



VRD 0002006913

Interoffice Communication

To Vinyl Department

From R. W. Seymour

Date 3/12/74

Subject REVISED EVACUATION PROCEDURE, REACTOR BUILDINGS

In case of a major vinyl-chloride spill or fire, the following procedure should be followed in most cases. Each vinyl-chloride leak or fire will be a little different and a judgement will have to be made in each case. However, most cases will best be handled in the following manner. This procedure is intended to protect the operating personnel and any changes to the procedure must first consider operator safety.

1. Evacuate All Personnel - The charging "A" Operator is to notify all utilities and be sure that they get out of the reactors and out of the building. In his absence, the Lead Operator is to be sure that all utilities are out of the building. All men are to move away from the building. Generally, all personnel should go to the break room. The Lead Operator should make a head count to insure that all personnel are accounted for.
2. Set-Off Deluge System - Do this while leaving the building, if possible.
3. Turn In The Emergency Alarm For Vapor Release - (Dial 202) and then announce over the speaker system the location and nature of the problem. The alarm will alert the guard to stop traffic.
4. Bottom Gasket Leak - If possible, vent reactor to the atmosphere while leaving the building.
5. Manhead Gasket Leak - If possible, blow down the reactor while leaving the building. Do not blow down a reactor if Utilities are still in the reactors. It is desirable to stop the blow down when system pressure has been equalized, if the building can be re-entered safely.
6. Dryer Operators - Dryer personnel are to push the emergency shutdown button for the gas burners when the vapor release alarm sounds. Waiting for instructions may be too late.
7. Entering Building - A building that has a high concentration of Vinyl Chloride should be entered only if you think that someone may be trapped or overcome by V.C. When the amount of V.C. has lowered, normally 15-30 minutes, enter the building using the buddy system, with Scott Air Paks. At this time, these men should stop blow down if the system has equalized and make any changes on the reactor that are necessary (i.e. take reactor off heat-up). They should check reactor to be sure that all pressure has been released and if reactor pressure is zero, shut off deluge system.

REVISED EVACUATION PROCEDURE, REACTOR BUILDINGS
Continued

Then check the building for VCM content with an explosimeter. If a reading above zero is obtained, leave the building. Return after several minutes with Scott Air Paks and check with explosimeter until zero reading is obtained. The building should then be ventilated for 10-15 minutes before re-entering by all personnel.

OPERATORS MUST KNOW, UNDERSTAND & PRACTICE THE EVACUATION PROCEDURE IF IT IS GOING TO WORK IN TIMES OF EMERGENCIES. IT IS YOUR RESPONSIBILITY AS A SHIFT FOREMAN TO SEE THAT THEY ARE PROPERLY TRAINED.


R. W. Seymour
Vinyl Operations Superintendent

RWS/lpb

cc	L. H. Bryan	Dryer Foremen	Reactor Foremen
	R. J. Freele	O. T. George	R. A. Collins
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RECOVERY PROCEDURE REVISIONS

1. All cyclone separators, receivers and knock-out tanks are to be drained outside the building to prevent VCM exposure to personnel from these VCM sources.
2. All reactors are to be recovered to a 20 inch Hg vacuum and this vacuum pulled for five minutes before taking the reactors off recovery. Check the vacuums with a manometer and if the recovery system will not pull a 20 inch vacuum, notify your Lead Operator so the problem can be corrected.

REACTOR DUMPING PROCEDURE

After the reactor charge has been recovered to a 20" Hg vacuum and this has been held for five minutes, the charge is ready to dump. The steps in the procedure to dump the reactor are as follows.

1. Leave manhead on reactor closed.
2. Break the vacuum on the reactor using the manual vent line.
3. Check to be sure that there is space to pump the charge to the proper blend tank.
4. Check the dump line valving to be sure that it is set up properly.
5. Check to be sure that the valve at the dump strainer is closed.
6. Check to be sure that you are at the proper reactor for dumping.
7. Open dump valve.
8. Open valve at the dump strainer slowly into the strainer.
9. Start slurry pump.
10. Do not stand at an open dump strainer while pumping a charge. If you must stand at an open dump strainer while pumping, wear a Scott Air Pak or air breathing mask.
11. When the charge is completely pumped, stop the pump.
12. Leave the strainer valve and the reactor dump valve open.
13. Start the reactor agitator.
14. Open steam vent valve on manual vent line to pull air up through the reactor and vent VCM fumes out the roof. Let the reactor vent for fifteen minutes.
15. Stop reactor agitator.
16. Check the vent tube at the reactor to be sure that it is exhausting properly.
17. Hold the vent tube at the reactor manhead as you open the lid to prevent VCM exposure.
18. Insert the vent tube to the bottom of the reactor as soon as the manhead is open.
19. Exhaust the reactor for ten minutes.
20. Rinse the reactor with water while the steam vent is still pulling on the reactor. If VCM fumes are present, exhaust the reactor more before rinsing.
21. When rinsing is completed, shut the strainer valve and the reactor dump valve.
22. Leave the vent tube in the reactor, but shut off the steam vent, manual vent and charge valve.
23. Reactor is now ready for the cleaning step.

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REACTOR CLEANING PROCEDURE

After the dumping and rinsing of a charge, the reactor should be in the following condition:

1. Reactor empty.
2. Dump valve closed.
3. Charge valve closed.
4. Manhead open, agitator stopped.
5. Vent tube extended to the bottom of the reactor.

The reactor is then ready to begin the cleaning procedure. If the reactor is to be entered follow all the steps on the reactor cleaning safety check list. Check off each item after it is done. Check that the dump valve and charge valve are closed. Check the vent tube air flow and make sure that indicator light is "on" vent fan. Insert the vent tube to six inches from the bottom of the reactor and record the time that this is done. Pin-out agitator start-stop button. Have the "A" Operator blank the charge valve and dump valve and initial your checklist when this is done. Lock-out the reactor agitator in the switchgear room with your personal safety lock and place the key in your pocket. After a minimum of twenty minutes of exhausting, remove the vent tube (record the time). Have the Lead Operator measure the VCM content in the reactor. If less than required VCM concentration, proceed. Otherwise exhaust the reactor longer and measure again. Check the agitator start switch to be sure that it will not start. Replace the vent tube to six inches from the bottom of the reactor. Have the "A" Operator check to be sure that all the items above No. 13 are complete. Then have him initial the checklist at No. 13. Put on the safety harness and secure the safety line to the harness and outside of reactor. Place tools, bracket and ladder in the reactor. Secure the bucket line to the outside of the reactor.

Enter the reactor and replace the vent tube to six inches above the bottom of the reactor. Go immediately to the bottom of the reactor and check for the odor of Vinyl Chloride. If any Vinyl Chloride odor is detected, exit from the reactor immediately and contact the "A" Operator. If no odor is detected, proceed to clean the reactor.

Reactors are glass lined and slippery. Use care in the reactor to guard against slipping and watch your safety harness rope so that it does not get tangled or wrapped around the blades or agitator shaft. When cleaning is done, remove all the equipment from the reactor and remove the lock and pin-cut from the agitator. Notify "A" Operator or Lead Operator to remove blanks from dump and charge valves.

If the reactor is to be cleaned with high pressure water (no entry) complete the items on the checklist marked with an asterisk (*).

Bottom lines on the reactor are to be open for the draining of the water. Charge valve to be closed. Check the vent tube for the proper exhausting and operating light "on". Insert the vent tube to six inches from the bottom of the reactor and record the time. Pin-out the reactor agitator start-stop button. Get the high pressure lance and hoses ready at the reactor. When the twenty minute evacuation is complete, remove the vent tube and place it at the manhead so that any fumes exiting the reactor will be pulled in by the vent tube. Start the pump and clean the reactor with the high pressure lance making sure to spray all areas thoroughly to remove loose resin particles. When cleaning is complete, remove pin from start-stop button and close the reactor dump valve.

VINYL REACTOR CLEANING SAFETY CHECKLIST

NAME _____ DATE _____ SHIFT _____

Reactor No.	_____	_____	_____	_____	_____	_____
1. Dump Valve Closed.	_____	_____	_____	_____	_____	_____
*2. Charge Valve Closed.	_____	_____	_____	_____	_____	_____
*3. Vent Tube Exhausting Properly.	_____	_____	_____	_____	_____	_____
*4. Vent Fan Operating Light "On".	_____	_____	_____	_____	_____	_____
*5. Insert Vent Tube To Six Inches From Bottom Of Reactor Time.	_____	_____	_____	_____	_____	_____
*6. Pin-Out Agitator Start-Stop Button.	_____	_____	_____	_____	_____	_____
7. Dump Valve & Charge Blinded By "A" Or Lead Operator, Initial.	_____	_____	_____	_____	_____	_____
8. Lock Out Reactor Agitator Motor In Switch Gear Room With Personal Lock & Place Key In Pocket.	_____	_____	_____	_____	_____	_____
*9. Remove Vent Tube After A Minimum Of 20 Minutes, Time.	_____	_____	_____	_____	_____	_____
10. VCM Content In Reactor	_____	_____	_____	_____	_____	_____
11. Try To Start Agitator With Start Switch. <u>It Should Not Start.</u>	_____	_____	_____	_____	_____	_____
*12. Replace Vent Tube As In Step No. 5. For High Pressure Cleaning, Keep Vent Tube At Manhead.	_____	_____	_____	_____	_____	_____
13. "A" Operator To Initial That All Above Steps Are Done.	_____	_____	_____	_____	_____	_____
14. Put On Safety Harness & Secure Safety Line To Harness & Outside Of Reactor.	_____	_____	_____	_____	_____	_____
15. Place Tools, Bucket & Ladder In Reactor, Secure Bucket Line To Outside Of Reactor.	_____	_____	_____	_____	_____	_____
16. Enter The Reactor & Replace Vent Tube As In Step No. 5. Go Immediately To The Bottom Of Reactor & Check For Odor Of Vinyl Chloride. If <u>Any</u> Is Detected, Exit From The Reactor Immediately & Contact "A" Operator. If <u>No</u> Odor Is Detected, Proceed To Clean Reactor.	_____	_____	_____	_____	_____	_____
17. Remove Vent Tubes, All Tools, Bucket, Ladder From Reactor.	_____	_____	_____	_____	_____	_____
*18. Remove Lock From Agitator & Take Pin Out From Start-Stop Button.	_____	_____	_____	_____	_____	_____
19. Notify "A" Operator Or Lead Operator To Remove Blanks On Dump & Charge Valves.	_____	_____	_____	_____	_____	_____

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