They had an emergency, in excess of 100# VCM liquid spilled in the polmer building one day, employees persumably were wearing respirators, at least 200 ppm was detected. Call to OSHA area director indicated they were not familiar with the VCM standard nor knew what to do. Air Products put a letter on file that they had notified OSHA.

VII. OSHA Program Directive - Organization Resources counselors (ORC) Meeting
Comments of May 7 & 8, 1975.

- A. OSHA generally thought that the PVC & VCM industry were nit-picking the OSHA standards and resorting to legalistic maneuvering in the interpretation of the standards. They were amazed of the over-reaction of industry to the standard. They felt that industry should strive to meet the interest of the law and not cross - examine and re-interpret.
- B. Massive release - OSHA agreed that 100 ppm is inappropriate to use as a sole measure of what constitutes a massive release. It will really depend upon the situation and for each plant management to determine when to put the emergency plans into work. Massive releases could not occur if you didn't have VCM under pressure according to their thinking. **The primary point to remember is what were the employees exposed to; concentrate on people related exposures.**
- C. Regulated Areas - OSHA feels employers are over-reacting if they feel they have to regulate their whole plant. This is not the intent of the standard. On the other side of the coin, OSHA, R. McClure used the phrase "cite for spite" referring to some OSHA Area Directors who have cited companies in order to get Washington D.C. offices to clarify the VCM standard.
- D. NIOSH will be required to show confidence levels of their analytical accuracy and confidence levels the same as industry.
- E. During turnarounds - areas can be regulated and de-regulated as required, to cover necessary conditions.
- F. **OSHA inspectors will monitor your employees in your plant using direct reading instruments, whether for 15 minutes samples or longer.**
- G. Truck drivers transporting PVC or VCM do not have to be monitored, however, if he is required to handle the product, monitoring is required.
- H. Document all training data, particularly about the availability of respirators during this year.
- I. If an employer uses continuous monitoring for personnel exposure, data has to recorded and documented once/month. However, upon taking a vote, no company used area monitoring for personnel exposure monitoring solely.

*Similar
to what happened
at VCM plant.*

VII. OSHA Inspections - 5 since April 1st of companies represented.

A. Bob Toole - B. F. Goodrich

1. OSHA will check to see that there are a sufficient number of respirators in the plant for all employees.
2. OSHA will talk to various employees in the plant regarding the VCM standard to check if they have been offered respiratory protection.
3. OSHA paid particular attention to compliance with para. 1910.134 regarding the respiratory program.

B. John Floros - Great American Chemicals

1. OSHA inspector came in and stayed 2 days, no citations.
2. He went through recordkeeping in depth, wanted to see back up of everything.
3. He wanted to see respiratory program.
4. He questioned people to verify above.
5. He accepted notifying employees of over-exposure above 1 ppm TWA by notifying employees by letter posted on Bulletin Board of plant with list of employees and corrective action to be taken for all to see .
6. Areas not regulated - OSHA inspector wanted to see monitoring results. ~~Monitoring showed no problem but inspector monitored personnel in the area anyway.~~ >?
7. Eight (8) hr. monitoring was conducted.
8. They had a dust problem but OSHA man not particularly interested.
9. In general, OSHA man was not very picky, he could have cited the company in many areas, but didn't.

C. J. Mudd - General Tire

1. OSHA inspection going on May 16, 22 samples have been taken, 15 items of discussion were raised during the exit briefing without a citation issued.
2. The inspector reviewed the records - medical, monitoring, respiratory training, etc. in detail.
3. Inspector spent 1½ hours with union employees.

C. W. Iliff - Uniroyal

1. One experienced OSHA Ind. Hygienist and two (2) trainees made the inspection.
2. 50-15 minutes samples were taken.
3. W. Iliff thinks he will be cited for not having an alarm system out in the regulated area. His present method used is by voice communication.
4. Other comments of OSHA activities basically the same as above recordkeeping, training, etc.

D. Goodyear - N.Y., N.Y.

1. OSHA inspector had 3 pumps - he took 15 minute samples and 1hr. samples for 8 hours on personnel.
2. OSHA man intends to issue a citation if he finds an employee over 1 ppm TWA for 8 hours whether or not he was wearing his respirator at the time (he referred to the statement "without regard to respiratory protection")

XIII. Short Stops - New Developments

Adolph Peterson, Union Carbide, Texas City, Texas

Mr. Peterson stated that sodium nitrite has successfully been used in their plant to completely stop any PVC run away reaction. Sodium nitrite is water soluble and is mixed in equal molar with water. Another company commented that they have used this with the same success. The reaction is stopped dead not just controlled.

IX. Miscellaneous

- A. OSHA now has stated that a 4 hr. service life canister doesn't not expire after 4 hours, if the canister is stored in the control room, for example where no VCM exposure is permitted to enter the canister when the seal has been removed.
Ref. Bob Toole - B. F. Goodrich
- B. OSHA has held the employer responsible for cleaning, disinfecting and maintenance of respiratory protection, not the employee.
Ref. Pantasote Co.
- C. Medical meeting held approximately May 13 - general agreement reached that all employees would be considered suitable for using respiratory equipment provided they were not asthmatic or had a lung disease that significantly affected their breathing.

What's our plan?

- D. No women of child bearing age will be permitted to work in areas of VCM exposure per their Medical Director's ruling.
Ref. Union Carbide, Adolph Peterson.
- E. Fifteen (15) companies have transferred people out of PVC or VCM operations since the VCM standard's existence. Twelve (12) of those companies have been successful to transfer these employees to other company locations.
- F. A total of eight (8) companies have reported emergencies to OSHA area offices since April 1st. Information given has ranged from verbal to written letters to the OSHA Area Director.
- G. Three (3) companies have actually constructed a fence around their regulated areas.
- H. Fourteen (14) companies have added people to their respective plants to meet the VCM Standard.
- I. Two incidents of reporting of emergencies to OSHA were mentioned where VCM was released through a failed rupture disc without personnel exposure resulting. OSHA Area Directors at La. and Ohio still wanted the incident reported as an emergency.
Ref. A. Dixon - Goodyear - La.
W. Iliff - Uniroyal, Ohio

Earl Gremillion

C. E. Gremillion

bw

Distribution

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VINYL CHLORIDE SAFETY ASSOCIATION
ATTENDANCE ROSTER - MAY 15 & MAY 16, 1975
STATLER-HILTON HOTEL - BOSTON, MASSACHUSETTS

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