

Mailed 5/16/85.

VCM QUESTIONNAIRE

Please fill out one questionnaire for each plant site where VCM is stored or loaded/unloaded in T/C's.

1. Size of storage vessels? Two(2) at 220 cubic meters.
2. Storage temperature? Ambient temperature between 5 and 30 degrees C °C
3. Distance from tank(s) to nearest residence? 2000 meters.
Nearest village or community? 2000 meters
4. Does prevailing wind blow towards a residential area?
yes _____ no X
5. Have you done any vapor cloud dispersion modeling?
yes _____ no X
6. Does your plant have an emergency plan which includes notification or warning the local community?
yes _____ no X
7. Have you made any changes in your operation or procedures since the Bhopal incident?
yes X no _____
8. Tank safety features:
 - a. Is tank(s) diked? yes X no _____
 - b. If a spill occurs, does VCM collect under vessel or is it directed away to a basin? under X away _____
 - c. What special features does diked area or basin have?
hard surfaced _____ covered _____
foam generation _____ water spray X
pump _____ other(explain) _____
- d. Is tank(s) sprinkled? yes X no _____
- e. Are flammable vapor detectors located where spill could occur? yes X no _____
- f. Are VCM area monitors located at tanks (for measuring ppm)?
yes X no _____
- g. Do level instruments have a redundant (second) backup?
yes X no _____

- h. Do levels alarm at a control building which is manned around the clock? yes X no
- i. Does tank(s) have dual relief valves? yes no X (single)
- j. Is there rupture discs under relief valve? yes X no
- k. How is space between relief valve and rupture disc monitored? pressure gauge X open bleed valve
Pressure switch with alarm other

- l. Have you established a maximum fill level limit for your tanks? yes X no

If yes, what is limit? 80 %

(Note: Please state limit as percent of capacity)

- m. Has tank(s) been internally inspected since original installation date? yes X no

If yes, please give age of tank and describe general condition and any problems (of a non-proprietary nature) found. Tank was inspected in January 1985 at ten years of age with no abnormal conditions being noted.

- n. Any other safety features? Describe Each time the tank is filled the VCM is metered into the tank with a shutoff at a certain weight to be also a backup for the high level devices.

9. Pumps and lines:

- a. Are bottom lines on tank equipped with remote operated block valves (EBV's)? yes X no
- b. Do pumps have double seals? yes X no
- c. Are pumps sealless? yes no X

CTL020072

d. Are pumps all steel or wrought iron construction?
yes X no _____

e. Are pumps protected against a dead-headed condition
(running with discharge valve blocked)?
yes _____ no X

3 If yes, how? _____

f. Are pumps protected from a liquid blocked in condition?
yes _____ no X

If yes, how? _____

g. Are pipelines protected from liquid blocked-in condition?
yes X no _____

If yes, how? Relief valve.

h. Are pipelines protected from hydraulic shock of sudden
valve closure? yes _____ no X

i. What type gaskets are used in piping systems? Flat
asbestos type X retained type (such as flexitallic) X
Uses both.

10. Tank car loading/unloading: Not applicable

a. Is the T/C area protected by water sprinkler?
yes _____ no _____

b. Are water monitor nozzles installed? yes _____ no _____

c. Are flexible hoses used in the operation?
yes _____ no _____

If yes, does the plant have a test program or procedure
for the hoses? yes _____ no _____

Please describe _____

Questionnaire

Page 4

- d. Have you ever had a hose fail under VCM pressure?
yes _____ no _____
- e. How is overfilling prevented? Magnetic level float
gauge _____. Load scale _____. Other _____

- f. Is load/unload area diked for containing spillage?
yes _____ no _____
11. Do you ship or receive VCM by tank truck? yes _____ no X
12. Is the plant in the U.S.A.? X outside the U.S.A. _____

Note: This is being asked because U.S. Plants will have certain EPA required features whereas other countries may have different requirements. These distinctions will be used in the tabulations. Remember the survey is anonymous and no company will be identified.

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April 18, 1985

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VINYL CHLORIDE SAFETY ASSOCIATION QUESTIONNAIRE

Attached is a questionnaire concerning safety considerations in the storage and loading or unloading operations for vinyl chloride. Please have your plants fill in the data and return to me no later than July 15, 1985. From these I will work-up the data in tabular form to present at Tampa in September.

All companies who submit data will get a complete set of the survey results.

The questionnaires will be anonymous and no company names will be associated with the data. This will allow your company to determine how it compares to the overall industry with respect to VCM storage, loading and unloading.

Your truly,

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wcb

attachment

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