



INTER-OFFICE CORRESPONDENCE

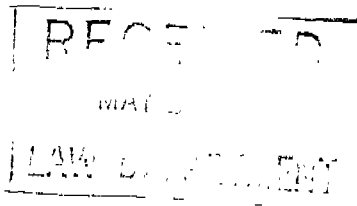
Date: May 28, 1975

From: F. C. Dehn

Location: 10 West

Subject: VCM Regulated Areas

To: Mr. J. A. Clapperton
Mr. J. M. Davis
Mr. J. Dennison
Mr. M. E. Petruccelli
Mr. F. J. Trunzo
Mr. G. Work



A meeting was held in General Office on May 12 with representatives from Caribe, Lake Charles and Paulsboro terminal. Those in attendance were: J. A. Clapperton, J. M. Davis, J. Dennison, M. E. Petruccelli, F. J. Trunzo, and G. Work. The purpose was to review thoroughly the vinyl chloride regulations section dealing with regulated areas. We wish to apply uniform criteria for the regulation of all vinyl chloride monomer areas in the Chemical Division and associated integral operations. At this time, none of the Chemical Division locations have actually reported the boundaries of their regulated areas to EPA. This is due, and EPA has requested the definition of Caribe's regulated areas. On the basis of our concerted judgment and legal counsel's interpretation, the plants and terminal will proceed with their compliance requirements.

By unanimous judgment, it was decided that we wish to keep the regulated areas as small as possible, while complying with all the requirements of the regulations. Although strict interpretation of the regulations reduces the necessary frequency of sampling to as low as once per quarter for those locations showing less than 1 ppm, it was our conclusion that we would sample a minimum of once per month at all locations. We will further sample at whatever frequency is necessary in areas that are critical or require more frequent sampling.

In order to adequately cover all of the areas of manufacturing, packaging, repackaging, storage, handling and loading of vinyl chloride, these were discussed in separate sections.

Storage Area (Caribe)

The vinyl storage area at Caribe is a five-sided diked area. The dike is the perimeter of the regulated area. Each side of this diked area should contain the appropriate sign as indicated in the Federal Register, Volume 30, No. 194, Article 1910.93q, the section on Signs and Labels (P. 35898, 10/4/74). The biggest problem Caribe has in the storage area is in about the pump and refrigerated compressor area. Puerto Rico has ordered a canned pump for evaluation. Someone is normally in this area about 50 percent of the time. Wherever there are vent lines available here, these should be raised to a minimum of 20 feet above the tanks. Caribe is in the process of installing their automatic vinyl monitoring system. This system will have a number of continuously recording points in and about the storage area.

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(Paulsboro)

The Paulsboro terminal has a seven-sided diked area. The dikes here will also be considered the perimeter of the regulated storage area, and appropriate signs will be posted. In the case of Paulsboro, the compressor and vent stack are outside the diked area. These must be placed within a readily identified regulated area and adequately placarded with the appropriate sign. The vent stack from the refrigeration system for the Paulsboro storage tanks should likewise be raised to a point approximately 20 feet above the tank vent.

(Lake Charles)

The Lake Charles storage area at the dock is a pressure storage. Lake Charles has not established vinyl levels in this area when they are not loading a ship. Sufficient sampling should be performed as soon as possible in order to adequately establish the need for calling the pressurized sphere the regulated area. The sphere must be adequately marked as required in the Federal Register.

West of the vinyl chloride pressurized sphere is the 75-foot purge stack and the pump complex for loading. This area should be marked as a regulated area. Intermittent operation of loading pumps makes them susceptible to leaking. The effectiveness and utility of the canned pump Caribe has ordered should be followed. This may be a best, safe procedure for intermittent pump-operating facilities. Adequate sampling must be performed to identify the perimeter boundaries.

The Lake Charles storage area south of the VCM manufacturing area and across the tracks is a regulated area. This will encompass the six vinyl chloride storage bullets up to and including the two vinyl chloride spheres. This rectangular section (approximately 300 yards long and 100 yards wide) will have two signs on the front side where the area can be entered, one on each side, and one on the back which borders a road in the wooded section. In this case also, the height of the stack should be considered in the light of the diffusion equations and the proposed EPA regulations which are soon to be issued. Sampling in and about the pumping area and the regulated area perimeter must confirm the boundary limits.

Loading Areas (Caribe)

The Caribe vinyl loading area is the ship dock. The area at the gate leading to the Breasting Dolphin should be marked as a regulated area. In this case, since various ships are here at times and other chemicals are loaded aboard

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the Puerto Rican and other ocean-going vessels, this regulated area sign should indicate it is only a regulated area when vinyl chloride is being loaded or unloaded. The recommended method of designation is to have this as a permanent sign with a flashing red light that can be turned on at such time when vinyl is being loaded or unloaded.

(Lake Charles)

Lake Charles barge loading at their dock area is to be similarly marked. The beginning of the TEE head for ship loading should be marked as the regulated area with the necessary red flashing light indicating when vinyl is being loaded or unloaded. The same applies to their barge-loading station north and west of the ship-loading TEE head. Similar identification of the barge-loading area is required. As a further precaution during loading operations, the plant road is blocked off on both ends, eliminating the vehicular traffic past these two loading stations.

The Lake Charles vinyl chloride tank car loading area will be considered a regulated area while vinyl chloride is being loaded or unloaded. These prevalent signs should be on all sides from which access to the loading area is possible. Flashing red lights should be available at this Lake Charles tank car loading area also. These should be operable when vinyl loading is in progress.

(Paulsboro)

The Paulsboro unloading dock for the Puerto Rican should be marked in a fashion similar to both the Caribe and Lake Charles vinyl ship loading dock areas. The specific location for the regulated area sign or signs, as well as their accompanying boundaries while vinyl chloride is being loaded or unloaded and flashing red light signals will have to be appropriately located. The configuration of the dock area was not characterized.

Details of the Paulsboro tank car and truck loading area are not that clear. However, the same exposures can occur as at Lake Charles and similar precautions should be taken. All sides of the loading area should be adequately marked as well as adequate definition of regulated areas. Adequate monitoring will be required to establish these areas.

Manufacturing Area (Lake Charles)

The regulated areas for the Lake Charles vinyl production area are the VC

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process section and the laboratory in the control room building. The perimeters of the VC process section will be the pad area. All four sides should have the regulated area signs posted in very conspicuous places. The control lab enters from an outside door. This door should be the one marked regulated area to remind everyone entering the laboratory there. The VC furnace pad south of the main VC process area is not being considered a regulated area. The opportunity for leaks here is extremely slight since there are no pumps, sample points, vents, etc. Any samples taken are reported to be below 1 ppm. Appropriate regulated area signs are to be posted and monitoring frequency should continue to conform with regulations.

(Caribe)

The Caribe vinyl process area is not as easily identified because of the integrated nature of OHC and VCM. An L-shaped area bordering on C Street beginning 60 feet north of Main Street and extending 165 feet further north represents the western boundary. This proceeds 70 feet due east to the center line of the pump area dividing EDC from VCM. This rectangular area plus the section around Vessel V404 is the area designated by Caribe as being the regulated area. This section is readily identified at the plant site because the perimeters are enclosed in a yellow tape barrier. Their automatic monitoring system has 17 points continuously recording in this area. At both Lake Charles and Caribe, their automatic monitoring systems are designed to sound an alarm when the VCM limit exceeds 5 ppm. Appropriate regulated area signs are to be posted and monitoring frequency should continue to conform with regulations.

General

Both Caribe and Lake Charles will have breathing air systems that run the length of the vinyl operations. These have a multitude of quick connect sites to permit great flexibility in working throughout the vinyl area should there be vinyl present above the limits. In addition, both plants are to have a number of air bottles clearly identified and designated with full and empty signs for use in those areas not accessible by breathing air lines.

All people entering these regulated areas must sign in every day. This includes the normally-assigned operator. Attention is called to the fact that with these multiple small regulated areas, a number of stations will have to be provided for people to sign in.

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Since the OSHA VCM rules do not spell out the details required to implement the "sign-in" requirements, it is not considered necessary for a supervisor to be present during sign-in. If after some experience PPG finds a frequency of either failures to sign in or illegible signatures, then a supervisor will be necessary. Perhaps a daily sheet, in typewritten form, listing the names of those who may be expected in the regulated area, together with a space to sign next to the typewritten name might suffice. Of course, such a daily sheet might need lots of extra blank spaces for those whose presence is unexpected. *

The sailors are not subject to OSHA, as they are not "workers", but are subject to USGC regulations. So, compliance with OSHA does not require registration while transiting through a VCM regulated area. Although strict interpretation of the law does not require people other than workers to register, it is recommended that we have them register, i.e., sailors, insurance men, OSHA Inspectors, etc. *

With regard to pressure vessels, if dedicated to VCM these should be labeled with the Federal Register statement. *

Regarding the permanence of the regulated area boundaries, it is suggested that these areas be narrowly drawn (which we have done). Then in the adjacent areas, sampling can be taken for a representative period of time to determine any pattern of excursions in these adjacent areas. The adjacent area sampling you suggest (two consecutive samples a week apart are less than exceed 1 ppm.) should satisfy this. If after a period of time, patterns do appear, then consideration would have to be given to an expansion of the regulated area. *

Summary

- 1) The parameters that have been established as regulated areas must be confirmed through continuous monitoring. Most of the regulated areas will have a number of automatic monitoring devices. In addition to these and at the outer areas of the regulated area, manual monitoring will have to take place in order to adequately characterize the correct boundaries of the regulated area.
- 2) The proper nomenclature, as taken from the Federal Register, exposure to vinyl chloride should be used to adequately identify storage areas. These require permanent regulated area signs. Diked areas, for the most part, serve as the perimeter boundaries. The pumping stations adjacent to the storage areas must be included in the regulated area. If refrigeration equipment is in this area, i.e., for low temperature refrigerated

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storage, this equipment must also be enclosed in an identified, regulated area.

- 3) Loading areas are included as regulated areas. However, in these cases, the required sign should be supplemented with one indicating that this area is only regulated during the loading and unloading of vinyl chloride. There should be a flashing red light which is operable at the time of loading and unloading to adequately warn and identify this as the regulated time period.
- 4) The manufacturing sections that are identified as regulated areas have been so determined by prior sampling. These areas may or may not be readily identifiable boundaries of concrete operating pads. It is recommended that they be further identified by some marker such as yellow marking tape.
- 5) The furnace areas have been determined to be clean areas by prior sampling. As of this time, the furnace areas of Lake Charles and Caribe are not to be considered regulated areas.

* Law Department interpretations by F. Trunzo.


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