

TO	W. E. Horton	FIELD POINT OR DEPT. & BLDG. NO. Avon Lake G.C.	DATE YOUR LETTER 12-15-80
FROM	T. S. Bialke	FIELD POINT OR DEPT. & BLDG. NO. Akron - D/0020, 5-H	DATE THIS LETTER 12-15-80
SUBJECT	INDUSTRIAL HYGIENE SURVEY - NOV. 10-13, 1980		

On November 10-13, 1980 I conducted an industrial hygiene survey at the Avon Lake General Chemical Plant.

Recommendations are contained herein addressing ventilation design proposals for Estane, heavy metal monitoring in Compound, and noise control in Dryer Bldg. 452 and Compound West. Previous recommendations have been made addressing antimony oxide use at the Technical Center by Estane personnel (T.S.Bialke to M.N.Dedecker 11/19/80).

The Avon Lake monitoring programs for acrylonitrile, VCL and noise appear to be adequate. Also, the plant's physical examination schedules follow BFG medical policies.

I wish to thank Bill Welch for his assistance during my survey.

T. S. Bialke
T. S. Bialke

v

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RECOMMENDATIONS:

1. Estane/Estol

- a. Incorporate into the design of the Estane line ventilation system provisions for the following: (1) access doors to facilitate clean-out of the duct work and hoods, (2) match hoods to the equipment and needs of the operator and place the hoods as close to the source of fume generation as possible and (3) install a manometer to indicate reduced flow rate.
- b. Ensure that the Estane/Estol line ventilation system, Bldg. 471, is kept clear of condensed material so that air flow is not restricted.

2. Investigate the feasibility of waterblasting the Estane agitators free of material rather than burning the material off with welding torches.

3. Compound

- a. Document Pb, Sb and Cd exposure for the weighman and Henschel operator, Geon East and West, for the next three months by obtaining personnel air samples during each usage of pigments containing these metals.
- b. Replace sound reflective roof/cover of Geon West mill drive enclosure with one made of a sound absorbent material.
- c. Utilize the vacuum system for clean-up in Compound area (Banbury line cuber room); if it is necessary to use compressed air for clean-up, require the involved workers to wear approved toxic dust respirators.

4. Bldg. 451

Ensure that the HRC system is firmly bolted to a manhead before operation.

5. Bldg. 452

Reduce noise from the three air pumps used to supply transport air by muffling exhaust or by providing a noise enclosure.

6. Plant Wide

Establish a timetable for replacement and modification of eyewash fountain valves to make them more easily accessible and to eliminate the spring loaded type valves (recommendation from previous year).

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Discussion (con't)

This will require close communication between the Environmental Department and Compound Scheduling. Compound must communicate to the Environmental Department one day in advance of when lead, antimony, cadmium or chrome containing pigments are going to be used so that sampling equipment can be prepared.

Noise control efforts in Compound East and West have reduced worker exposures significantly. This survey was the first time I found all cuber doors (east and west) closed. However, the enclosure around the mill drive in Geon West is covered with what appears to be a corrugated fiberglass material which reflects the noise from the drive over and out of the enclosure. The enclosure would be more effective if this roof was made of a sound absorbent material such as the enclosure walls or the roof of the Geon East mill drive enclosure, rather than the existing noise reflective type.

Clean-up of the Banbury line cube room was observed. A worker was inside the cube room without a respirator while using compressed air to blow material about. He was, however, wearing a face shield. All efforts must be expended toward using the existing vacuum system for clean-up. If, however, compressed air is to be used to clean-out inaccessible places, the employee involved must wear respiratory protection. Any NIOSH approved toxic dust respirator would be sufficient.

During the walk-through of Bldg. 451, an HRC unit was observed not firmly bolted to a manhead. In fact, it had no bolts on it at all. The HRC system must be firmly bolted to a manhead before being energized.

In Bldg. 452, along the west wall near the bagging operations, there are three air pumps that produce a very high frequency noise which is transmitted to all parts of the building. Various options are available for controlling these noise sources such as muffling or enclosing. C. Bayard indicated it may be possible to reduce the pressure requirements or eliminate the air pumps altogether. I encourage this approach over others mentioned above.

Plant Wide

In my last year's survey report, it was recommended that the ALGC plant modify the valves for eyewash fountains to make them more uniform and eliminate the spring actuated valves. An engineering standard has finally been written, but little progress has actually been made to implement the change. This changeover should proceed in a timely fashion to eliminate a potential serious health problem.

The vinyl chloride, acrylonitrile and noise monitoring programs were reviewed and found to be in order.

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TABLE I.

AIR SAMPLING RESULTS
 Avon Lake G.C.
Nov. 12-13, 1980

<u>Employee/SS#</u>	<u>Job</u>	<u>Area</u>	<u>Sample Time</u> <u>(min)</u>	<u>ug/M³</u>			
				<u>Pb</u>	<u>Sb</u>	<u>Cr</u>	<u>Cd</u>
11/12/80							
J.Gormal 301-32-9428	CML Weighman	Cpd. West	255	55	0	1.1	5
P.Hoggrette 298-12-7699	Henschel Op.	" "	245	7.2	0	2.4	0
J.Sakach 173-20-2231	" "	" "	235	1.9	0	0.7	0
11/13/80							
P.Hoggrette	Henschel Op., Cpd. West		370	BLDL *			
J. Sakach	" "	" "	369	BLDL *			

CML Weighman sample invalid because of pump malfunction.

* BLDL = Below lower detection limit of analysis; essentially "0".

All employees monitored wore 3M 9900 toxic dust masks.

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