

ALLOYS PLANT
INDUSTRIAL HYGIENE STUDIES
1965 - 1977

TX WHITE

INTRACOMPANY CORRESPONDENCE

FROM:	C. T. Tash Logs
TO:	Homer Cole
COPY:	R. E. Merlean
DATE & SUBJECT	March 22, 1973 Asbestos February Industrial Hygene Survey

Dear Mr. Cole:

Attached are 3 letters which describe action being taken to correct the industrial hygene problems recognized by you during your recent survey of the Plant. I have received the charcoal sampling tubes which we will be using to collect more solvent vapor samples at our coating and cleaning line as well as at the Sheffield Plant.

We will commence with these as soon as the ventilation systems have been repaired and are operating more efficiently than in recent weeks. Solvent vapor samples will be forwarded to you for analysis shortly.

Sincerely,

C. T. Tash

CTT:lw

002979

INTRACOMPANY CORRESPONDENCE

R 78 (Rev. '38)

FROM	A. T. Henry
TO	J. L. Kerins
COPY	L. A. Johnson, C. T. Tash
DATE & SUBJECT	March 12, 1973 PRODUCTS CONTAINING ASBESTOS

Your letter of March 7, on the subject of using products containing asbestos was passed on to me for reply. We have two conditions in the plant which will be discussed. One condition involves usage of material as production tools, the other is maintenance application where sawing is performed, and asbestos shorts are used.

The Cast House presently uses asbestos as one material for furnace "doughballs". We are working toward discontinuing the use of doughballs in favor of ceramic cones. Other uses of asbestos material in production involves rope for trough sealing and sheet for temporary metal dam. This material is usually cut with a knife, causing no significant airborne particles.

We have two locations where asbestos materials are sawed to size for maintenance. In these areas we are taking positive action regarding the use of respirators, personal hygene, housekeeping, and dust collection. Vacuum equipment is on order.

Six individual tests have been made in the soaking pit area, and were found to be in compliance from the standpoint of exposure.

In summary, we have everything moving toward, (1) eliminating the product, or (2) providing adequate protection in the areas where asbestos is sawed.

If any further information is needed regarding our action on this subject please let me know.

A. T. Henry

ATH:lw

002980

INTRACOMPANY CORRESPONDENCE
R-98 (Rev. 1-68)

FROM	A. T. Henry
→ TO	L. A. Johnson
COPY	C. T. Tash, P. L. Akers
DATE & SUBJECT	March 14, 1973 INDUSTRIAL HYGENE SURVEY

The letters from H.M. Cole of March 2, and March 6 on the above subject has been reviewed with Charlie Tash and Pete Akers. The following action is being taken on each item:

ALLOYS PLANT

1. Paint Line airborne contaminates . New sampling tubes are being sent to John den Boer for sampling, and to be sent to Richmond for processing. This program will be underway in two weeks.

   Engineering is checking out all ventilation systems and other controls for proper operation.

2. Box Shop Noise.
   Engineering controls are being instituted rather than administrative controls. The dust collection system is being insulated, a flexible joint in the pipe, as well as dampers to close off when machines are not in operation.

   The approach at the double end tennor is to insulate the noise at the source rather than the wall. This job is underway.

   The chipper is the one problem for which we have no immediate answer. It is essential that an operator be near the machine on occasion when unplugging is necessary. Engineering is making a study of ways to handle this noise source.

3. Process Furnaces.
   The carbon monoxide leakage in the process furnace area was taken care of some weeks ago. Furnace seals were checked, and leaks repaired in this area.

002981

SHEFFIELD CAN PLANT

1. Coater and Press Line Air Samples.
   Charlie Tash says the tests previously taken were inconclusive. He is initiating a new series of samples.

2. Noise Levels.
   The noise sources from the Yoder and Schmutz slitters, and the air compressor are on the schedule of Pontetti for investigation.

A more detailed review of recommendations will be made when the resampling and Engineering surveys are made.

A. T. Henry

ATH:lw

002982

INTRACOMPANY CORRESPONDENCE

Alloys A-6

FROM	J. S. Prestley - MRD — MRD#: 33-839-8R
TO	R. H. Mansur - GOB
COPY	H. M. Cole - GOB; Dr. E. C. Irby - EXO; R. E. Hughes, S. J. Sansonetti, G. E. Spangler - MRD
DATE & SUBJECT	March 5, 1973 — PARTICLE COUNTS - ASBESTOS DUST

Listed below are the computed counts of total number of fibers per effective filter area for the samples submitted to Metallography. These are based on counts of 40 fields per sample (twice the specified minimum of 20 fields).

Sample No.	Calculated No. of Fibers Per Total Effective Filter Area
A1	106,442
A2	98,839
A3	0
A4	114,045
A5	22,809
A6	30,412

These values must be converted to particles per unit volume of air by your department since we did not receive the data for determining total air volume. The above figures represent relatively low counts and it is our understanding that this is due to short sampling times.

The counts above were determined using phase contrast microscopy and standard methods[1]. Computation of fibers per total filter area was as follows:

$$\text{Total No. of Fibers Per Filter Area} = \frac{(\text{Filter Area}) \times (\text{Avg. Count Per Field})}{(\text{Field Area})}$$

Measured Effective Filter Diameter = 32.334 mm (Area = 821 mm^2)
(Determined from opening in plastic filter holder)

Area of Microscope Field on Porton Reticle = .002756 mm^2

Average Count Per Field = $\frac{\text{(Total No. of Counts)}}{\text{(No. of Fields Counted)}}$

The present fiber counts were made without regard to identification of the type of fibers. For example, it was reported that one of the samples counted was taken from an area where only fiberglass was involved. If samples in the future will be taken from areas known to contain fiberglass, we will have to adapt our present microscope for polarized light for fiber identification or acquire a microscope that is equipped for both phase contrast and polarized light. When a large amount of fiberglass is mixed with the asbestos fibers, the resulting counts could unnecessarily indicate violation of OSHA Asbestos Regulations. If future samples are to be taken in areas where particles of a nature other than asbestos are present, particularly fiberglass, provisions for identification of types of particles may be necessary.

J. S. Prestley

JSP:ljo

REFERENCES:

[1]Stephen G. Bayer, Ralph D. Zumewalde, Thomas A. Brown, "Equipment and Procedures for Mounting Millipore Filters and Counting Asbestos Fibers by Phase Contrast Microscopy," Bureau of Occupational Safety and Health, 1014 Broadway, Cincinnati, Ohio 45202, July, 1969

INTRACOMPANY CORRESPONDENCE
R-98 (Rev. 1-68)

FROM: H. M. Cole

TO: Alloys File

COPY:

DATE & SUBJECT: February 22, 1973

In a telephone conversation with Charlie Tash on this date, the following recommendations regarding asbestos handling and usage should be followed:

(a) Provide and require all employees tearing out or cleaning up insulation containing asbestos with U. S. Bureau of Mines approved respirators.

(b) Dry sweeping of asbestos containing materials (cleaning up of insulation) or blowing off of asbestos from machining operations should be prohibited. All loose or spilled asbestos containing materials should be cleaned up with a vacuum system.

(c) Asbestos containing materials should be separated from any eating areas. Note: eating table was located in same area where shorts were being mixed and insulation being torn out at #7 soaking pit.

(d) Sawing of asbestos materials should be eliminated. If sawing or machining is necessary, it must be done on machinery that is properly ventilated. Note: sawing marinite board on an unventilated saw in the machine shop.

(e) Discontinue the use of dough balls in the cast house. Substitute with "Fiber Tap Hole Cones". Can be obtained from Consolidated Ceramic Products Company - Blanchester, Ohio.

(f) Empty "asbestos shorts" bags and other asbestos containing materials should be disposed of in an appropriate manner.

H.M. Cole

HMC:slc