

FILE NAME: General Electric (GE)

DATE: 1949-1965

DOC#: GE197

DOCUMENT DESCRIPTION: GE Erie Plant - BC Notes & 13 Docs [From PA Archive]

General Electric Erie

- Planned Asbestos survey 1965
- 1964 punch cards with Operation/Hazard/Control Measure matrix with asbestos dust hazard documented in building 6
- 1964 analysis of findings mentions asbestos and other hazards
- 1959 complaint of rash/dermatitis
- 1954 survey of asbestos dust – all samples <5 MPPCF
- 1951 Report of Investigation of asbestos dust – 4.1 – 8.1 MPPCF
- 1951 Report on asbestos dust - 3.6 - 17.8 MPPCF
- 1949 Report of Investigation of exposure to asbestos dust “weighted exposure of personnel operating machines was too high” - all dust counts >5MPPCF most >10, highest 32.8 MPPCF
- 1949 free silica and asbestos study

996 South Main Street
 Meadville, Pennsylvania
 March 23, 1965

General Electric Surveys
 Erie

F. G. Renton
 Industrial Hygienist III

J. A. Fierro *John Fierro*
 Industrial Hygienist
 Region III

Thru: Regional Industrial Hygienist

Below is a list of the surveys planned for General Electric. The areas marked with a (*) have already been surveyed.

Carbon Monoxide	Building 2	Motor Barrel & Magnetic Section
	Building 6	Commutator Assembly Area
	Building 13	Core Assembly Area, Bay-B
Noise	Building 5	Engine Cab Area
	Building 6	Commutator Assembly Area Sec. 64547
	*Building 6	Armature Spin Test
	*Building 10E	Control Test & Development
	Building 13	Core Assembly Area Bay-E
	Building 17	Armature Coil Area
	Building 26	Motor Test & Development
	Building 64	Aerospace Section Bay-C
	Building 64	Aerospace Section Generator Test Area
Iron Oxide Fumes	Building 5	Welded Components
Asbestos	Building 6	Mixing Insulation Pastes
O-chlorobenzene	Building 18	Bay-E
Beryllium & Copper	Building 64	Aerospace Section Bay-A
Copper (Ozone-Oxides of Nitrogen)	*Building 6	Generator Armature Test Spin Area
Lead	*Building 6	Generator Armature Test Spin Area

JAF:sah

RECEIVED
 MAR 24 1965
 INDUSTRIAL HYGIENE
 DIVISION
 DEPT. OF HEALTH
 HARRISBURG, PA.

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF HEALTH

PLANT INFORMATION RECORD

#12 DIVISION OF OCCUPATIONAL HEALTH

Stock No 52821

General Electric Corporation

PLANT General Plant Foundry Division, Building # 22

ADDRESS 2901 East Lake Road

Erie, Pennsylvania

PRODUCT OR SERVICE Brass, beryllium, copper, aluminum copper, malleable iron and steel and aluminum castings

PERSON IN CHARGE Carl Gorny, Employee Relations and Safety Director

PHYSICIAN R. B. Nutter, M.D.

IDENTITY None

NURSE *Alice Manning, R.N.

SAFETY SUPERVISOR Carl Gorny

INDUSTRIAL HYGIENIST A. J. DeSorbo, Schenectady, N.Y.

INSURANCE CARRIER Electrical Mutual Insurance Company

LEGAL OWNER Corporation

RECOMMENDATIONS Ear plugs should be worn at all high-level noise operations.

REMARKS *Staff of five nurses.

Employees receive annual chest X-ray.

Dust survey conducted annually by G.E. industrial hygiene facilities. Surveyed for radiation 6/17/58; dust, metallic oxide fumes and carbon monoxide 9/15/59.

The following alloys of copper, aluminum and beryllium are handled occasionally:

Brass

Bil C25H, Be .45 - .75 per cent

B50H61, Be .35 - .50 per cent

Inspection

Aluminum, beryllium alloy

1 ounce of Be per 100 lbs of new metal (aluminum)

Sept. 10, 1964

P.G. Renton & J. Pierro

ORIGIN

NAME

DATE RECEIVED

Sand Preparation Area - Basement

Binding sand

Silica dust

General ventilation

Approved respirator

American Optical

Intermittent operation

(2-3 hrs. per 8 hr. day)

Preparation of core mix

Silica dust

Enclosed operation

Corn starch

Exhaust ventilation

Mogul Cereal Binder B242

Mogul Cereal Binder Co.

New York, N.Y.

Dextrose dust

Globe Dextrose Co.

Corn Products Co.

New York, N.Y.

Sodium silicate dust

Kerosene vapors

Korbond FB-300 Corn Oil

United Oil Manufacturing Co.

Erie, Pa.

Core Room

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FBI
JAN 14 1964
FEDERAL BUREAU OF INVESTIGATION
U.S. DEPARTMENT OF JUSTICE
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JAN 14 1964
FEDERAL BUREAU OF INVESTIGATION
U.S. DEPARTMENT OF JUSTICE

Bench core manufacture (8 stations)	Silica dust Lack of oxygen	General ventilation Sand is damp
(CO ₂ is used to harden core)	Carbon Dioxide	
Blower core manufacture (6 stations)	Silica dust	General ventilation Sand is damp
Core baking (gas fired ovens 400-450° F.)	Conductive heat Carbon Monoxide Kerosene vapors Decomposition products	Ovens are exhausted locally.
Core packing	Silica dust	General ventilation Sand is damp
Core pasting	Lyquagrip Core Paste Whitehead Brothers Co. Small quantities 75 Westminster St. Providence, R.I.	General ventilation Brush application Personal hygiene
	Dermatitis Graphite Dust Talc dust	
Roll-out core machine	Silica dust	General ventilation Sand is damp

CONTINUED ON SUBSEQUENT PAGES

REGION		COUNTY	PLANT NAME - ALPHABETIC
COMMONWEALTH OF PENNSYLVANIA			PLANT INFORMATION RECORD
DEPARTMENT OF HEALTH			STOCK NO. 5258.3
DIVISION OF OCCUPATIONAL HEALTH			
PLANT	General Electric Corporation, Bldg. #64		
	D. C. Motor & Generator Division		
ADDRESS	2901 East Lake Road		
	Eric, Pennsylvania		
PRODUCT OR SERVICE	Electric Motors and Generators		
PERSON INTRODUCED	Carl Salzer, Safety Specialist and Personnel Mgr.		
PHYSICIAN	R. D. Butter, M.D.		
DENTIST	None		
NURSE	Alice Manning, R.N.		
	Staff of five nurses		
SAFETY SUPERVISOR	Carl Salzer		
INDUSTRIAL HYGIENIST	None		
INSURANCE CARRIER	Electric Mutual Insurance Co.		
LEGAL OWNER	Corporation		
RECOMMENDATIONS	None		
REMARKS	D. C. generators and electric motors are fabricated and assembled. Many of the operations require handling of epoxies. Radiation survey conducted 6-12-58.		
DATE	August 11, 1961 BY J. G. [Signature]		

<u>Operation</u>	<u>Hazard</u>	<u>Control Measure</u>
Applying epoxy resin to rotters	Epoxy resin vapors	Local exhaust ventilation
Commutator turning	Copper dust Mica dust Dermatitis	Local exhaust ventilation Personal hygiene Hand creams
<u>Aerospace - model shop</u> Applying epoxy resin to commutator components	Epoxy resin vapors	Local exhaust ventilation
Baking of epoxy dipped components electric oven 400°F.	Epoxy resin fumes	Local exhaust ventilation
Cleaning of metal parts	Xylene vapors Dermatitis	General ventilation Personal hygiene Hand creams
Heavy machining turret lathes bores grinders mills drills backs	Steel alloy dust Copper dust Soluble & insoluble cutting oils Dermatitis Carborundum dust	General ventilation Personal hygiene Skin creams
Welding oxyacetylene electric arc inert gas (Argon)	Iron oxide fume Intense visible light Ultraviolet & infrared radiation Carbon monoxide Ozone Lack of oxygen	General ventilation Helmet Goggles
Motor cleaning	Naphtha vapors Dermatitis	General ventilation Closed unit Brush
<u>Aerospace assembly area</u> <u>Light machining</u> lathe mill drill band saw cross cut	Mica dust Mineral wool dust Plastic dust	<u>Bay-D</u> Local exhaust ventilation to bag collector (re-circulates air)

<u>Operation</u>	<u>Hazard</u>	<u>Control measure</u>
Machining boiler plates turret lathes mills bored drills	Iron oxide dust	General ventilation
Inspecting Metallic components Magnus Aja-Lif	Kelite Spray White Mist Los Angeles, Calif. Kerosene vapors Dermatitis	General ventilation Occasional operation Personal hygiene
Paint spraying boiler plates	Paint pigment mist Xylene vapors mist Dermatitis	Local exhaust ventilation Personal hygiene Hand creams
Paint drying boiler plates Gas oven 260°F.	Paint pigment fumes Xylene vapors Carbon monoxide Conductive heat	Local exhaust ventilation
<u>Shaft machining area</u> Machining motor shafts mills lathes	Iron oxide dust Soluble oil Dermatitis	General ventilation Hand creams Personal hygiene
Shaft grinding	Iron oxide dust Carbonundum dust	General ventilation
<u>Field core area</u> Field coil winding	Epoxy vapor Thinner vapors G.E. Spec. 9424 Dermatitis	General ventilation Hand cream Personal hygiene
Winding leads	Mineral wool dust Asbestos dust Dermatitis	General ventilation Small quantity Occasional operation Personal hygiene Hand cream
Brazing wire leads	Zinc, Tin, Copper oxide fumes HCL	General ventilation
Core winding (soldering)	Lead Tin oxide fumes HCL	General ventilation

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JAN 10 1964
U.S. DEPT. OF HEALTH
DIVISION OF OCCUPATIONAL SAFETY AND HEALTH
WASHINGTON, D.C.

REGION	COUNTY	PLANT NAME - ADDRESS	PLANT INFORMATION RECORD
1	2	3	4
COMMONWEALTH OF PENNSYLVANIA			PLANT INFORMATION RECORD
#9			STOCK NO. 3358.3
DIVISION OF OCCUPATIONAL HEALTH			
General Electric Corporation			
PLANT Locomotive and Car Equipment Manufacturing			
Building #6			
ADDRESS 2901 East Lake Road			
Erie, Pennsylvania			
PRODUCT OR SERVICE Locomotive and locomotive components			
PERSON INTERVIEWED Dick Morano, Safety Specialist			
PHYSICIAN R. D. Mutter, M.D. ph. extension 2074			
DENTIST None			
DRUG *Alicia Manning, R.N.			
SAFETY SUPERVISOR Dick Morano			
INDUSTRIAL HYGIENIST None			
INSURANCE CARRIER Electric Mutual Insurance Company			
LEGAL OWNER Corporation			
RECOMMENDATIONS Improve housekeeping and exercise care to avoid spillage of cyanide salts in the work area.			
Remove the mechanical obstruction from the exhaust hood in the operation involving the fabrication of field coil insulation			
REMARKS * Staff of five nurses			
Inspection	DATE September 2, 1964	by P. G. Rantos & J. Florio	

OPERATION	HAZARD	CONTROL MEASURE
<u>Commutator Testing Bay-C (Sections # 9, 10)</u>		
Spinning commutators	Noise	Operation to be further evaluated
Four commutators were spinning at the time of visit. May run as many as ten. The noise is continuous. Four shifts of workers are exposed. No ear plugs worn.		
<u>Coil Forming Area</u>		
Coil winding	Mica dust	General ventilation
	Fiberglass dust	Personal hygiene
	Dermatitis	Hand creams are available
Equilizer assembly	Epoxy resin vapors	General ventilation
	Cardolite Resin NC-513 (catalyst) vapors	
	3-M Chemical Co.	
	St. Paul, Minnesota	
	Hysol Hardner HZ-3416 vapors	
	Hysol Corporation	
	Clean, N.Y.	
	Dermatitis	Hand Creams are available
		Personal hygiene
Wire cutting	Copper dust	General ventilation
Wire brushing	Wire stripping	General ventilation
	compound vapors	Personal hygiene
	G.E. Spec. #306	Hand creams are available
	Dermatitis	
Wire cleaning	Nitric acid	Local exhaust ventilation
steam heat	Silver cyanide	Goggles
	Dermatitis	Rubber aprons and gloves
Mixing silver and sodium cyanide pellets	HCN	Local exhaust ventilated hood
gas fired pot	CO	Occasional operation
		(Mixing one hour every two weeks)
		Amylnitrate ampules
Operation is sloppily conducted resulting in spillage of cyanide pellets. Acid cleaning tanks in vicinity increase the hazard potential.		
Lead loop winding	Mineral wood dust	General ventilation
	Dermatitis	Hand creams
		Personal hygiene
Holding armature coils (varnish application)	Acetone vapors	General ventilation
	Dermatitis	Personal hygiene
		Hand creams

CONTINUED ON SUBSEQUENT PAGE

<u>Operation</u>	<u>Hazard</u>	<u>Control Measure</u>
Curing varnished armature coils electric fired ovens (6) 2000F.	Acetone vapor Varnish fume	General ventilation
Wrapping ground insulation (shellac and varnish application)	Acetone vapors Isopropyl alcohol vapors Mica dust Fiberglas dust Dermatitis	General ventilation Personal hygiene Hand creams
Machine taping of wire (automatic unit)	Fiberglas dust Mica dust Dermatitis	General ventilation Hand creams Personal hygiene
<u>Dip room</u> Dipping armature coils into varnish	Toluol vapor GE Spec. 1514 Solvent vapors	Local exhaust ventilation Intermittent operation Occasional operation (3 hrs. per week)
Winding and cleaning stator coils	Mica dust Toluol vapors Dermatitis	General ventilation Personal hygiene Hand creams
Mechanical wire wrapping (automatic machine)	Toluol vapor Mica dust Mineral wool dust Dermatitis	General ventilation Personal hygiene Hand creams
Fabricating insulation for field coils	Mineral wool dust Ethylene dichloride vapors Epoxy resin vapors Boron trichloride dust Formvar 7/70E vapors Shawinigan Resin Corp. Springfield 1, Mass. Araldite No. 772 vapors Dermatitis	Exhaust hood ventilation (hood is mechanically constructed) Intermittent operation Most chemicals are used in small quantities Impervious rubber gloves
Drying of fabricated field coil insulation	Solvent vapors (as above) Epoxy resin fumes	General ventilation
Dye mixing & impregnation of Fiberglas rolls (operation is conducted under vacuum)	Mineral wool dust Toluol vapors Isopropyl alcohol vapors G.E. Spec. 2311 Dye dust Dermatitis	Exhaust ventilation Impervious gloves

Operation

#598 Generator coil winding & insulating

Hazard

Epoxy resin vapors

G.E. Spec. XLJ051 (Catalyst vapors)

Toluol vapors

Isopropyl alcohol vapors

G.E. Spec. 805M Permafil

Dermatitis

Zinc

Tin

Copper

Silver oxide fume

Control Measures

General ventilation

Brush application

Personal hygiene

Hand creams

Silver soldering on generator coils is done intermittently

Molding & baking generator coils

electric heated oven 1750C.

Varnish fumes

Toluol vapors

G.E. Spec. S-xll4 (Fluorocarbon release) vapors

General ventilation

Generator coil winding (heat lamps for drying)

Mineral wool dust

Varnish fumes

Toluol vapors

Dermatitis

Infrared radiation

General ventilation

Personal hygiene

Hand creams

Cleaning generator coils

Cakite liquid

detergent

Dermatitis

Personal hygiene

Hand creams

Induction brazing

Copper oxide fumes

Zinc oxide fumes

Tin oxide fumes

General ventilation

Intermittent operation

Annealing armature bars
gas fired furnace

Conductive heat

Carbon monoxide

General ventilation

Wrapping field coils

Dipping field coils into varnish

Toluol vapors

Dermatitis

General ventilation

Personal hygiene

Hand creams

Baking dipped field coils
electric fired oven 140°F.

Toluol vapors

Varnish fumes

General ventilation

Manual cleaning of field
coil terminals
(motor driven wire brush)

Varnish dust

Copper oxide dust

General ventilation

Impregnating field coils
with varnish
(100 lbs. air pressure)

Toluol vapors

Solvaasol vapors

General ventilation

Enclosed operation

Operation

Curing impregnated field
coils
electric fired oven 1600°F.

Hazard

Varnish fumes
Toluol vapors
Conductive heat

Control Measure

Local exhaust ventilation

*Asbestos putty mixing

Asbestos dust
Talc dust
Silica flour dust
Varnish solvent vapors
Boron trifluoride dust
(hardener)
Butyl perbenzoate vapors
(catalyst)

General ventilation
Intermittent operation
Occasional operation
(maximum 2 hours per
day for mixing)

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GENERAL ELECTRIC CORPORATION
RESEARCH DEPARTMENT
JAN 20 1960

*This operation is to be relocated and will incorporate exhaust ventilation.
The operation is to be further evaluated. Boron trifluoride and butyl
perbenzoate are used in very small quantities.

Wrapping field coils

Mineral wool dust
Epoxy resin vapors
111 - Trichloroethane
vapors
Dermatitis

General ventilation
Personal hygiene
Hand creams

Braxing field coil leads
(silver solder)

Zinc
Tin
Copper
Silver oxide fumes
Borax flux fumes

General ventilation

Machining field coils
drills
mills

Copper dust

General ventilation

Dipping field coils into
shellac

Isopropyl alcohol
Dermatitis

General ventilation
Personal hygiene
Hand creams

Removing asbestos from
field coils

Asbestos dust

Local exhaust ventilation

Cables, Terminals, Bus
Rings, Wire Processing
Rolling & extruding copper
strip (resistance welding)

Copper oxide fumes
Soluble cutting oils
Dermatitis

General ventilation
Intermittent operation
Personal hygiene
Hand creams

Strip annealing
electric fired oven 5500°F.

Conductive heat

Local exhaust ventilation

<u>Operation</u>	<u>Hazard</u>	<u>Control Measure</u>
Coil forming machine	Copper dust Insoluble cutting oils Dermatitis	General ventilation Personal hygiene Hand creams
Machine wire insulating	Toluol vapors Mineral wool dust Dermatitis	Local exhaust ventilation
Drying of insulated wire electrical furnace N heated 325°F.	Toluol vapors Varnish fumes Conductive heat	General ventilation
Impregnating field coils (100 lbs. air pressure)	Toluol vapors Solvesso vapors	General ventilation Enclosed operation
Curing impregnated field coils electrically heated oven 106°F.	Conductive heat Toluol vapors Varnish fumes	Local exhaust ventilation
<u>Wire terminal area</u> Stripping plastic from terminals	Plastic dust Steel alloy dust	General ventilation
Silver soldering	Zinc Tin Copper Silver oxide fumes Borax Flux fumes	Local exhaust ventilation
Terminal cutting rip saw	Copper dust	General ventilation
Resistance welding on terminals	Copper fumes	Local exhaust ventilation
Sanding terminals belt sander	Copper dust Carborundum dust	Local exhaust ventilation
Silver plating	Nitric acid Silver cyanide Dermatitis	Local exhaust ventilation Gloves Aryl nitrite ampules are available
Tinning field coils	Lead oxide fume Tin oxide fume Soldering flux fumes G.E. Spec. 810B3	Local exhaust ventilation

<u>Operation</u>	<u>Hazard</u>	<u>Control Measure</u>
Coil Winding	Mineral wool dust Dermatitis	General ventilation Hand creams Personal hygiene
Paint dipping coils	Solvesso thinner vapors	General ventilation
<u>Commutator assembly area</u> Machining commutators rip saw mill	Copper dust	General ventilation
Braking on commutators	Copper Zinc Tin Copper Silver oxide fume Flux fume G.E. Spec. 81083	Local exhaust ventilation
Commutator turning vertical boring mills (2) lathes (4)	Mica dust Copper dust	Local exhaust ventilation
Curing commutators electrically heated ovens 140 - 210°C.	Conductive heat	General ventilation
Cutting commutator components (punch press)	Copper dust	General ventilation Personal hygiene Hand creams
Paint spraying	Paint pigment mist Toluol vapors	Local exhaust ventilating hood
Descaling metal components steam heated unit	Kelite - 3360 (sodium hydroxide) Dermatitis	Local exhaust hood ventilation Mechanical operation limited exposure
<u>Punch Press area</u> Cutting metallic components punch presses (28)	Mild steel dust Noise	General ventilation Intermittent exposure
Light machining lathes drills punches V & O Automatic punch press	Mild steel dust Noise	General ventilation Intermittent exposure

RECEIVED
JAN 10 1960
FEDERAL BUREAU OF INVESTIGATION
U.S. DEPARTMENT OF JUSTICE

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF HEALTH
#5 DIVISION OF OCCUPATIONAL HEALTH

PLANT INFORMATION RECORD
Stock No. 52833

General Electric Corporation
PLANT Locomotive and Car Equipment Manufacturing
Building No. (24)
ADDRESS 2901 East Lake Road
Erie, Pennsylvania

PRODUCT OR SERVICE Locomotive and locomotive components

PERSON INTERVIEWED Dick Morane, Safety Specialist

PHYSICIAN R. B. Mutter, M.D.

DENTIST None

NURSE *Alice Manning, R.N.

SAFETY SUPERVISOR Dick Morane

INDUSTRIAL HYGIENIST None

INSURANCE CARRIER Electric Mutual Insurance Co.

LEGAL OWNER Corporation

RECOMMENDATIONS

REMARKS *Staff of five nurses.

Inspection

August 19, 1964

P.G. Rentos & J. Pierro

RECEIVED
AUG 25 1964
INDUSTRIAL HYGIENE DIV.

RECORDED
INDEXED
AUG 25 1964
INDUSTRIAL HYGIENE DIV.

OPERATION

HAZARD

CONTROL MEASURE

Compartment Assembly

Welding	Iron oxide fume	General ventilation
electric arc	Intense visible light	Helmet
	Ultraviolet and	
Sigmatic welding	infrared radiation	
(CO ₂ A)	Carbon monoxide	
	Ozone	
	Oxides of nitrogen	
	Lack of oxygen	
Grinding	Carborundum dust	Local exhaust ventilation
	Steel alloy dust	

Compound Molding Room

Compression molding	Phenolic resin fumes	General ventilation
electric heated unit	Asbestos dust	Small quantities
250° F.	Mica dust	Intermittent operation

Mixing Room

Mixing G.E. Spec #91	lime dust	Enclosed room
Compound	G.E. Spec. "Sillex	Local exhaust ventilation
	"Diamond" dust	Occasional operation
	Asbestos dust	(2-3 hrs. per week.)
Curing Asbestos mixture	Conductive heat	Local exhaust ventilation
steam heated unit, 325° C.	Asbestos dust	
Grinding of asbestos	Asbestos dust	Local exhaust ventilation
molded units		

RECEIVED
JAN 10 1964
U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE FOR OCCUPATIONAL SAFETY AND HEALTH

996 South Main Street
Hazardville, Pennsylvania
October 27, 1964

73
Cooler also quite
going to be done
here!

R. B. Mutter, M.D.
Supervising Physician
Health & Hygiene Subsection
General Electric Company
2901 East Lake Road
Erie, Pennsylvania

Dear Doctor Mutter:

Pursuant to our recent plant evaluation, we are submitting to you a detailed analysis of our findings. At your request, this information is broken down as to building and further subdivided with regard to location and operation.

Before continuing further, we wish to thank you and your safety representatives for the courtesy and cooperation received. We also wish to acknowledge the assistance of Miss Childs, whose efficient scheduling aided in expediting our activities.

The comments which appear under remarks are not intended to be unduly critical. We simply wish to indicate to you certain problem areas requiring greater consideration by your safety personnel. In most instances, each point was individually discussed with the responsible safety representative and, quite often, the situation was immediately remedied.

In most cases control measures and personal protective devices are available. The use and maintenance of the latter, however, should be more strongly enforced. In this regard special emphasis should be given to operations where high noise levels are generated. Where noise control cannot be effected by other means, the use of ear protective devices should be mandatory. Greater supervision should also be given to operations requiring the handling of epoxy resins. The use of impervious protective clothing and gloves should be obligatory in order to preclude the possibility of contact dermatitis.

Many chemicals of various descriptions are used throughout the plant. In most instances, these are stored in containers which are inadequately labeled. As a result, the employee may be unaware of the toxicity of the material he is handling. Chapter 4, Article 432, Section 9 of the Rules and Regulations for the Department of Health requires that all containers of hazardous chemicals be appropriately identified and labeled.

Sincerely,

Very truly yours,
[Signature]

R. B. Mutter, M.D.

- 2 -

October 27, 1964

Additionally, several operations are supplied with local exhaust ventilating equipment designed to recirculate the effluent air. This procedure requires the approval by the Department of Health. The Department should be consulted prior to new installations.

Thank you once again for your assistance, and we shall call upon you with regard to conducting several engineering studies, the locations of which appear in the addendum to this report. Copies of Article 432 as amended, are enclosed for distribution to safety personnel.

Very truly yours,

H. J. Suravics
Regional Industrial Hygienist
Region III

HJS:sah

enclosures

RECEIVED
RECORDS SECTION
OCT 29 1964
U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE

Building Six continued

- 2 -

7. LOCATION: Insulation Department - Fourth Floor

OPERATION: Asbestos putty mixing

REMARKS: This operation is to be relocated on second floor. Several chemicals of high toxicity are handled intermittently without mechanical exhaust ventilation. Until such time as additional studies are conducted, it is suggested that the workers be supplied with a U. S. Bureau of Mines approved dust respirator.

The new installation should incorporate engineering measures to control contaminant dispersion.

8. LOCATION: Field Coil Winding Area - Third Floor

OPERATION: Field coil terminal cleaning

REMARKS: The operator's position should be adjusted as to make maximum use of the present exhaust system. The piling of equipment in front of the exhaust should be avoided as this acts to reduce its efficiency of collection.

9. LOCATION: Cables, Terminals, Bus Bars - First Floor

OPERATION: Soldering terminals

REMARKS: The exhaust system on the belt sander does not appear to be working effectively. The system should be checked for cleanliness by need of repair.

10. LOCATION: Shafts and Keys Section 6462 Transportation Motor Assembly Area

OPERATION: Spray painting of metallic components

REMARKS: The respirator worn by the worker was unsuited. If the use of a respirator in this operation is to be continued, the worker should be supplied with one approved by the U. S. Bureau of Mines for organic vapors.

The local exhaust hood does not appear to be working effectively. It may require maintenance or cleaning.

11. LOCATION: Shafts and Keys Section 6462 Transportation Motor Assembly Area

OPERATION: Fan Blade Testing

REMARKS: Employees are intermittently exposed to high levels of noise. Ear plugs are provided but not worn.

12. LOCATION: Railway Generator Armature Spin Test Section 64633

OPERATION: TIG welding commutators

REMARKS: We wish to further evaluate exposures to copper oxide fume during this operation.

COMMONWEALTH OF PENNSYLVANIA
996 South Main Street
Meadville, Pennsylvania
September 14, 1959

SUBJECT: Occupational Diseases
(Adele A. Putman
General Electric, Erie, Pa.)

SEP 15 1959

TO: Jan Lieben, Director
Division of Occupational Health

THRU: E. J. Baker, Chief
Industrial Hygiene Section
Division of Occupational Health

FROM: J. W. Knauber
Regional Industrial Hygienist
Region III

This woman was employed at the same operation, a field coil repair, for 13 years. During this period, she was exposed to woven glass tape, mica tape, various resins and glues, and epoxy resins. Early this spring she developed a rash on her arms. At the time of this rash, there was no lost working time. However, she was referred to a dermatologist located in Erie, Dr. Marus. Dr. Marus' original diagnosis was that this was not an industrial dermatitis.

On June 23, 1959, the dermatitis re-occurred and the woman was off work from June 23 through July 20, 1959; this included her regular 2 weeks paid vacation. She reported back to work on July 20th and, late that same day, was reported off sick, due to her dermatitis, by Dr. Nutter, Plant Medical Doctor. Dr. Nutter stated that the dermatitis had cleared and that she was physically able to resume work on August 3, 1959. However, both Dr. Nutter and Dr. Marus are definitely against her resuming her previous job, and she is presently laid off from work pending the re-hiring in another job in which she will not be exposed to the causative agent.

Dr. Nutter stated that Dr. Marus performed patch tests some time between June 23 and July 20, 1959, and that the causative agent of dermatitis was a putty used as a filler in the field coil manufacture. The putty consists of asbestos, oil and an alcohol thinner. The composition of the oil, if needed, can be determined by contacting the General Electric, Schenectady office.

JWB/rh

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① Was this O.D. investigation requested?

② When will recommendations?

EBR

Commonwealth of Pennsylvania
Department of Health

BUREAU OF INDUSTRIAL HYGIENE

Report of Survey

General Electric Company
2801 East Lake Road
Erie, Pennsylvania

On January 14, 1954, in response to a request from Mr. H. A. Haber, safety director, a survey was conducted in the wood shop of General Electric Company, to determine the exposure of employees to asbestos dust. Mr. G. D. Kauffman, foreman of the department, was present during the survey.

RECOMMENDATIONS

None.

DETAILED FINDINGS

This department was engaged in the processing of asbestos board. The equipment consisted of saws, drill presses, a sanding wheel, and a Pantograph. All the equipment was exhaust ventilated and, as the accompanying table indicates, no concentration exceeded the maximum allowable limit of 5 million particles per cubic foot of air.

Housekeeping in this department was good.

Surveyed by
Date
Permitting Agency or its representative

Commonwealth of Pennsylvania
Department of Health
BUREAU OF INDUSTRIAL HYGIENE

Table 1 Asbestos Dust

General Electric Company
2901 East Lake Road
Erie, Pennsylvania

Location	Asbestos* (millions of particles per cubic foot of air)
Raw	
East	2.80 2.30
West	0.80
Drill press	
North	3.00 2.80
South	4.20 2.90
Handing wheel	4.40
Pantograph	0.04

*Maximum allowable limit - 5 million particles per cubic foot of air

Survey by -

C. F. Kennedy
District Industrial Hygienist

W. G. Reiser
Jr. Asst. Ind. Hygienist

January 20, 1954

KCM:ark

GROUP 1
GROUP 2
GROUP 3
GROUP 4
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Commonwealth of Pennsylvania
Department of Health

BUREAU OF INDUSTRIAL HYGIENE

Report of Investigation

General Electric Company
(Building 24)
East Lake Road
Erie, Pennsylvania
April 12, 1951

This investigation was made at the request of Mr. H. A. Weber, director of safety.

RECOMMENDATIONS

1. Adjust or redesign exhaust ventilation at drill presses, G. E. Cat. Nos. 17040, 17530, 14000, and band saw No. 7134 to reduce respirable air-borne asbestos dust to less than 5 million particles per cubic foot of air.

DETAILED FINDINGS

Air samples were obtained at several machines to determine concentration of dust in the breathing zone during work on asbestos board. The machines involved were multiple drill presses, G. E. Cat. Nos. 17040, 17530, 14000, and a band saw No. 7134. No investigation was made on machines in the compound molding room owing to production reasons.

Findings are given in Table 1. In most cases the quantities of dust exceeded the amounts recommended for continuous exposure. One exception occurred with the drilling of small, thin asbestos pieces at press, G. E. Cat. No. 14000. However, it is doubtful if such results could be obtained with larger work.

All of the drill presses were equipped with an exhaust system composed of a single flexible hose and hood, which could be moved from point to point. However, it appeared to be impractical where it was necessary to use several of the drills of any one press on the same asbestos piece.

The hand saw was also provided with exhaust ventilation which, as shown by findings, did not reduce respirable air-borne dust to work-day limits.

In view of the findings it is recommended that adjustments be made in ventilation as needed to provide positive reduction in dust concentration at the various machines to below recommended limits. It is felt that this is particularly desirable at the drill presses, where failure to properly utilize the present flexible system could produce greater air-borne concentration than found during investigation.

Investigation by:

F. W. McDaniel
Senior Industrial Hygienist

W. G. Reiser
Jr., Asst. Industrial Hygienist

Commonwealth of Pennsylvania
Department of Health
BUREAU OF INDUSTRIAL HYGIENE

Table 1
Dust Concentrations

General Electric Company
Plant (Building 24)
East Lake Road
Erie, Pennsylvania

Location (Building 24)	Millions of dust particles per cubic foot of air	Remarks
Drill Press (G. E. Cat. #17646)	7.8 8.9	Drilling asbestos
Drill Press (G. E. Cat. #17536)	8.0 8.1	Drilling asbestos
Drill Press (G. E. Cat. #14968)	4.1 8.0	Drilling small asbestos pieces

Hand Saw
(57134)

3.1

Saving asbestos

3.0

*Maximum allowable concentration for asbestos dust--5 million particles per cubic foot of air

April 20, 1961

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I hope that we have made the correct assumption in this case.
We have changed this to read 1754.
The last item on the table indicates the band was to be No. 1654.
The drill pieces to be 14888. We have changed this to read 14888.
The first paragraph of the detailed findings you have indicated one of
us 17648, 17528, and 16888 and of the band was No. 1754. In the
in your recommendations you list catalog Nos. of the drill pieces
with the General Electric Company.
have not done it correctly you will probably want to communicate
corrections which we feel must be the correct ones. In case the
memorandum of April 18. In editing the report we have made the
report of the above-mentioned investigation submitted with your
I am calling your attention to a couple of minor errors in the

Philip C. Hill

State District

P. M. Mahoney

(Building 24)

General Electric Company
Report of Investigation
P.O. Box 10000
Harrisburg, PA 17105

April 20, 1961

Commonwealth of Pennsylvania
Department of Health

BUREAU OF INDUSTRIAL HYGIENE

Report of Investigation

General Electric Company
East Lake Road
Erie, Pennsylvania
January 25, 1951

This investigation was made at the request of R. H. Rutter, M. D., Works Physician, and Mr. H. A. Weber, Works Safety Engineer.

RECOMMENDATIONS

1. Revise or improve ventilation at snagger #13325 and saw #14165, Building 24, to reduce dust concentration to safe levels.
2. Provide respirator for the operator of the snagger until changes have been made.

DETAILED FINDINGS

Air samples were obtained to evaluate exposures of personnel to asbestos dust originating in operations at asbestos saws #14165 and #13025, drill press #14762, and snagger #13325, Building 24. This investigation was made as a follow-up to an earlier study of similar nature made in July 1949. Findings of the earlier study reflected the need for improved ventilation at saws #14165 and #13025, snagger #13325, and at several machines which will not be discussed here because, for production reasons, they could not be investigated at this time. Since the previous study, changes in exhaust ventilation have been made at saws #14165 and #13025. No changes were noted at snagger #13325.

Samples were collected in the breathing zone of personnel concerned. The collection medium was distilled water. Dust counts were determined by standard light-field technique and particles were examined for size at a magnification of 1000 diameters. The latter operation showed that collected particles were within the respirable range.

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COMMONWEALTH OF PENNSYLVANIA

Results of findings are given in Table 1. Dust counts reflect improvement in ventilation at saws #14165 and #13325. Findings for other machines investigated show no marked changes.

In view of the results, it was recommended that the exhaust ventilation at snagger #13325 be improved to lower dust concentrations to safe levels of 5 million particles per cubic foot of air or less, and that the operator use a respirator until this is achieved. Improvement was also recommended for saw #14165, ventilation for which, though much better than in 1949, is still not as effective as desired.

No changes were recommended for drill press #14752 since the mobile exhaust hood with which it is equipped, when properly placed, appeared to give sufficient control of dust.

February 5, 1951

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Investigation by:

P. W. McDaniel
Senior Industrial Hygienist

W. G. Reiser
Jr. Asst. Industrial Hygienist

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U.S. DEPT. OF HEALTH
DIVISION OF OCCUPATIONAL SAFETY AND HEALTH

Source: Bureau of Census, Bureau of Economic Analysis
 1960-1961
 1960-1961
 1960-1961

Threshold limits for asbestos dust - 5 million particles per cubic foot of air

0.4	0.6	0.8	1.0	1.2	1.4	1.6	1.8	2.0	2.2	2.4	2.6	2.8	3.0	3.2	3.4	3.6	3.8	4.0	4.2	4.4	4.6	4.8	5.0	5.2	5.4	5.6	5.8	6.0	6.2	6.4	6.6	6.8	7.0	7.2	7.4	7.6	7.8	8.0	8.2	8.4	8.6	8.8	9.0	9.2	9.4	9.6	9.8	10.0	10.2	10.4	10.6	10.8	11.0	11.2	11.4	11.6	11.8	12.0	12.2	12.4	12.6	12.8	13.0	13.2	13.4	13.6	13.8	14.0	14.2	14.4	14.6	14.8	15.0	15.2	15.4	15.6	15.8	16.0	16.2	16.4	16.6	16.8	17.0	17.2	17.4	17.6	17.8	18.0	18.2	18.4	18.6	18.8	19.0	19.2	19.4	19.6	19.8	20.0	20.2	20.4	20.6	20.8	21.0	21.2	21.4	21.6	21.8	22.0	22.2	22.4	22.6	22.8	23.0	23.2	23.4	23.6	23.8	24.0	24.2	24.4	24.6	24.8	25.0	25.2	25.4	25.6	25.8	26.0	26.2	26.4	26.6	26.8	27.0	27.2	27.4	27.6	27.8	28.0	28.2	28.4	28.6	28.8	29.0	29.2	29.4	29.6	29.8	30.0	30.2	30.4	30.6	30.8	31.0	31.2	31.4	31.6	31.8	32.0	32.2	32.4	32.6	32.8	33.0	33.2	33.4	33.6	33.8	34.0	34.2	34.4	34.6	34.8	35.0	35.2	35.4	35.6	35.8	36.0	36.2	36.4	36.6	36.8	37.0	37.2	37.4	37.6	37.8	38.0	38.2	38.4	38.6	38.8	39.0	39.2	39.4	39.6	39.8	40.0	40.2	40.4	40.6	40.8	41.0	41.2	41.4	41.6	41.8	42.0	42.2	42.4	42.6	42.8	43.0	43.2	43.4	43.6	43.8	44.0	44.2	44.4	44.6	44.8	45.0	45.2	45.4	45.6	45.8	46.0	46.2	46.4	46.6	46.8	47.0	47.2	47.4	47.6	47.8	48.0	48.2	48.4	48.6	48.8	49.0	49.2	49.4	49.6	49.8	50.0	50.2	50.4	50.6	50.8	51.0	51.2	51.4	51.6	51.8	52.0	52.2	52.4	52.6	52.8	53.0	53.2	53.4	53.6	53.8	54.0	54.2	54.4	54.6	54.8	55.0	55.2	55.4	55.6	55.8	56.0	56.2	56.4	56.6	56.8	57.0	57.2	57.4	57.6	57.8	58.0	58.2	58.4	58.6	58.8	59.0	59.2	59.4	59.6	59.8	60.0	60.2	60.4	60.6	60.8	61.0	61.2	61.4	61.6	61.8	62.0	62.2	62.4	62.6	62.8	63.0	63.2	63.4	63.6	63.8	64.0	64.2	64.4	64.6	64.8	65.0	65.2	65.4	65.6	65.8	66.0	66.2	66.4	66.6	66.8	67.0	67.2	67.4	67.6	67.8	68.0	68.2	68.4	68.6	68.8	69.0	69.2	69.4	69.6	69.8	70.0	70.2	70.4	70.6	70.8	71.0	71.2	71.4	71.6	71.8	72.0	72.2	72.4	72.6	72.8	73.0	73.2	73.4	73.6	73.8	74.0	74.2	74.4	74.6	74.8	75.0	75.2	75.4	75.6	75.8	76.0	76.2	76.4	76.6	76.8	77.0	77.2	77.4	77.6	77.8	78.0	78.2	78.4	78.6	78.8	79.0	79.2	79.4	79.6	79.8	80.0	80.2	80.4	80.6	80.8	81.0	81.2	81.4	81.6	81.8	82.0	82.2	82.4	82.6	82.8	83.0	83.2	83.4	83.6	83.8	84.0	84.2	84.4	84.6	84.8	85.0	85.2	85.4	85.6	85.8	86.0	86.2	86.4	86.6	86.8	87.0	87.2	87.4	87.6	87.8	88.0	88.2	88.4	88.6	88.8	89.0	89.2	89.4	89.6	89.8	90.0	90.2	90.4	90.6	90.8	91.0	91.2	91.4	91.6	91.8	92.0	92.2	92.4	92.6	92.8	93.0	93.2	93.4	93.6	93.8	94.0	94.2	94.4	94.6	94.8	95.0	95.2	95.4	95.6	95.8	96.0	96.2	96.4	96.6	96.8	97.0	97.2	97.4	97.6	97.8	98.0	98.2	98.4	98.6	98.8	99.0	99.2	99.4	99.6	99.8	100.0	100.2	100.4	100.6	100.8	101.0	101.2	101.4	101.6	101.8	102.0	102.2	102.4	102.6	102.8	103.0	103.2	103.4	103.6	103.8	104.0	104.2	104.4	104.6	104.8	105.0	105.2	105.4	105.6	105.8	106.0	106.2	106.4	106.6	106.8	107.0	107.2	107.4	107.6	107.8	108.0	108.2	108.4	108.6	108.8	109.0	109.2	109.4	109.6	109.8	110.0	110.2	110.4	110.6	110.8	111.0	111.2	111.4	111.6	111.8	112.0	112.2	112.4	112.6	112.8	113.0	113.2	113.4	113.6	113.8	114.0	114.2	114.4	114.6	114.8	115.0	115.2	115.4	115.6	115.8	116.0	116.2	116.4	116.6	116.8	117.0	117.2	117.4	117.6	117.8	118.0	118.2	118.4	118.6	118.8	119.0	119.2	119.4	119.6	119.8	120.0	120.2	120.4	120.6	120.8	121.0	121.2	121.4	121.6	121.8	122.0	122.2	122.4	122.6	122.8	123.0	123.2	123.4	123.6	123.8	124.0	124.2	124.4	124.6	124.8	125.0	125.2	125.4	125.6	125.8	126.0	126.2	126.4	126.6	126.8	127.0	127.2	127.4	127.6	127.8	128.0	128.2	128.4	128.6	128.8	129.0	129.2	129.4	129.6	129.8	130.0	130.2	130.4	130.6	130.8	131.0	131.2	131.4	131.6	131.8	132.0	132.2	132.4	132.6	132.8	133.0	133.2	133.4	133.6	133.8	134.0	134.2	134.4	134.6	134.8	135.0	135.2	135.4	135.6	135.8	136.0	136.2	136.4	136.6	136.8	137.0	137.2	137.4	137.6	137.8	138.0	138.2	138.4	138.6	138.8	139.0	139.2	139.4	139.6	139.8	140.0	140.2	140.4	140.6	140.8	141.0	141.2	141.4	141.6	141.8	142.0	142.2	142.4	142.6	142.8	143.0	143.2	143.4	143.6	143.8	144.0	144.2	144.4	144.6	144.8	145.0	145.2	145.4	145.6	145.8	146.0	146.2	146.4	146.6	146.8	147.0	147.2	147.4	147.6	147.8	148.0	148.2	148.4	148.6	148.8	149.0	149.2	149.4	149.6	149.8	150.0	150.2	150.4	150.6	150.8	151.0	151.2	151.4	151.6	151.8	152.0	152.2	152.4	152.6	152.8	153.0	153.2	153.4	153.6	153.8	154.0	154.2	154.4	154.6	154.8	155.0	155.2	155.4	155.6	155.8	156.0	156.2	156.4	156.6	156.8	157.0	157.2	157.4	157.6	157.8	158.0	158.2	158.4	158.6	158.8	159.0	159.2	159.4	159.6	159.8	160.0	160.2	160.4	160.6	160.8	161.0	161.2	161.4	161.6	161.8	162.0	162.2	162.4	162.6	162.8	163.0	163.2	163.4	163.6	163.8	164.0	164.2	164.4	164.6	164.8	165.0	165.2	165.4	165.6	165.8	166.0	166.2	166.4	166.6	166.8	167.0	167.2	167.4	167.6	167.8	168.0	168.2	168.4	168.6	168.8	169.0	169.2	169.4	169.6	169.8	170.0	170.2	170.4	170.6	170.8	171.0	171.2	171.4	171.6	171.8	172.0	172.2	172.4	172.6	172.8	173.0	173.2	173.4	173.6	173.8	174.0	174.2	174.4	174.6	174.8	175.0	175.2	175.4	175.6	175.8	176.0	176.2	176.4	176.6	176.8	177.0	177.2	177.4	177.6	177.8	178.0	178.2	178.4	178.6	178.8	179.0	179.2	179.4	179.6	179.8	180.0	180.2	180.4	180.6	180.8	181.0	181.2	181.4	181.6	181.8	182.0	182.2	182.4	182.6	182.8	183.0	183.2	183.4	183.6	183.8	184.0	184.2	184.4	184.6	184.8	185.0	185.2	185.4	185.6	185.8	186.0	186.2	186.4	186.6	186.8	187.0	187.2	187.4	187.6	187.8	188.0	188.2	188.4	188.6	188.8	189.0	189.2	189.4	189.6	189.8	190.0	190.2	190.4	190.6	190.8	191.0	191.2	191.4	191.6	191.8	192.0	192.2	192.4	192.6	192.8	193.0	193.2	193.4	193.6	193.8	194.0	194.2	194.4	194.6	194.8	195.0	195.2	195.4	195.6	195.8	196.0	196.2	196.4	196.6	196.8	197.0	197.2	197.4	197.6	197.8	198.0	198.2	198.4	198.6	198.8	199.0	199.2	199.4	199.6	199.8	200.0	200.2	200.4	200.6	200.8	201.0	201.2	201.4	201.6	201.8	202.0	202.2	202.4	202.6	202.8	203.0	203.2	203.4	203.6	203.8	204.0	204.2	204.4	204.6	204.8	205.0	205.2	205.4	205.6	205.8	206.0	206.2	206.4	206.6	206.8	207.0	207.2	207.4	207.6	207.8	208.0	208.2	208.4	208.6	208.8	209.0	209.2	209.4	209.6	209.8	210.0	210.2	210.4	210.6	210.8	211.0	211.2	211.4	211.6	211.8	212.0	212.2	212.4	212.6	212.8	213.0	213.2	213.4	213.6	213.8	214.0	214.2	214.4	214.6	214.8	215.0	215.2	215.4	215.6	215.8	216.0	216.2	216.4	216.6	216.8	217.0	217.2	217.4	217.6	217.8	218.0	218.2	218.4	218.6	218.8	219.0	219.2	219.4	219.6	219.8	220.0	220.2	220.4	220.6	220.8	221.0	221.2	221.4	221.6	221.8	222.0	222.2	222.4	222.6	222.8	223.0	223.2	223.4	223.6	223.8	224.0	224.2	224.4	224.6	224.8	225.0	225.2	225.4	225.6	225.8	226.0	226.2	226.4	226.6	226.8	227.0	227.2	227.4	227.6	227.8	228.0	228.2	228.4	228.6	228.8	229.0	229.2	229.4	229.6	229.8	230.0	230.2	230.4	230.6	230.8	231.0	231.2	231.4	231.6	231.8	232.0	232.2	232.4	232.6	232.8	233.0	233.2	233.4	233.6	233.8	234.0	234.2	234.4	234.6	234.8	235.0	235.2	235.4	235.6	235.8	236.0	236.2	236.4	236.6	236.8	237.0	237.2	237.4	237.6	237.8	238.0	238.2	238.4	238.6	238.8	239.0	239.2	239.4	239.6	239.8	240.0	240.2	240.4	240.6	240.8	241.0	241.2	241.4	241.6	241.8	242.0	242.2	242.4	242.6	242.8	243.0	243.2	243.4	243.6	243.8	244.0	244.2	244.4	244.6	244.8	245.0	245.2	245.4	245.6	245.8	246.0	246.2	246.4	246.6	246.8	247.0	247.2	247.4	247.6	247.8	248.0	248.2	248.4	248.6	248.8	249.0	249.2	249.4	249.6	249.8	250.0	250.2	250.4	250.6	250.8	251.0	251.2	251.4	251.6	251.8	252.0	252.2	252.4	252.6	252.8	253.0	253.2	253.4	253.6	253.8	254.0	254.2	254.4	254.6	254.8	255.0	255.2	255.
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Building 24

Exposures were evaluated by collecting and counting air-borne dust at the breathing level of operators of various machines including saws, snaggers, drill presses, and the mixing machine used for preparation of the compound indicated in the preceding paragraph. Samples were collected in distilled water and timed to give a fair representation of exposures of personnel working at the various machines.

Counts of dust obtained at machines handling Texellite were of lower general range than those found for asbestos. Since this dust was a synthetic resin type, the results were not believed to indicate excessive exposures.

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#10970 (compound molding room). It is therefore recommended that the ventilation where provided be increased, or that the system be re-designed as needed to reduce dust concentrations. Machines not so equipped should be provided with mechanical exhaust ventilation.

Dust counts also showed the high exposure of the operator while loading the mixing machine used in connection with the production of molded asbestos articles. While the exposure time was relatively short, it is believed good practice to provide a respirator for the operator to be worn during the loading period. A recommendation to that effect is made.

Building 5 (second floor)

Exposures investigated included those occurring at a trichloroethylene degreasing tank #M-2458, a nearby heat-treating tank using a molten cyanide-bearing salt, and at a paint-spraying booth. No numbers were obtained for the latter two locations but they were considered sufficiently familiar to the safety director of the division as to require no additional identification.

Air samples were collected at the breathing level in the vicinity of the degreasing tank, and trichloroethylene content was determined by decomposition of the sample and measurement of chlorine obtained. Analysis indicated that weighted exposures were not excessive, although it was shown that too fast a drag-out of work from the tank could give high concentrations of the air-borne solvent. This occurred in spite of the fact that the tank was equipped with good lateral-slot-type ventilation. While it is believed that recommendations for protection of health are unnecessary, it should be pointed out that even small amounts of trichloroethylene in the air may, on decomposition, yield products that are corrosive to certain metals.

Study was made of the possibility of exposure to air-borne cyanide at the heat-treating tank near the degreaser discussed above. No sampling of air was considered necessary because examination showed that the visible fumes from the molten salt

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Table 1

Dust Concentrations
(Building 24)

General Electric Company
East Lake Road
Erie, Pennsylvania

Location	Millions of particles of dust per cubic foot of air	Remarks
<u>General Shop</u>		
Asbestos saw (G.E. cat. #14165)	32.8 26.4 32.0	Sawing asbestos
Asbestos saw (G.E. cat. #13025)	24.4 28.0 32.0	Sawing asbestos
Snagger #13325	19.2 19.0 17.6	Snagging asbestos
Band saw #1134	21.2 16.8 19.0	Sawing asbestos
Drill press #14752	11.8 8.0 8.0	Drilling Taxolite
Drill press #14665	11.6 12.0 13.0	Drilling Taxolite
Circular saw #13369	14.0 12.0 14.8	Sawing Taxolite
<u>Compound Mixing and Molding Rooms</u>		
Mixer	21.2 22.4 24.0	Loading mixer with silica, asbestos, and lime
	9.6 7.6	Mixer operating
Snagger #225	17.6 16.8 22.8	Snagging molded asbestos-silica articles
Drill press #10570	15.0 20.0 17.6	Drilling molded asbestos-silica articles

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Sample and Laboratory Report

Name & Address of Co. General Electric Company, East Lake Road, Erie
Product Mfg. Electrical apparatus Material Sampled Settled dust
Date Collected July 12, 1949 By McDaniel
Disposition of Sample Harrisburg Date July 12, 1949
Analysis desired for Free silica and asbestos on 7A49, free silica Other substances known or thought to be present *SEE BELOW
Apparatus only on 7B47 Collecting Medium

C.L. No.	Dist. No.	Sampling Location and Operation	Time	Air Volume
B364	7A49	Compound molding room		
B365	7B47	Compound molding room		

REPORT OF ANALYSIS

*Sample 7A49 may contain silica, calcium silicate, and asbestos.
Sample 7B47 believed to be quartz

C.L.	Dist.	%Free silica	
B364	7A49	58.23	Analysis by V.M. Vought
B365	7B47	98.49	

The remainder of B364 (7A49) is not chrysotile asbestos, but looks like one or another of the amphibole family of minerals closely related to chrysotile. Chrysotile is fibrous but these minerals are not. These minerals are formed of platelets and are columnar.

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Date August 23, 1949

A. E. Gallaway
Principal Chemist