

Handwritten: M. J. Pedricktown
B. F. Goodrich Chemical Company

Inter-Organization Correspondence

To	H. T. Evans	From	J. W. Gressler
Location	Pedricktown	Location	Pedricktown
Department		Department	
Subject	SAFETY INSPECTION - BUREAU OF ENGINEERING AND SAFETY, N. J. DEPARTMENT OF LABOR AND INDUSTRY		Date January 11, 1971

This morning the Pedricktown Plant was inspected by Mr. Leon Johnson and Mr. Fred Antheil from the New Jersey Department of Labor and Industry. Noise level samples were taken in two areas, Building 521 (Boiler House) and Building 513 (Pearl-Paste Polymerization). Mr. Antheil conducted the tests. He used a General Radio Sound-Level Meter, Type 1565A, on the A scale. Listed below are the results:

Building 521 (Boiler House)

<u>Area Sampled</u>	<u>Reading dBA</u>
1. At operator's desk	87
2. At lab testing table	89
3. At boiler feed pumps	90
4. Inside of phone booth	73
5. Inside of restroom (door open)	80
6. Inside of restroom (door closed)	75
7. Front of east boiler	87

Building 513 (Pearl-Paste Polymerization)

<u>Area Sampled</u>	<u>Reading dBA</u>
1. Center, first floor	86
2. Control panel at south door, first floor	85
3. At paste spray ring water collection tank, west wall, first floor	87
4. Pearl side, first floor, west side	86
5. While bottom Yarway valve was opening on the first floor	98

This inspection was limited to sound-level readings.

J. W. Gressler

JWG/rp

cc: A. R. Webber
D. L. Dowell
W. E. McCormick
W. L. Cato
File

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Harold Evans

Pedricktown Plant

Akron

Dept. 0020 - Bldg. 5-H

1/8/71

As I discussed with you on the 'phone last week, we are shipping immediately the x-ray equipment to your Plant to do hand x-rays beginning January 20. Mrs. Bender, our x-ray technician, will arrive the evening before and you are reserving a room for her at Howard Johnsons for the 19th and 20th.

We are also sending to you, twenty blood and urine containers for personnel handling lead. We would like to have repeat specimens on Messrs. Neff, Draybold, and Pfeffer as soon as possible.

As I told you on the 'phone, you will need a small centrifuge to prepare the blood serum for liver function tests. We suggest Model #S-16220 listed in the Sargent-Welch catalogue, at a price of \$172. The procedure is for your nurse to draw the blood, then centrifuge it and send to us only the serum. She will need to draw a minimum of 10 ml., inasmuch as we need at least 3 ml. of serum. We will send to you small tubes for the serum and these should be returned to us, packed in dry ice, by airmail parcel post. Sometime within the next week we will ship to you the container and the tubes for the transmittal of the serum to us.

I would like to have you advise me approximately a week in advance of the date of your shipment of the serum to us so that we may properly alert our laboratory to expect them.

W. E. McCormick

mj

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Report of Visit to the Pedricktown Plant
November 19 & 20, 1970

This visit to the Pedricktown Plant was made primarily to evaluate atmospheric vinyl chloride concentrations in PSG reactors during cleaning operations. Noise evaluations were also performed throughout the Plant. The exhaust efficiency of laboratory hoods was appraised.

I. Recommendations:

- A. Personnel working at the bagger and bag compressor in the Drier Building should be placed on the Plant's Hearing Conservation Program. This will include preassignment and periodic audiometric examination of personnel and enforced wearing of ear protection on the job. Provisions of The B. F. Goodrich Company's Medical Bulletin No. 34 should be followed in all essential detail.
- B. Make certain that all personnel working with raw sewer water and sewage are adequately protected in accordance with The B. F. Goodrich Company's Medical Bulletin No. 41.

II. Results and Discussion:

A. Vinyl Chloride in PSG Reactors

As part of a continuing program for evaluating atmospheric vinyl chloride concentrations in polymerizers, air samples were obtained in two PSG reactors prior to and during manned entry for cleaning.

Samples were collected in Vacutainer tubes and analyzed by Mr. E. G. DeCapita and Mr. D. P. O'Keefe on the Plant's F & M 700 chromatograph. A separate report has been prepared and distributed by Mr. DeCapita covering the analysis of the samples (12-14-70).

This preliminary evaluation of PSG atmospheres indicates no major or acute hazard exists to personnel from atmospheric vinyl chloride exposure during the cleaning operation.

The recommended maximum vinyl chloride concentration of 200 ppm was considerably above the majority of all concentrations measured in the reactors. One sample from Reactor 83, collected near the manhole 30 minutes after opening, showed a vinyl chloride concentration of 222 ppm; a second sample from this reactor collected at the same location 15 minutes after entering showed a concentration of 755 ppm. Little credence is given to the last concentration value of 755 ppm. Vinyl chloride concentration at this sampling site under the prevailing physical conditions would normally be expected to decrease rather than increase. The apparent discrepancy is attributed to sampling or analytical error.

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A third sample showing a high concentration of vinyl chloride (755 ppm) was obtained after a second run in Reactor 83 on the following day. This sample was collected at the lower outlet of the reactor immediately after opening of the reactor. There is no reason to doubt the validity of this result. Though it is somewhat high, it does not represent a personnel exposure condition during the cleaning operation.

The remaining thirteen samples from PSG reactors were all less than 200 ppm vinyl chloride (range 188-8 ppm). This concentration range of vinyl chloride presents no inhalation health hazard to personnel who must enter the reactors for cleaning purposes.

Further work is planned in the vinyl chloride evaluation program throughout the Chemical Company and additional measurements of PSG reactor atmospheres will be scheduled.

B. Noise

Three noise hazardous areas within the Plant were designated in the May Plant visit report. One additional area has been identified as noise hazardous during the present visit; this is the bagger and bag compressor area in the Drier Building.

In the Mass Poly Building, there is excessive noise within the office during the pneumatic conveying of product. Conversation and telephone usage is difficult. The condition can be corrected by covering the conveying trench in the floor of the office. It is suggested that this be done.

During the time of this visit the paste side of the Drier Building was down and only the resin side was operating. Additional noise measurements should be performed throughout the building when all normal equipment is operating.

The Latex Building was also down. A noise survey should be performed of this facility when it is operating.

The second floor of the Drier Building is potentially a noise hazardous area, but it is normally unoccupied.

The remaining high noise areas shown in the Table (Second floor, Suspension and Paste Poly Building; Bagger station, Compounding Building) were identified in the May report.

C. Laboratory Hoods

Fume hoods in the quality control laboratory are of a bypass design to conserve conditioned air in the laboratory. There was concern among laboratory personnel as to the exhaust efficiency of these hoods. Face velocity at the hoods is an ineffective measure of

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exhaust capability of these hoods since outside air is circulated through the hood to make up total exhaust flow. A velocity traverse was made from the roof of the building on the exhaust opening from one of the hoods. This opening measured 10.5" X 10.5" (0.77 ft.²) and the average exhaust velocity (9 point traverse) was 990 ft. min.⁻¹. This is equivalent to a volume flow of 762 ft.³ min.⁻¹ from the hood.

The open face of the hood in the laboratory is 28" X 35" (6.8 ft.²). With a volume flow from the roof exhaust of 762 ft.³/min., there would be an equivalent face velocity at the hood opening of 112 ft./min. This is a satisfactory value for handling all but the most toxic materials (TLV $\leq$ 5 ppm).

R. W. Modrall

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6.8 762
112
68/7620.
12
6/10

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TABLE I

Pedricktown Plant Noise Levels

Location	Noise, dba
Suspension & Paste Poly Building	
First Floor	89-90
Second Floor	91-92
Mass Poly Building	
Production Area	88-90
Office, during conveying of product intermittent peaks to	86-88 96
Compounding Building	
Bagger Station (North)	91-92
Near Mills (South of Cubar Enclosure)	89-90
Drier Building	
First Floor, overall average	85-86
near operator's desk	83
bagger & bag compressor area (paste side)	103
Second Floor, near Rotex screener	90
near centrifuge	90-91

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