

TO	C. B. Cooper	FIELD POINT OR DEPT. & BLDG. NO. Henry	DATE YOUR LETTER
FROM	T. S. Bialke	FIELD POINT OR DEPT. & BLDG. NO. Akron - D/0020, 5-H	DATE THIS LETTER 8-9-78
SUBJECT			

INDUSTRIAL HYGIENE SURVEY - HENRY PLANT

On June 19-23, 1978 an industrial hygiene survey was conducted at the Henry Chemical plant.

The plant's program for controlling vinyl chloride and the medical surveillance program for all workers are functioning adequately.

Procedures for handling and disposing of asbestos insulation must be developed and implemented as quickly as possible. A plant-wide respirator program must also be written.

The plant management is to be complimented on the enthusiasm of its staff. I would like to thank the Henry plant management for the consideration given to me during my visit and I look forward to working with them in the future.

T. S. Bialke
T. S. Bialke
Industrial Hygienist

v

cc: A.W. Otto
J.D. Krumholz
N.L. Kuchenmeister
D.E. Giffin

1. Asbestos

Restrict purchase of insulation to asbestos-free types.

Provide maintenance personnel who carry respirators with them with storage bags that can be hung on maintenance carts.

6. Poly Building

Conduct additional noise dosimeter monitoring of baggers and others.

RECOMMENDATIONS (con't)

7. Polymer Chemicals

Clean local exhaust ventilation systems.

Develop plans to upgrade existing and provide new local exhaust ventilation at dry compound addition points and bagging operations.

8. 3114 Process

Modify local exhaust ventilation hood over manhead to provide higher capture velocity across manhead opening.

Provide hoods and hangers at the end of flexible exhaust ducts provided for sampling point spot ventilation that will allow for easy access to sample sites.

9. Supply noise dosimeter data to the plant nurse so that comparisons with individual audiometric results can be made.

DISCUSSION AND FINDINGS

Five bulk samples of various types of insulation were collected and analyzed for asbestos (see Table I for results). Two samples were found to contain asbestos; sample #1, a preformed 2" type of pipe insulation discovered in the carpenter shop storage room and #5, a sample of insulation found in a 55 gallon drum outside the polymer chemicals building which had been removed as a result of repair work on the MBT crude reactor. The material found in the barrel was disposed of improperly and had not been wetted down upon removal.

An asbestos handling procedure similar to the one prepared by Avon Lake (Appendix I) must be developed and implemented by the Henry plant. The preformed insulation corresponding to sample #1 must be properly disposed of (see Appendix I or OSHA 1910.1001 for procedure). All pipe insulation, unless known otherwise, should be handled as if it were asbestos.

The Henry plant uses a number of respirators of different types. During my walk-through, I observed many practices such as improper storage of respirators, failure to clean respirators and non-approved airline respirators that were in violation of OSHA. The plant needs to develop a written respirator program with responsibility for the program assigned to one individual for the monitoring of its effectiveness. The program has to provide for the periodic review of the serviceability, cleanliness and maintenance of all respirator equipment by an individual or individuals trained in and impressed with the importance and necessity of such a program.

BFG46071

DISCUSSION/FINDINGS (con't)

Respirators assigned to maintenance personnel were found to be draped over the handle bars of their tool carts. Such practice is improper as far as OSHA is concerned and will eventually lessen the service life of a respirator. Small canvas bags are being used at other plants to store respirators assigned to maintenance personnel. Avon Lake General Chemical plant obtained canvas pouches that do the job from Salem County Rehabilitation, Mannington Road, Salem, New Jersey 08079. Cost is \$7.50 per pouch and they are called "canvas respirator pouch with belt".

Currently CO and hydrocarbons are being removed from instrument air at the airline stations to provide approved breathing air. Such a dispersed filtration system is hard to maintain and is expensive when replacement of many filter cartridges is required. Centralizing the production of breathing air by filtering instrument air before it enters either the PVC, PC or 3114 process areas would reduce the frequency of replacing filters and reduce operating costs. The certainty of supplying adequately filtered breathing air to all airline stations within a building would be assured. Such plans are under consideration by the plant and are encouraged.

The local exhaust ventilation systems of both the PVC compounding building and Polymer Chemicals building were found to be in need of a clean-out. A branch of the local exhaust system over the bin in the compounding building was totally plugged. A requirement for routine cleaning of all ventilation systems was described to me. Such a procedure, to be effective, must be properly implemented and maintained to insure adequate ventilation.

The handling of toxic pigments (Pb, Cd, Sb) in the PVC compounding building is very infrequent. However, when such pigments are used, the employees must wear toxic dust respirators such as the 3M 9900. Respirators are required as the ventilation in the weigh booth and Henschel area is not adequate to control toxic dusts. The system is adequate, however, for nuisance dusts. If the use frequency of toxic pigments is increased to weekly, the ventilation system must be upgraded and monitoring for toxic pigments begun.

The Poly building has a potential for overexposing workers to high intensity noise. More dosimeter work is needed in this area to adequately characterize the exposure, especially for PVC baggers. Steps can be taken to reduce noise and save energy by initiating a program to plug steam leaks, compressed air leaks and sealing faulty switches and agitators, all of which are sources of high frequency noise in the area.

25996005

BFG46072

DISCUSSION/FINDINGS (con't)

The polymer chemical building has numerous sources of dust exposure to both raw materials and final product at the packaging sites. Dust monitoring has not shown any overexposure to nuisance dust. Most, if not all, compounds used or bagged in the PC building are characterized as such. Even though no overexposure exists, as defined by present standards, it behooves the Henry plant to proceed with plans to upgrade existing local exhaust systems and to install additional exhaust ventilation at other sources of dust exposure; the packaging operations for example.

Steps must be taken to close up existing sources/leaks of dust as much as possible.

As noted in the 3114 process start-up review, the local exhaust ventilation drops at the sampling points are in need of modification. Various suggestions have been made to provide adequate ventilation at the sample site to remove any vapors produced and yet allow for easy access to the sample site. Whatever design is decided upon will certainly provide for better conditions than now exist with the free hanging flexible ducts with no hoods or hangers. The exhaust hood over the manhead also is poorly designed. It needs to be lowered or modified to provide a higher capture velocity across the manhead. Here again, various design changes have been suggested. Any of these will do a better job. When a design is decided upon, its installation must proceed rapidly.

Noise dosimeter results are to be provided to the plant nurse so that she can compare them with an individual's audiometric examinations and properly counsel him/her on whether a hearing problem is a result of on or off the job noise exposure.

Air sampling for vinyl chloride, benzene and acrylonitrile was performed (Table II). All readings were within published or recommended standards. The plant's physical examination requirements were reviewed and found to be in order.

TSB

BFG46073

25396006

TABLE I.

INSULATION BULK SAMPLE RESULTS

Henry Plant

<u>Sample No.</u>		<u>Collection Site</u>	<u>Constituent</u>
1.	2" I.D. preformed pipe insulation	Carpenter Shop storage	Asbestos
2.	6" I.D. ditto	ditto	Fiberglas synthetic fiber
3.	6" x 1½" x 32" preformed pipe insulation	ditto	ditto
4.	Eagle-Picher Super 66	ditto	Rock wool
5.	MBT crude reactor insulation	Uncovered waste barrel outside PC bldg.	Asbestos

BFG46074

25996007

TABLE II.

AIR SAMPLING RESULTS

Henry Plant

<u>Location</u>	<u>Type</u>	<u>Sample Time (min.)</u>	<u>Pollutant</u>	<u>ppm</u>
PVC Milling	General area	284	VC	<0.1
PVC Milling	Over mill	260	VC	0.2
Polymer Chemicals	PC operator	245	Benzene	0.1
Polymer Chemicals	General area, 3rd flr. slurry tank	250	Benzene	0.1
3114 Building	General area 3rd floor 3114 dryer	239	Acrylonitrile	<0.1

25996008

BFG46075