

JJH: JCL: TGG: RF

XF: OKC

TO: Harry Garrison

FROM: Tom Grumbles  
DATE: March 12, 1985

Interoffice  
Communication

SUBJ: CHEMICAL EXPOSURE ABATEMENT PROGRAM

VISTA

There are several suggestions noted in the text. Other comments are below.

I.A.2 Modification of PEL's for Prolonged Exposure Periods: I'm not sure why you've included this attachment. For your information, VCM is a category IC (Figure XIII-1) contaminant and is not adjusted for prolonged work schedules.

I.L.3 Signs/Labels: McClain and I are still looking at the waste container question given us by Warner. I think the answer will be that the waste containers in-plant must be labeled. OSHA doesn't care about NESHAPS and hazardous waste definition. Also, if we used the same rationale with the waste material as for product (RVCM below 8.5ppm) then this material could create exposure exceeding 0.5ppm.

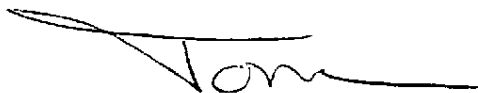
I hope to respond to Warner this week.

I.L.4 I'd suggest the following words:

It has been determined that if RVCM levels in resin are less than 8.5ppm, airborne concentrations of VCM from processing this product will not produce exposures exceeding 0.5ppm. Therefore, products meeting these conditions are exempt from the labeling requirements of the standard. Resin produced by the OKC plant is typically below 1.0ppm RVCM, therefore containers of PVC product are not labeled.

I.L.5 VCM Containers: Processing and storage vessels will have to be labeled to comply with OSHA 1910.1200, HAZARD COMMUNICATION STANDARD.

Please call if you have questions on any of these comments. I'm sure we'll be discussing the waste container labeling issue in the near future.



Thomas G. Grumbles

Attachment

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VISTA POLYMERS INC.

OKLAHOMA CITY PVC PLANT

CHEMICAL EXPOSURE ABATEMENT PROGRAM

I. VCM EXPOSURE ABATEMENT

A. REFERENCES:

1. OSHA 1910.1017 - Vinyl Chloride (Attachment I)
- ② OSHA Instruction CPL-2-2.20, Modification of PEL's for Prolonged Exposure Periods (Attachment II)

B. PURPOSE: To establish and administer a program that will minimize employee exposure to vinyl chloride monomer.

C. OBJECTIVE: To achieve the purpose stated above by carrying out the basic elements listed below:

1. Conduct a personnel monitoring program that will provide dosimetry data for individuals and/or job positions. Maintain records of this program. Report exposures exceeding the permissible exposure limit to affected employees in writing.

OK  
②

2. Maintain a fixed point continuous monitoring system of areas of the plant where VCM concentrations may occasionally exceed the permissible exposure limit.
3. Establish regulated areas if necessary and restrict access to these areas which are determined to have vinyl chloride concentrations in excess of the permissible exposure limit.
4. Control employee exposures to vinyl chloride monomer at or below the permissible exposure limit by engineering, work practice and personal protective controls.
5. Provide respiratory protective equipment (and other protective garments as necessary) and training in the use of this equipment to employees who might be required to work in areas where VCM concentrations would (or might) require such protection.
6. Establish and maintain an emergency manual that details procedures to be taken by employees to control and/or correct emergency situations or to evacuate if they are not equipped/trained to handle such situations.

VISTA POLYMERS INC.

OKLAHOMA CITY PVC PLANT

CHEMICAL EXPOSURE ABATEMENT PROGRAM

I. VCM EXPOSURE ABATEMENT

C. OBJECTIVE (Continued)

7. Provide training for each employee relating to the hazards of vinyl chloride monomer and precautions for its safe use.
8. Provide a program of medical surveillance for all plant employees and maintain records of this program.
9. Provide appropriate warning signs and labels for areas in which employees or other personnel may encounter a potential for exposure to VCM above the permissible exposure limit.

D. PERSONNEL MONITORING PROGRAM

Personnel monitoring data collected during 1983 and 1984 indicate that there were no exposures in excess of the permissible exposure limit (PEL) and that only 7 sampling results (1 in 1983 and 6 in 1984) were in excess of the action level. Based on this data, the plant could discontinue personnel monitoring as provided by OSHA 1910.1017(d)(2)(iii). We will continue, however, to pursue a personnel monitoring program to serve as an audit of our abatement program's effectiveness.

The strategy for this personnel monitoring program will be based on job position as indicated below:

| <u>Monthly</u>        | <u>Quarterly</u>        | <u>Semi-Annually</u>   | <u>Annually</u>  |
|-----------------------|-------------------------|------------------------|------------------|
| 1 - Shift Supervisor  | Lab Technicians/Loaders | Mechanical Engineer    | Office Manager   |
| 1 - Panel Operator    | Lab/Loading Supervisor  | Mechanical Supt.       | Maint. Clerk     |
| 3 - Outside Operators | Maintenance Supervisor  | Process Engineers      | Materials Coord. |
| 2-3 Mechanics         | Safety Director         | Senior Process Engr.   | Recep/Secretary  |
| 1 - Utility Helper    |                         | Process Superintendent | Warehouseman     |
|                       |                         | Plant Superintendent   | Yield Analyst    |
|                       |                         | Plant Manager          |                  |

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OKLAHOMA CITY PVC PLANT

CHEMICAL EXPOSURE ABATEMENT PROGRAM

I. VCM EXPOSURE ABATEMENT

D. PERSONNEL MONITORING PROGRAM (Continued)

Personnel monitoring will be repeated at least monthly for any employee whose dosimetry results indicate an exposure greater than the action level (0.5 ppm). This repeat sampling will continue until two consecutive samples (not less than 5 days apart) indicate exposure at or below the action level (0.5 ppm). When this is achieved, the employee will return to the routine sampling schedule. This repeat sampling will be conducted in addition to the routine sampling indicated above.

All employees in job positions in the monthly sampling category will be sampled at least once every four (4) months by rotating persons selected in the various job categories. See Attachments III-A and III-B for an example of the sampling control log.

Employees whose dosimetry results indicate exposure above the PEL (1.0 ppm) will be notified in writing by the Plant Manager. An example of this notification is appended as Attachment IV.

Records of the dosimetry results are maintained per OSHA 1910.1017(m). A summary of these results are presented in Attachment V for 1983 and 1984.

Personnel exposure monitoring is conducted using passive dosimeters (3M Organic Vapor Monitors) and a Perkin Elmer F-42 Gas Chromatograph (See Attachment VI).

E. FIXED POINT MONITORING SYSTEM

The Fixed Point Monitoring (FPM) System consists of two Honeywell gas chromatograph analyzers, 19 remote monitoring heads, and a Perkin Elmer computer which monitors the analyzer output, computes and signals an alarm in the event a leak is detected and summarizes the daily results. If concentrations of VCM are detected that would result in exposures above the PEL, persons in the area are instructed to leave the area. Only authorized persons with the appropriate protective equipment are allowed in the area until the situation is remedied.

These monitoring heads are located strategically throughout the plant in areas which based on past experience were susceptible to vinyl chloride leaks. The location of these monitoring heads are listed in Attachment VII.

\* computes what?  
(concentration, ppm,  
air levels, etc.)

\* should specify  
How (Radio,  
PA system, etc.)

VISTA POLYMERS INC.

OKLAHOMA CITY PVC PLANT

CHEMICAL EXPOSURE ABATEMENT PROGRAM

I. VCM EXPOSURE ABATEMENT

F. REGULATED AREAS

There are no longer any regulated areas as defined by OSHA 1910.1017(e) since no area of the plant has vinyl chloride concentrations in excess of the permissible exposure limit. Several of the areas formerly designated as regulated areas are treated as areas that due to the nature of the equipment/operations have a higher than normal potential to expose an employee to VCM concentrations in excess of the PEL (1.0 ppm) if an error, equipment malfunction, etc. was to occur. Unauthorized persons are advised to stay out of the areas. In addition, employees may be required to wear respiratory protection as a precautionary measure while performing certain tasks in these areas (example: VCM unloading platforms while connecting/disconnecting VCM unloading hoses to/from railcars).

G. ENGINEERING AND WORK PRACTICE CONTROLS

A written plan to reduce exposures to, at or below the permissible exposure limit, or to the greatest extent feasible, solely by means of engineering and work practice controls has been prepared and is updated every six months. A copy of the last such update is presented in Attachment VIII.

H. RESPIRATORY PROTECTION

Respiratory protective equipment, as well as other necessary protective garments are provided to employees. Training is also provided to employees in the proper use, maintenance, storage, etc. of this equipment. The plant has a separate, comprehensive, written respiratory protection program; however, it is not included as an attachment in the exposure abatement program.

I. EMERGENCY PROCEDURES MANUAL

The plant maintains a separate, comprehensive, written Emergency/Disaster Plan; however, it is not included as an attachment in the exposure abatement program. Specific operational procedures to prevent, control and/or correct hazardous releases of vinyl chloride are found in the Operating and Maintenance Procedures Manual.

VISTA POLYMERS INC.

OKLAHOMA CITY PVC PLANT

CHEMICAL EXPOSURE ABATEMENT PROGRAM

I. VCM EXPOSURE ABATEMENT

J. TRAINING

All employees are provided training relating to the hazards of vinyl chloride and precautions for its safe use. This training program covers all of the key points addressed by OSHA 1910.1017(j). Employees are provided this training in their initial plant orientation/indoctrination and once per year thereafter.

K. MEDICAL SURVEILLANCE

A comprehensive, medical surveillance and health screening program is provided for all employees. The program meets, and in some cases exceeds, the minimum requirements of OSHA 1910.1017(k).

Examinations are provided every six months for each employee who has been employed in vinyl chloride or polyvinyl chloride manufacturing for ten years or longer and annually for all other employees.

Each employee exposed to an emergency is afforded appropriate medical surveillance.

Medical records are maintained by the Vista Medical Department in accordance with OSHA 1910.1017(m). No medical records are maintained at the plant.

L. SIGNS/LABELS

Warning signs and labels are posted in areas and affixed to containers, respectively, as required by OSHA 1910.1017(1).

1. Regulated Areas - Since the plant has no regulated areas in which the concentration of VCM is above the permissible exposure limit, posting strictly per OSHA 1910.1017(1)(i) is not required. We have, however, retained warning signs in and around most of these areas as a matter of good practice.
2. Hazardous Operations - Areas containing hazardous operations (i.e., areas where a release of vinyl chloride might be expected as a consequence of the operation or because of an accident in the operation which would result in an employee exposure in excess of the permissible exposure limit) are posted with the appropriate warning.

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I. VCM EXPOSURE ABATEMENT

L. SIGNS/LABELS (Continued)

3. Containers of PVC Waste - The OSHA regulations were promulgated prior to the NESHAPS regulations which require steam stripping of reactor slurry before dumping. Personnel dosimetry, fixed point monitoring and a special study (see Attachment IX) conducted in 1984 all document evidence that PVC resin waste from the reactors (referred to as reactor culls) and PVC trapped in the water effluent system (referred to as pond resin) present no exposures above the permissible exposure limit or the action level to personnel handling these materials. These containers, therefore, are not labeled.
- ④. PVC Containers - Containers of PVC product are not labeled since it has been determined that there is not exposure to downstream processors provided the residual VCM concentration is less than 8 ppm. Resin produced by the Oklahoma City Plant typically runs nil to 1.0 ppm.
- ⑤. VCM Containers - VCM container (gas cylinders) and railcars are labeled as required by OSHA 1910.1017(1)(5). Processing and storage vessels, however, are not labeled.

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