

CONFIDENTIAL

PLAINTIFF'S
EXHIBIT
WH-1003

EAST PITTSBURGH WORKS INDUSTRIAL HYGIENE SURVEY

August 7, 1975

PURPOSE OF TRIP:

- (1) Evaluate potential airborne asbestos from grinding and cutting of stator wedges in the E-3 area.
- (2) Evaluate general airborne dust concentrations in E-31 area.
- (3) Review the operations of cutting melamine in E-5 area.

SUMMARY OF FINAL RESULTS:

The two breathing zone (BZ) samples for asbestos were well below the OSHA Standards (E-5 area). Three BZ air samples were below the TLV (E-31 area). The BZ air sample on the worker cleaning the dust filter unit was above the TLV.

PERSONS CONTACTED:

G. Brady
R. Wolf
W. Ponitz, E-5
M. Hudak, E-31
C. Waltz

SUMMARY OF OBSERVATION AT E-5 AND STOREROOM 112:

Walter Ponitz, Supervisor of Manufacturing LRA of E-5 area described the cutting and grinding of the stator wedges composed of Micarta 44141AJ. During the past six months approximately 1.5 hours per week were utilized for the entire operation.

The grinding of stator wedges is done in the E-9 Storeroom 112 with a micro-grinder Serial No. 60166 which was attached to a Pangborn dust filter collector Serial No. 61447. A safety hazard of no guard at the feed entrance of the microgrinder was noted.

Ventilation checked out very good on the grinder. However, there was no connection sleeve between the funnel cone of dust collector and dust bin.

The waste dust is shoveled into an open dumpster resulting in a poor house-keeping condition. It was recommended that the dust could be collected into an elastic-rimmed plastic bag attached to the collection cone. This would eliminate the airborne dust concentrations. Please note that asbestos dust must be disposed of in sealed impermeable plastic bags (OSHA 1910.93a).

The grinding operation was performed by two operators wearing MSA Dustfoe-66 Respirators. The results show that the ventilation is adequate to remove the dust from the breathing zone of the operators. Respirators are not required for this grinding operation.

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SUMMARY OF ASBESTOS SURVEYS:

Two samples were taken at the Storeroom 112 for the purpose of evaluating potential airborne asbestos exposure to employees. Samples were taken at the breathing zone of the operators with an MSA Portable Pump (Table 1).

Both samples were below the TWA established by OSHA (1910.93a).

SUMMARY OF "SKINNING" OPERATION E-31:

Mike Hudak, Supervisor, Manufacturing LRA E-31, described the removal of insulation from copper coil wire 61152CP-CQ using a 3M Scotchbrite metal cutting and polishing wheel. For the past two months this has been a three 8-hour shift operation involving approximately 24 workers. The complaint from the workers included dust getting on their clothing and causing throat and skin irritations.

Excellent ventilation was observed on the Torit (skinner). Approximately 240 feet per minute was measured at six inches from the nozzle. The BZ samples were taken under the face shield of the Torit Operator and on the lapel of the worker cleaning the Torit filter unit. No safety glasses were worn. The MSA Dustfoe-66 and the disposable 3M TC-21C-132 respirators were worn at all times by the operators and cleaners. Because of operations which sometimes can't include the ventilation safeguards, it is recommended that disposable respirators be assigned to the employees. It is also recommended that safety glasses with side shields be worn at all times by employees assigned to the operation.

One employee vacuums the dust filter of each Torit approximately once a week. This worker was working on his hands and knees cleaning the dust filter. The dust bin was emptied by shaking the contents into an open trash can. An extension on the vacuum cleaner would allow the worker to stand upright away from the dust and floor. Another type of collection bin should be looked into and the worker should be instructed on proper disposal of the waste dust.

SUMMARY OF SURVEY AND ANALYSIS:

Three air samples were taken of workers skinning insulator wire. The three samples were approximately 12% of the TLV set by OSHA standards for nuisance dust. One air sample was taken on the worker cleaning the Torit filter unit. Large clumps of particles were found on the sampler filter. The results of the sample were above the TLV for total nuisance dust. A follow-up for this observation could be a particle size analysis. All results are listed in Table 2.

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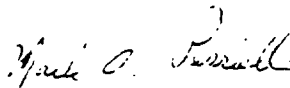
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CUTTING OF MELAMINE IN E-5 AREA:

This summary is based upon observations by John Adams in March 1973. The sawing of melamine creating excessive heat is causing the formaldehyde odor. The possible reasons for this problem occurring are listed below:

- (1) Water coolant not properly adjusted to the point of contact.
- (2) Saw blade is dull or cutting edge thickness too narrow to give proper clearance for remainder of blade.
- (3) Operator trying to cut too fast for the thickness of the piece or trying to cut too sharp a radius which binds the blade.
- (4) If cooling water is recirculating type, adding a surfactant to lower the surface tension of water may help.
- (5) It is possible that an occasional piece of melamine stock could have been incompletely cured and retain an excessive amount of unreacted formaldehyde which would be more readily liberated at lower temperatures. At the TLV for formaldehyde the fumes are slightly irritating to eyes and nose. Most people will not be able to tolerate such a concentration which would cause a permanent health effect. Efficient local ventilation would eliminate the vapors and mist created by this operation. Another survey is needed to determine proper engineering techniques.

Please keep us advised on future problems associated with this operation.



Mark A. Perriello,
Associate Industrial Hygiene Engineer

Attachments

144/ 1000199

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I. H. Sample No. 5101
(Completed by I.H.L. Reay.)

AIR SAMPLE RECORD

FIELD DATA

Plant East Pol. Department LRA-E-5 Date Sampled 8-13-76
Operation Sawing on Drill 65 54709 F 81719 PLS
Operator's Name I. Canada SS# 142-26-0925 Job Title Pro-Filter
Sampling for Asbestos - 42.251 AA
Sampling Location: Bldg. 203 Column # 56
(CHECK:) V Breathing Zone: _____
Area: _____
Pump # 0-44-0777 Rotameter Setting Yellow Line Flow Rate 1.59 LPM or CFM

Type of Collector:

Cassette No. 2-19 Charcoal Tube No. _____
Impinger No. _____ Other _____
Impinger: Sampling Solution _____ Vol. _____ ml
Rinse Solution _____ Vol. _____ ml
START 9:10 (AM) (PM) STOP 11:05 (AM) (PM) 85 net min.
_____ (AM) (PM) _____ (AM) (PM)

REMARKS: The bar saw and its saw had a ventilation
system but no ventilation system on drill press.
Emitted area - 75% of this time on bar saw, 20% on
drill press and 10% on drill press.

Sketch, Diagram, Photographs
(Use other side if necessary)

Sampled by O. Brady
C. Walz

Results 2.2 fibers/cc

I. H. L. - 8/75 - Revised by MAP

$$\frac{1.07 \times 10^{-6} \text{ g/cc} \times 2.79 \times 10^5}{1.59 \text{ L/min} \times 85 \text{ min}}$$

844/6022873

55005099

Westinghouse
Electric Corporation

Westinghouse Industrial Hygiene
Research and Development Center

South Road
Pittsburgh, Pennsylvania 15225
412 756 5847

May 3, 1977

⑦ EAST PITTSBURGH WORKS
Accident Prevention 4G10
ATTN: G. T. Brady, Mgr.

An asbestos air sample was collected by J. A. Sensus on 4/19/77 in Bldg. 2X-1 in the breathing zone of W. T. Connolly, Social Security No. 159-12-4643. The sample was collected for 150 minutes (7:45 a.m. - 10:15 a.m.) while using a punch on ⑦ M 46316CJ/QB. The result was 2.1 fibers/cc. This result is in excess of the federal (OSHA) 8 hour average limit of 2.0 fibers per cc.

To determine whether the operator is over-exposed it would be necessary to establish his exposure for the remainder of the day using additional sample cassettes. Do not use the same cassette; to do so would obscure the asbestos with excessive trash dust.

John F. Adams

John F. Adams, Industrial Hygiene Engineer
⑦ Industrial Hygiene Laboratory, 401-3X9

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TO: C. T. Brady

⊕ EAST PITTSBURGH

Sampled Date - 6-5-79

Analyzed Date - 6-19-79

Analyzed By - ROBERT C. BROWN

Phase Contrast Microscopy

I.D.#	Cassette No.	Employee's Name	Operation	Sampling Time (min.)	Analyte	Sample Results fibers/cc	8-hr. T.W.A. fibers/cc
6638	X-39	C. Marton	Cutting asbestos m- carta strips on wet saw.	310	Asbestos	0.65	0.91
6639	W-26	C. Marton	Cutting asbestos m- carta strips on wet saw.	135	Asbestos	1.52	
6640	X-37	R. Morris	Wedge cutting of as- bestos mcarta.	432	Asbestos	0.036	
6641	X-38	B. McConnel	Grinding edges of asbestos mcarta.	390	Asbestos	0.095	

The OSHA Permissible Exposure Limit (PEL) is 2.0 fibers (greater than 5 μ m in length) per cubic centimeter.

Diane Whittle

Diane Whittle, Industrial Hygiene Engineer
Corporate Industrial Hygiene Laboratory

CAZ

6-27-79