

Inter-Organization Correspondence

B.F. Goodrich

TO A.W. Clements	FIELD POINT OR AKRON DEPARTMENT & BLDG. NO. Long Beach	DATE YOUR LETTER
FROM F.C. Dilley	FIELD POINT OR AKRON DEPARTMENT & BLDG. NO. Long Beach	DATE THIS LETTER June 11, 1974
SUBJECT		

OSHA INSPECTION

Mr. Lee L. Pitchforth, Jr., Industrial Hygienist, U.S. Department of Labor, Occupational Safety and Health Administration visited the Long Beach Plant on 6-10-74. The length of Mr. Pitchforth's visit was approximately 5 hours.

A meeting was held in the Plant Manager's office attended by Production Manager, Technical Manager, Industrial Relations Manager, and Safety Engineer. Mr. Pitchforth stated his visit was to complete the Questionnaire and for a quick walk-thru of our plant. The questionnaire is the 18 page form entitled "Vinyl Chloride, (VC) and Poly-Vinyl Chloride (PVC) Facilities. To complete this form is quite time consuming and took approximately 3 hours.

After completion of the questionnaire I escorted Mr. Pitchforth through the plant. We visited the Poly building main floor and control room. In the control room he asked to talk to an employee for only about 5 minutes. We selected Recovery Operator, to talk to Mr. Pitchforth. He merely explained to the employee the role of OSHA in the Vinyl Chloride situation. He was interested in determining if our employees were actually informed on all aspects of the vinyl problems.

After being satisfied in the Poly area we proceeded to the Bendix unit and this operation was explained in detail. At this time we made a quick walk thru of the Compound, Warehouse, and new Vinyl storage areas.

On the summation Mr. Pitchforth made 2 recommendations. He suggested I follow more closely the ANSI Standard on Respiratory Protection pertaining to the fitting of respirators. Also, He suggested either deducting the background figures on OVA reporting or noting the background differential on the report itself. A weekly summary is posted in our Poly building for employee information and on this report he suggested the changes. Also, he mentioned our housekeeping as being excellent and stated that this one item helped cut his time in half in our plant.

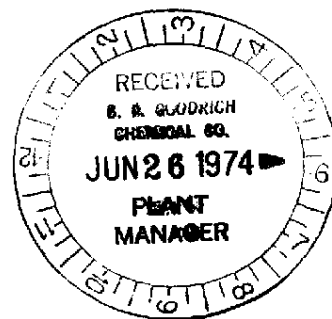
This official was aware of our recent Cal/OSHA and State Health Department inspections. Also, he was acquainted with the Health Department official that took air samples in our plant and also of the findings.

Mr. Pitchforth gave no indication that he would return at a later date.

REDACTED

F.C. Dilley

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ADVANCE COPY*Long Beach***QUESTIONNAIRE: VINYL CHLORIDE (VC) AND POLYVINYL CHLORIDE (PVC) FACILITIES****1. General Plant Layout:**

a. Is it an outdoor facility? Yes, except 2nd floor reactor building enclosed.

b. How long has the plant been in operation? Since 1960

c. Is the equipment corroded? No

d. Is the equipment in need of maintenance? No Specify: Preventive
maintenance program in force.

e. Is the housekeeping good? Yes Poor? In which
aspects?

f. Where is the control room located? West side, 2nd floor of reactor
building.

g. Other pertinent details re general plant layout: Close proximity
to American Chemical Company plant.

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2. Raw Materials

- a. Indicate the raw materials: Basically all VCM (Homopolymer plant)
- b. How are these handled? Closed system of tanks, pumps, and pipeline.
- c. What provisions is made for their storage? _____
Silo? _____ Tank? _____ Car? _____
Bags? _____ Pressure area? _____ Other? VCM Stored in sphere
and small pressure tanks at process area. (Cars presently unloaded at
American Chemical Co. and transferred via pipeline to BFG)
- d. What controls are enforced while these materials are in storage?
Closed storage system with normal fire and safety protection. Daily
routine leak detection checks with OVA
- e. Is entry to storage facilities accomplished with an air supplied
mask? Yes

If not, how? _____
- f. How are withdrawals of raw materials controlled? Via pipeline and pumps
Closed system? Yes Exhaust system? _____
Out of doors? _____ Other? _____

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3. Manufacturing Process

a. What process is used? Suspension polymerization

VC: Direct chlorination? _____

Oxychlorination? _____

Other? _____

PVC: Polymerization? See 3a.

Wet? Yes

Dry? _____

Other? _____

b. What is the method of recycle for the unreacted vinyl chloride?

Unreacted VC removed as vapor, then compressed and condensed to liquid.

c. In what form is the finished product? _____

Powder? Yes (resin)

Pellets? Yes (compound)

Gas? _____

Other? _____

d. How is it shipped? 50 lb. bags, boxes, hopper trucks, hopper cars.

e. What are the container sizes? 50 lb. bag to 180,000 lb. hopper cars.

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4. Controls for the Containment of VC and/or Control of Reaction

- a. What controls are utilized? Polymerization in pressure vessel, temperature
Describe: Polymerizer jacketed, water cooled. Additional cooling controlled.
source considered proprietary information.

Are the controls arranged to fail-safe? Yes

- b. Are two sources of supply provided for? _____

Cooling water? Tower supply; fire water back up.

Electricity? Twin loop supply from outside power source. No in-plant
emergency power source.

Compressed air? Dual compressors.

Refrigeration? _____

Are they automatic? Cooling water - manual valve; Electrical-
automatic; compressed air - manual valve.

- c. Where is the control room/area located? West side, 2nd floor of reactor
building.

Is it at positive pressure with respect to contaminated areas?

Yes

Is it at least 200 feet from major VC storage or processing? Approx. 200ft.

- d. Are written control/startup/shutdown procedures available to
operating personnel? Batch process - covered by routine procedures.

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5. Ventilation

- a. What is the type of ventilation system? Pressured control room.

Louver intake and powered exhaust blowers for enclosed area of reactor building.

Is it adequate? Control room pressure maintained at 0.20 inches H₂O.

Reactor building-one air change per 2.5 minutes at normal blower speed and one change per 1.6 minutes at high speed.

- b. Where is the air exhausted? Control room exhausts within reactor area.

Reactor area exhaust to atmosphere at roof level.

* Is the air treated before exhaustion? No How?

- c. Is makeup air introduced in sufficient volume to maintain correct operation? see 5 (a) above.

Where does the makeup air come from? Control room intake approximately 30ft. NW of building.

* Is it treated? How? Passes through furnace type filter.

Is it heated in the winter? Yes (control room)

- d. Is the entry air to the control room treated? see 5 (c)

How?

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6. Waste Materials

a. What is the disposition of waste materials? Solid waste to public
landfill. Waste water to sanitary sewer.

Buried? _____ Burned? _____

Where? _____ How? _____

City dump? _____ Other? Public landfill

Describe: Waste polymer and waste compound

Treated? _____ No _____ How? _____

Specify: Estimated amount - 1,000 to 1,500 pounds per day.

b. Other pertinent specifics relative waste materials: _____

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7. Sanitation

a. What sanitation facilities are provided? _____

Shower? _____ Yes

Washroom? _____ Yes

Change room? _____ Yes

Individual lockers? _____ Yes

Lunchroom? _____ Yes

Drinking fountains? _____ Yes

Toilets? _____ Yes

b. Comment on location, accessibility, adequacy, utilization,

condition, etc. of pertinent sanitation facilities: (Inspector
made no comment prior to plant tour).

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8. Exposure to VC

a. In which activities is there a potential for exposure to VC? VC

exposure potential in polymerization and drying area jobs. PVC exposure potential in resin bagging and loading area and in certain compounding jobs.

How many employees are involved in each activity? 8 people per shift in

poly/drying area: 2 charge operators, 2 recovery operators, 3 helpers, 1 dryer operator. (continued below)

What is the length of the potential exposure time? Per shift: Charge

operators - 4 hrs; recovery operators 5 hrs; helpers 5 hrs. dryer operator 1 hr.

b. Are the activity areas regulated? Not posted, but only regular

Indicate which: employees and authorized visitors permitted.

Give the rationale for establishing these;

c. Are all employees generally aware of the hazards presented by

VC or PVC? Yes. Employees informed at hiring and on a continuous basis through safety meetings, bulletin board notices, etc.

To what extent is labeling or posting of signs used to appropriately inform or warn employees? No posting.

8 (a) Continued: Potential PVC exposure: 3 operators per shift involved. Resin bagger/loader - 5 to 6 hours per shift; Compound Henschel operator - 7 hours per shift; Compound relief operator - 1 hour per shift.

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9. Protective Clothing and Equipment*

- a. What articles of protective clothing and equipment are the employees provided? Coveralls, impervious suits for vessel entry, safety glasses, gloves, hard hats, rubber footwear for vessel entry, ear plugs and faceshields where needed.

Are they required to wear or use these? Yes

Do they wear or use these? Specify Yes

- b. Do employees change into work clothes upon arrival at the plant and back into street clothes before departing? Yes

- c. Do they shower at the end of the day? Yes

- d. Do they wash hands and face before eating lunch? Yes

Where do they eat lunch? Lunch room (remote from process area)

- f. How are clothing and equipment articles cared for? Clean coveralls provided daily - separate lockers for clean and dirty garments.

- (1) How often cleaned? Daily change provided.

How? Garments laundered once per week

Where? Rental garments; contract supplier.

- (2) Are they decontaminated after use? see f. (1) above

Which use? _____

When? _____

Where? _____

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9. Protective Clothing and Equipment*--Continued

g. How often are the articles replaced? As necessary by contract
supplier.

What determines replacement? Normal wear

* Respiratory protection devices are covered in question 10--omit here.

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10. Respiratory Protection

- a. What kind of respiratory protection devices are provided? Self-
contained breathing apparatus; air supplied respirators; organic
cartridge respirators with particulant filter. Nuisance dust respirator
provided in dusty areas.

Are the respirators provided specific for protection from VC or
PVC? Yes

Explain: Self-contained and/or air supplied respirator used in con-
centrations above 50 ppm; organic cartridge respirator used in areas
for vessel entry.

What respirators are utilized by the employees? All of above as
dictated by job requirement and individual situations.

- b. Is there a training program for employees which includes the
proper wearing of respiratory protection devices? Yes

- c. How often are the respiratory protection devices checked for
efficiency and effectiveness? All respirators monthly.

If applicable, how often are cartridges or cannisters replaced?

Cartridges replaced daily. Cannisters replaced as dated or used.

- d. Other comments: _____

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11. Maintenance and Decontamination Activities

a. What procedures are established for maintenance and decontamination?

Any equipment which has contained VC is exhausted prior to any entry
by either production or maintenance personnel. Written procedure and
safety check list employed.

Are there periodic inspections for the:

Ventilation system? Visual

Process equipment? Yes

Piping and fittings? Yes

Other? _____

b. What transpires when leakage occurs? Personnel alerted, breathing
apparatus obtained if necessary, problem area isolated and repair made
as soon as possible.

c. What provisions are there for the protection of employees in
cleanup of leaks or spills, maintenance or repair operations
on contaminated systems or equipment? Protective clothing, footwear,
gloves, eye protection, respirators.

What protective clothing and equipment are utilized? See above

Air supplied suits? No Gloves? Yes

Respirators? Yes Others? _____

d. How are employees decontaminated after work is completed? Clothing
change, shower.

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11. Maintenance and Decontamination Activities--Continued

- a. Are maintenance repair cleanup crews available during all shifts?

Maintenance crew available on day shift and on Call-out basis at

night. Production personnel handle minor maintenance during night shifts.

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12. Fire Protection

- a. What provisions are made for fire protection? All buildings sprinkled
and equipped with fire hoses and hand extinguishers. All buildings
connected to a common fire alarm system.

Who approves the fire protection plan? FIA Insurance. Divisional
Engineering. L. A. County Fire Department.

- b. Who conducts fire inspections? FIA Insurance. L.A. County Fire
Department. Plant Safety Personnel

What is the frequency of the inspections? Bi-annually - quarterly and
monthly.

- c. Are there fire insurance engineers? Yes

Give particulars: FIA Insurance personnel are fire protection engineers.

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13. Employer Monitoring

- a. What is the method of sampling? Stationary Bendix total hydrocarbon continuous analyzer in polymerization area. Portable organic vapor analyzer for specific leak detection.

Are grab samples taken? Yes How? Bendix Micronair II. Permissible air sampling pump.

Are continuous samples taken? Yes How? See above

If sensors are used, where are they located? Bendix sample points: 1 on roof, 3 on reactor floor, 2 at pad level in reactor building.

- b. Are personal samples taken? Yes

How? Carbon absorption For how long? 4 hours

What is the sampling rate? 1 liter/minute

What areas of activity are the employees in when monitored? Normal work areas.

What percentage of employees are monitored in each area? 100%
in polymerization area.

What is the frequency of monitoring? 3 operators per week.

- c. What method is used to analyze the samples collected in the
OVA - total carbon hydrogen flame GC.
monitoring program? Bendix total carbon hydrogen flame GC

Carbon absorption - extraction and GC.

What is the sensitivity? OVA 3-5 ppm. Bendix 3-5 PPMGC .5 ppm.

What is the accuracy? OVA ⁺ 20%, Bendix ⁺ 20%. GC ⁺ 10%

- d. What is the disposition of the results of sample analyses? _____

Data tabulated and maintained on file.

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13. Employer Monitoring--Continued

Are the employees informed? Yes (Weekly posting of ambient average concentration.

Are the results recorded? Yes

Where are the records kept? Bendix - strip chart in control room. Other records kept in Lab and in Technical Department office.

How long are records of the results maintained? Plan to help as long as required by Standard.

Are the results available at all times to the employees? Yes

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14. Medical Program

- a. What does the in-house medical program consist of? Audiometric, visual, Hand X-rays, Blood and Urine specimen for lead (Compound employees annually). Liver function blood test. (Chem-12 and GGTP)

Are physical examinations of employees required? Yes

Preplacement? Yes

Periodical? Yes

What does the physical examination include? Mr. Pitchforth asked for a copy of Blank Physical examination form. See attachment.

Is there a medical surveillance program in effect? Yes

What does it consist of? See (a.) above.

Does the employee have access to his medical records? Yes

Is there a physician and nurse on duty at all times? No

If not, when? Nurse on day shift only ; doctor one day per week and on call.

How many employees are trained in first aid? 4 per shift.

- b. What satellite-support medical facilities are readily available?

St. Francis Hospital

What is the distance to the nearest hospital which would be readily available at any time? 6 miles to St. Francis Hospital

Would adequate, appropriate, medical services be available there? Yes

Is there a contract or working agreement in force with this facility? Yes (Plant doctor is on hospital staff)

Other comments: _____

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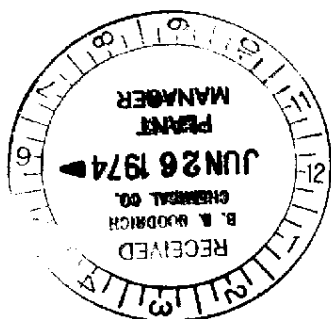
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15. Emergency

In the event an emergency should occur for any reason within the operation whereby employees are involved, what plan would be implemented? Plant has established emergency procedures.

- a. Is there an evacuation plan? Yes
- b. Are there definite emergency procedures established to include authorization for individual control of assigned personnel?
Polymerization area foremen control polymerization.
- c. Is there a mutual support plan for outside assistance in the event of a catastrophic incident such as fire, explosion, massive spill?
Yes. Carson Community Industry Emergency System.

Explain: Communication system established among area industries and L. A. County Fire Department to inform of any major emergency and place each company in best possible position to help each other.



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