

EAST PITTSBURGH WORKS 4-G-10
Accident Prevention Department

E. J. Hlavaty, Mgr.

East Pittsburgh 2

April 24, 1973

Results of Air Samples
Taken for Airborne
Asbestos Fibers in
Section E-5, LRA,
East Pittsburgh Works

cc: E.Pgh. 2-G - LRA Plant Layout - C. H. Waltz, Supvr.

Introduction

At the request of your office, Headquarters Industrial Hygiene has made an air quality survey for asbestos fiber concentration at operating stations in Section E-5 which are involved with Misarta sheet, $\odot$ M-4414LAK, or asbestos gasket material, $\odot$ M-4225LAA.

Summary of Results

Six of the eight operation samples were found to create airborne concentrations below five fibers (longer than five micrometers) per cubic centimeter of air. This is the threshold limit value set by Federal Regulation (Occupational Safety and Health Act) for continuous occupational exposure based on an eight-hour time weighted average. Two of the eight air samples were above ten fibers per cubic centimeter of air by a statistically significant amount. This latter value is the instantaneous ceiling value above which no worker shall be exposed at any time according to the same Federal Regulation. Of the six samples which are at currently acceptable levels, two are within a factor of one-half times the value of two fibers per cubic centimeter which shall become the continuous exposure limit on July 1, 1976. The attached table gives a summary of all samples taken.

Recommendations

It is our opinion that the high exposure during the circle saw operation (shop order T8P0490) could be brought below permissible levels by lowering the local exhaust hood down over the saw blade. It will also be necessary to redesign the push-gate device which is used to push the cut pieces through and past the saw blade. This change has already been discussed informally with you.

PLAINTIFF'S
EXHIBIT
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Mr. J. Powers, Foreman of Section E-5, has described, also informally, a modification for the disc sander (operational shop order 80FO590) which we believe will substantially reduce the exposure there. This modification has subsequently been installed.

Several common work practices were observed which should be very strongly discouraged. They all involve personal and work station clean-up habits which tend to cause very high local concentrations of airborne asbestos in the worker's breathing zone. Probably the most hazardous practice is the use of the blow-dry gun for personal and general area cleaning; also included is brushing of clothing with the hands, shaking out aprons, and similar activities. Works Engineering should be requested to design vacuum clean-up stations, similar to the brush attachment for the common tank-type household vacuum cleaner, to be attached to the local exhaust system currently in use.

Although no imminent hazard was indicated by the results of the asbestos tests on milling or slotting operations (shop orders 81P185 and 81P0185), quantities of large nuisance particulates are ejected past the exhaust hoods and on to the operator. This aggravates the clean-up problem mentioned above and could at times cause a health hazard. Therefore, we recommend that the capture hood design on this machine be re-evaluated by Works Engineering in light of the type of work being done.

In expectation of the 1976 standard revision, the band saw (shop order PUK99863P1) exhaust ventilation hood should also be improved. This can be accomplished very simply by closing the gaps under the saw table and more frequent vacuum clean-up inside the saw through which the exhaust is drawn.

Headquarters Industrial Hygiene should be working with Works Engineering on all design changes before installation is started.

We hope that this survey has answered the needs of your initial request. We would welcome the opportunity to further discuss or elaborate on any of the observations or recommendations we have made.

John F. Adams
Headquarters Industrial Hygiene

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Attachment

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**RESULTS OF AIR SAMPLES TAKEN IN SECTION E-5
LARGE ROTATING APPARATUS DIVISION, EAST PITTSBURGH WORKS
DURING THE MONTHS OF MARCH AND APRIL**

<u>Sample Number</u>	<u>Operation Machine</u>	<u>Material Number</u>	<u>Shop Order Number</u>	<u>Column Number of Location</u>	<u>Date Sampled</u>	<u>Duration of Sample (minutes)</u>	<u>Results Fibers per Cubic Centimeter</u>	<u>Standard Deviation (1σ) Fibers per Cubic Centimeter</u>
4399	Milling	44141AK	81P185	50W	3-5-73	70.-	0.6	± 0.2
4398	Deburring	44141AK	80P800	48W	3-5-73	71.-	0.1	± 0.1
4403	Slotting	44141AK	81P0185	49W	3-12-73	60.-	1.9	± 0.4
4402	Circular Saw	44141AK	78P0490	50W	3-12-73	63.-	17.-	± 2.-
4405	Jig Saw	42251AA	P0899863P1	52W	3-20-73	59.-	0.6	± 0.1
4404	Band Saw	42251AA	P0899863P1	52W	3-20-73	43.-	1.1	± 0.2
4407	Speed Milling	44141AK	80P0590	48W	4-4-73	70.-	0.6	± 0.1
4406	Disc Sander	44141AK	80P0590	49W	4-6-73	45.-	12.-	± 1.-

DECEMBER 1992

IN RE: ABRAMS