

Date 22 February 1974

To G. B. H. Speed Subject RESULTS OF TEMPORARY AIR SYSTEMS USE
From D. V. Lowe
() Take Action () For Your Approval () For Your Info () Discuss With Me
() For Your Comments () As Requested () File () Note & Return

Both the temporary systems for Sweco slurry screener exhaust and fresh air supply to reactors being manually cleaned were put into service yesterday. Results from use of both systems are reported below. The results are quite good. All samples were taken on 22 February with the Century detector (which as yet still has not been calibrated with "zero" air or mixtures of VCI and "zero" air).

A. SWECO SLURRY SCREENERS. A fan was installed capable of pulling 750 cfm (as measured with a velometer) through each of two six inch hoses. One hose is attached to the top cover of the north screener and the other hose to the center screener. These two screeners are set right outside the west door at 3rd floor level. A six inch discharge duct from the fan carries fumes to a point above the roof of the reactor building. The suction is maintained on the screeners at all times regardless of whether slurry is transferring or not. (Screener No. 3 is further away from the building and will be provided with suction from the blend tank ventilation system).

1. Reading taken at void between cover and vibrating body during transfer of slurry and with exhaust fan running.

- a. Generally 5-7 ppm.
- b. Excursions to 8 ppm.
- c. Background in air surrounding building on this day was 4-5 ppm (have had rain).

2. Reading taken at same location under same conditions except exhaust fan was turned off.

- a. Generally 10,000 ppm.
- b. Excursions to 100,000 ppm.

3. Reading at same location and same conditions except exhaust fan turned on again.

- a. Generally 5-7 ppm.
- b. Excursion to 8 ppm.

B. REACTOR FRESH AIR SUPPLY SYSTEM. As a temporary measure to abate the hazard of reactor cleaning, a North American air blower was installed outside the reactor building on the grating south of building at 3rd floor level. The fan is rated 950 cfm at 16 oz. of pressure. A distribution system consisting of 6" aluminum pipe and finally 6" wire-reinforced hose was installed. Each hose section is equipped with 6" aluminum OPW fittings so that various lengths are used as necessary to reach to the bottom of any reactor. The velometer was used again and we determined a flow of air of 800 to 850 cfm through the longest possible hose hookup. This represents 100 air changes per hour in a 500 cu. ft. reactor. No. 16 reactor was tested after a water "cook" and both during and after air purging as shown below.

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1. As normal preparation for manual cleaning, No. 16 reactor was filled with mill water, thus displacing most of the VCI vapors to outside of building. The reactor was water "cooked" and then emptied to the floor. Vacuum was pulled with the steam jets as the reactor manway was opened.
 - a. Readings in reactor room before dropping water = 30 to 40 ppm.
 - b. Readings in room in vicinity of No. 16 reactor while dropping water to floor = 60 to 150 ppm.
 - c. Readings in room 5 minutes after completion of water drop = 30 to 40 ppm.
 - c. Reading inside open manway of reactor after finishing water drop and with vacuum jet still pulling on reactor (suction hose not inserted yet) = 70 ppm.
2. When water had dropped out, a suction hose attached to the induction port of a coppus blower was inserted through the manway all way to bottom of the reactor. The coppus discharge was pointed directly into the suction of a wall exhaust fan in the northeast corner of the building. The steam jet vacuum line was closed. The coppus blower began to pull 850 cfm from the reactor and on into the wall fan.
 - a. Reading of air entering reactor through manway while pulling exhaust in bottom of reactor = 50 to 70 ppm.
 - b. Reading in air discharging from coppus blower to wall fan initially = 10,000 to 100,000 ppm.
 - c. Air discharge from coppus blower after 5 minutes of operation = 7000 ppm.
 - d. Air discharge from coppus after 7 minutes = 2000 ppm.
 - e. Air discharge from coppus after 15 minutes = 70 ppm.
 - f. Air in room at No. 16 reactor during operation of coppus blower = 30 to 40 ppm, which tells us that the wall fan was successfully carrying the coppus discharge to the outside of building.
 - g. Air in reactor after coppus hose removed = 58 ppm.
3. Next, the new reactor fresh air purge was put into use. The coppus with hose was removed and another hose carrying 800 to 850 cfm of fresh air from the outside was inserted.
 - a. Reading inside manway after start blowing fresh air into reactor = 26 ppm.
 - b. Reading in manway after 5 minutes of fresh air purge = 15 ppm.
 - c. Reading in manway after 15 minutes of fresh air purge = 13 ppm.
 - d. Room reading at beginning of fresh air purge = 36 ppm.
 - e. Room reading at end of fresh air purge = 32 ppm.
4. The fresh air supply hose was removed from the reactor so men could enter through the manway. After entering, the 6" hose was re-inserted.

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- a. Reading inside reactor at about 3 feet under manway at the time of entry = 52 ppm.
- b. After entering, hose was re-inserted and readings taken over the next 10 minutes as they continued to work: 18 to 24 ppm.

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AP00035497

Nader Group Asks for Ban On Several Household Aids

WASHINGTON (AP) — Ralph Nader's Health Research Group asked the federal government Thursday to ban the use of vinyl chloride in aerosolized cosmetics, pesticides and other household products.

Several cases of a rare liver cancer have been found among vinyl chloride workers in a B.F. Goodrich Co. chemical plant in Louisville, Ky., and in a plant operated by the Goodyear Tire & Rubber Co. in Niagara Falls.

Vinyl chloride is a basic chemical in the plastics industry and the foundation for hundreds of consumer products.

Dr. Sidney M. Wolfe, director of the research group, said a significant amount of vinyl chloride is used as a propellant in aerosol containers.

Wolfe told a Senate Health subcommittee that a source in the cosmetic industry informed him that vinyl chloride is going into such cosmetic aerosols as hairsprays.

"Beauty parlor operators and consumers are using the vinyl cloud," he said. "This chemical may represent another thalidomide."

He did not identify any product brand names.

The Nader petitions to ban the chemicals in aerosols were sent to the Food and Drug Ad-

ministration, the Consumer Product Safety Commission and the Environmental Protection Agency.

"The chronic toxicity and evidence of carcinogenicity of vinyl chloride monomer for humans has been documented by scientific studies and clinical reports," said Wolfe.

"Immediate action is necessary to regulate the use of the chemical since there is no evidence to show that human being can be safely exposed to the chemical."

In letters to the three agency heads, the Nader group asked them to make public the brand names of all aerosol consumer products and cosmetics which contain vinyl chloride as a propellant.

"The public has the right to be fully informed about the dangers it faces or has faced regardless of the public relations damage that certain companies may suffer," said Wolfe.

He said vinyl chloride points up the need for a FDA regulation to require pre-market testing of cosmetics to prove their safety.

AP00035498



Air Products and Chemicals

A R H K Billaw / Pensacola
PUT IT IN WRITING

Date 21 February 1974

To J. P. Parker
All Foremen (5) / All Operators Subject SUMMARY OF REACTOR OPENING PROCEDURES

From D. V. Lowe

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This will review some of the new procedures being put into effect.

*Define
Leak*

- 1) Any reactor which develops a major leak is to be killed, dropped and stripped, the leak fixed, then the reactor recharged. (Also use the steam jets to pull on any reactor that has a major leak.)
- 2) Anyone fixing a major leak or working near it must wear a Scott air pak.
- 3) No. 1 priority for use of vacuum jets is to pull on any reactor where the manway is to be opened up after a batch is dropped or after a water "cook". No. 2 priority for jets is using them to charge reactors. (More jets are on order.)
- 4) Any reactor to be entered for manual cleaning must be water "cooked" for one-half hour after VCI fumes are pushed to the outside of building by filling the reactor with water. Drain the water from the reactor and use jets while draining to keep steam out of the room. Prepare for air purging.
- 5) In preparing for manual cleaning, first do one-half hour cook. Then use the coppus blower with 6" hose attached to suck air and VCI fumes from the empty reactor for 15 minutes. Arrange the coppus blower exhaust to point out of a door or other wall opening so the fumes do not enter the room. (NOTE: Larger hose sections are being made available to reach any reactor.)
- 6) After exhausting the empty reactor for 15 minutes, hook up the 6" hose to the new blower presently being installed on the platform grating south of the building. Two solid lines with fittings will lead from this blower in through the south wall.

Insert the 6" hose to the bottom of the empty reactor and turn on the fan. Blow fresh air from outside the building into the reactor for another 15 minutes. VCI level must be 50 ppm or less to enter. Follow other standard entry procedures also.

- 7) At all times while men are inside a reactor, use the 6" hose attached to the outside blower to supply fresh air to the reactor. Do not open vacuum line on the reactor while men are inside. If air velocity is too great from the hose, a throttling valve can be found on the fan discharge. Use the most air you can without creating a safety problem from flying scraps, etc.

RE

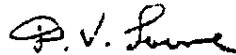
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A. K.

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J. P. Parker
All Foremen (5)/All Operators
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- 8) An exhaust fan system is being installed to pull on the Sweco slurry screeners today. Leave this fan running all the time, even when slurry is not being transferred. The fan will be started and stopped back at the motor control center.
- 9) The Sweco exhaust system and reactor fresh air-purge systems presently being installed are temporary systems. Permanent systems are now being designed for installation as early as possible.
- 10) Attached is a copy of the new procedure for water "cooking" reactors before they are air-purged for entry. Mr. Speed originated this procedure earlier this week.


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REACTOR CLEANING

PROCEDURE FOR PURGING REACTOR FOR CLEANING

1. Pull reactor down below 0 psig before closing off to stripper.
2. Close bottom valve.
3. Connect hose to bleed-off valve, wire connection and lead hose to outside of building - open bleed valve.
4. Fill charge pot with sodium bicarbonate and flush into reactor. 
5. Fill reactor full of hot mill water until all vapors are out.
6. Drain sufficient water out to clear sight glass.
7. Cook reactor for 30 minutes.
8. Put jets on.
9. Start cooling reactor and draining.
10. Open manway.
11. Turn off jets.

Leave bleed line open at all times.

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