

ETHYL CORPORATION
INTER-OFFICE
CORRESPONDENCE

PLAINTIFF'S EXHIBIT

ETCO-670

TO All Maintenance Superintendents ADDRESS Houston

FROM L. Funderburg ADDRESS Houston

SUBJECT Asbestos Handling DATE November 14, 1978

The attached Safety Rules regarding the handling of asbestos materials supercede the October 31 Revision. (See Paragraph F.).

These rules are being distributed to the holders of the Safety Manual, although repairs to the "asbestos scrap" dumpster are not complete. The repairs are expected to be completed this week by the central shops.

Until the dumpster is repaired and placed on location, all asbestos scrap should be placed in a plastic bag, sealed, tagged as asbestos scrap and retained within the area. Also attached is a map showing where the dumpster will be located.

L. Funderburg
L. Funderburg

LF:vg

Attachments

RECEIVED
ETHYL CORPORATION
NOV 15 1978
Manufacturing Department
Houston, Texas
Office Of Gen. Supt.
Mc

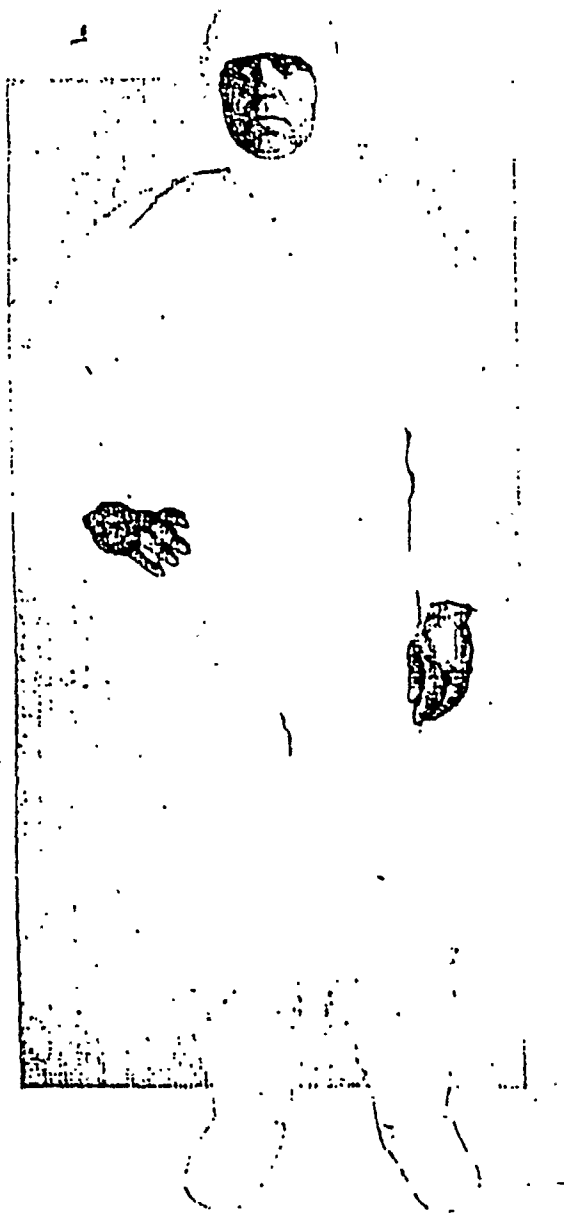
ETH 002352

4b. ASBESTOS PRODUCTS CUTTING AND HANDLING

The dust caused by handling asbestos materials may be an irritant to the lungs and bronchial tubes. The following rules must be observed when cutting, disposing of, and in some instances, handling these materials. In all cases where respiratory equipment is required, properly fitted NIOSH certified respirators must be worn, (See paragraph G) except those jobs which specify a fresh air mask.

- A. Asbestos materials will not be cut in the carpenter shop using power saw equipment.
- B. When it is necessary to machine or drill asbestos materials using a shop lathe, mill or drill press, the operator will wear the approved respirator and keep the material in a wet state sufficient to minimize airborne particles.
- C. When cutting asbestos materials with power saw equipment, the work will be performed in such open areas as designated by the proper area supervision. Fresh air masks and disposable or other type of clothing furnished by the Company, which is resistant to airborne particle penetration must be worn. *Open area - approved - fresh air mask - clothing*
- D. All employees must wear an approved respirator when cutting asbestos items such as sheeting and rope with shears or a pocket knife.
- E. When applying or removing asbestos materials an approved respirator must be worn. However, in the event of heavy demolition or when working asbestos in close restricted quarters suitable protection outlined in paragraph C above should be worn.
- F. All asbestos material removed must be placed in sealed durable plastic bags tagged "ASBESTOS" scrap and placed in a centrally located dumpster marked "ASBESTOS SCRAP" for disposal in an approved manner. In the event of a very large removal job, an extra dumpster should be ordered to the job site.
- G. Approved respirators for asbestos handling.
 - a. Americal Optical Respirators (AO)
 - 1. R-5000 (Small) with R56 Cartridge (R5056)
 - 2. R-6000 (Large) with R56 Cartridge (R6056)
 - b. Mine Safety Appliances (MSA)
 - 1. Comfo II - Small with GMA-F Cartridge
 - 2. Comfo II - Regular with GMA-F Cartridge
 - c. 3M
 - 1. No. 9910 Dust and Mist Respirator

Check 9910



JUMPSUITS & COVERALLS • Splash resistant • Tyvek items feature limited linting and are excellent for the treatment of burns • Tyvek material can be washed and ethylene-oxide sterilized • Sturdy metal zipper front closure • Ideal for Maintenance men and visitors to surgery • Ideal for Emergency Room, delousing, and setting casts • Can be used as cover garment in every department • Packed 24 per size, per case • Sizes: M, L, XL.

TYVEK JUMPSUIT • Elasticized closures at wrists and ankles which will contain fallout • Can be used for laminar flow surgery

8607... WHITE TYVEK

FULL COVERAGE HOOD • Plastic snaps adjust to all sizes • Full coverage • Packed 100 ea. per case

8622... WHITE TYVEK

each
PER
Must purchase case of 24

TYVEK & KAYCEL COVERALL

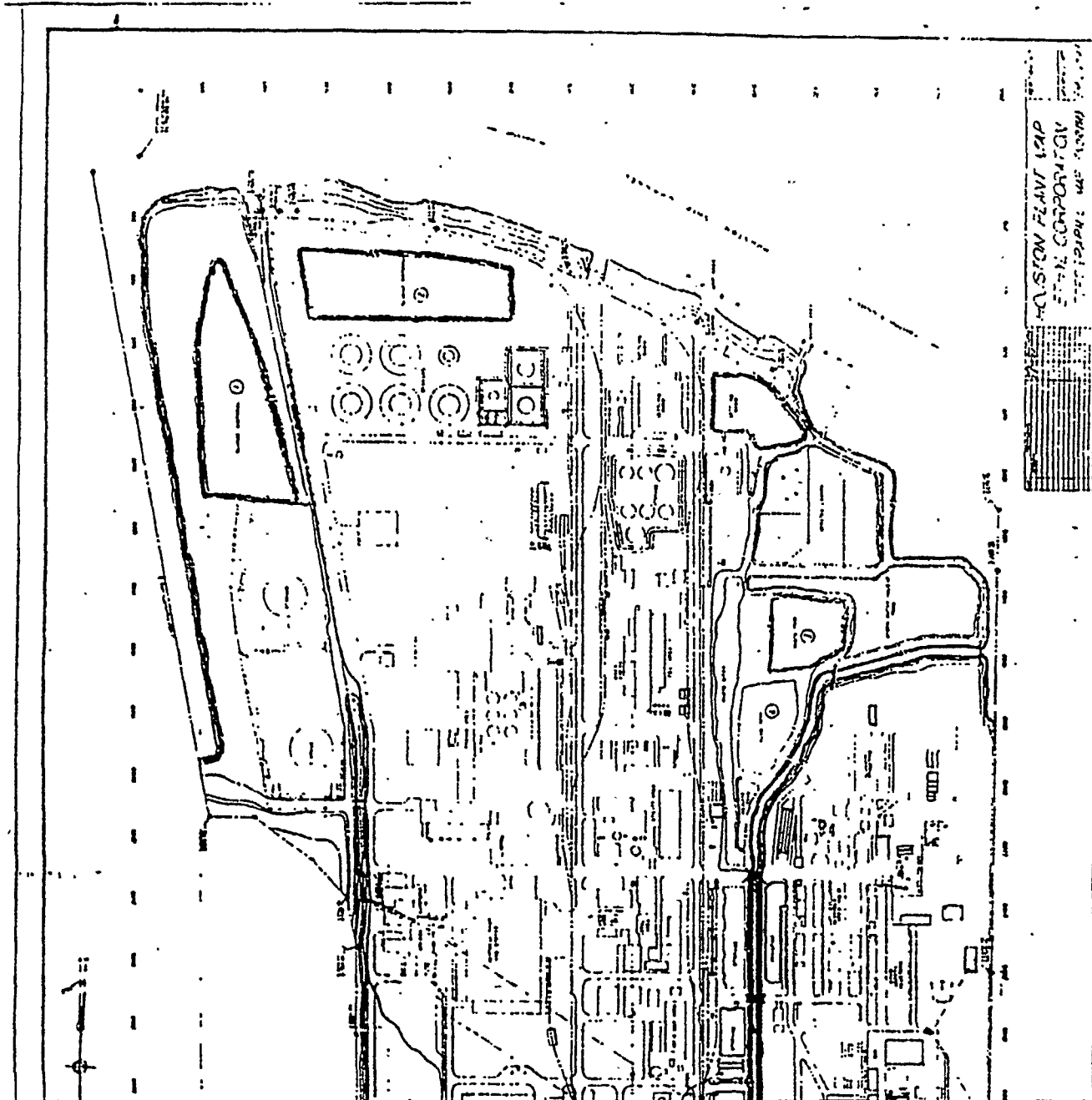
• Generously cut for easy wear over other clothes. • KAYCEL style is also available in small size.

8601... WHITE KAYCEL (also in small)

8605... WHITE TYVEK

ETH 002354

WORKLON DISPOSABLES



NAVY SHIP
DRAWING
PLAN
NO. 1212
1212

ETH 002355

ASBESTOS MATERIAL TYPES CURRENTLY USED WITHIN PLANT AREAS

I. Sodium

1. Asbestos Rope packing - is used in rebuilding cell bases.
2. Asbestos listing tape - is used to insulate dog legs and valves on sodium storage tanks, filter area plug cocks and flanges, sodium manifold header at thaw house, pencil heaters on sodium storage weigh tanks, steam tracing and winter proofing of the headers of instrument meters.
3. Asbestos Webb Sheet - is used on the bottom pan of heater trays.
4. Asbestos Yarn covered Thermocouple wire - is used to monitor heat on sodium cells, weigh tanks, storage tanks and the induction heat wiring.
5. Asbestos insulation - exists on sodium lines, steam lines, weigh tanks and possibly in other cases that are unidentified. However, any insulation found to be asbestos will be substituted with asbestos free material upon necessary replacement.
6. Asbestos Braid packing - is used extensively on 95% of sodium area pumps. (See attached chart).
7. Chemtite (Asbestos reinforced) Pipe and fittings are used in the chlorine processing and drain system. (C.P.)
8. Transite Pipe (contains asbestos) is used on sodium cell ducts. These have to be buffed or ground occasionally in order to fit properly.

II. TEL

1. Asbestos Rope packing - is used in the expansion joint of the furnaces scrubber duct system.
2. Asbestos filled Spirotallic and Asbestos Woven Gaskets are used on the Oriclone scrubber fan system.
3. Asbestos Yarn covered thermocouple wire is used to monitor heat factors on melt pots, alloy pots, related pumps and all induction heat wiring.
4. Electric wiring, special to the lead pit crane operation, has internal asbestos insulation with a plasticized cover.
5. Asbestos covering exists on the sodium scales tank and the distribution pot. Insulation on other pots such as alloy and melt pots has been replaced with asbestos free type.

III. CHC & Utilities

1. Asbestos webb gaskets are used on the boiler steam and mud drum access hole covers.
2. Asbestos material (similar to listing tape) is used to seal the water wall tubes cover plates on the boilers.
3. Asbestos listing tape is used on condensate and fuel oil lines in front of the boilers, for steam tracing and to winterize instrument lines at meters in the Utility and CHA area.
4. Asbestos insulation exists on the feed water heaters and external heads of the boiler steam and mud drum.

IV. Alcohols

1. Asbestos Webb Material is used to cover drains in 300 section when rodding a reactor.
2. Asbestos packing is used in S-605 precoat pumps, P4510 A, B, C. Cooling tower pumps and 4205, 4201, 4103 compressors in HA-3.
3. Asbestos impregnated with Teflon packing is used in P-673 A&B Hydrolisis acid pumps.
4. Asbestos filled spirotallic gaskets are used on 901 Dowtherm and 401 Olefin furnaces.
5. Asbestos Listing Tape is used for steam tracing and for winterizing instrument meter manifolds.
6. Asbestos Insulation exists on 801 A&B Alum tanks.
7. Chemtite (Asbestos Reinforced) pipe and fittings are used extensively in Alum service from hydrolysis to ponds.

V. Garage

1. Asbestos material is used as gaskets on the exhaust manifold system of automobiles and trucks.
2. Brake shoes lined with Asbestos are used on automobiles and trucks.

VI. Shops

1. Transite Pipe (contains asbestos) is machined in the shop for sodium riser pipe use.
2. Ebony asbestos blocks are drilled in the shop for shunt use in the Sodium area.
3. Firetard (Asbestos paper) and asbestos cloth are used to wrap welds on castings to prevent rapid loss of heat.

VII. General - All Areas

1. Asbestos Insulation exists on steam lines, brine lines, refrigerated lines, water lines etc. throughout the plant. This material will be replaced with asbestos free material when necessary to replace.
2. Asbestos Sheet Material such as John Mansfield 60, Carlock, etc. is used throughout the plant as pipe flange gaskets for most services and products (Steam, Air, Water, Sodium, Lead, Chlorine, etc.)
3. Firetard (Asbestos Paper) is used throughout the plant to protect pipe insulation from inclement weather conditions.
4. Asbestos Cloth and Firetard paper are used throughout the plant to cover sewer drains and to protect other equipment from hot metal particles caused by burning and welding.

VIII. Changes from Asbestos Materials

1. The Tel area changed from asbestos shorts which were previously used around the melt pot and alloy section pumps, to vermiculite which did not prove satisfactory. They have now changed to Fiber-Frax and the results are very satisfactory.
2. Asbestos rope which was previously used on M.L.A. filters has been changed to Fiber-Frax.

VIII. Changes from Asbestos Materials - continued

3. NOMEX listing tape which is asbestos free has been set-up as as stores inventory item to replace asbestos listing tape.

ETH 002358

Item No.	Manufacturer	Service	Stuffing Box Dimensions	Packing		Stock
				Size	Style	
1-1	Lawrence	Evaporator Settler	1-1/2 x 2-1/4 x 7 Rings	3/8	249 (A)	16-7
1-3A	Gould	Filtrate Return	1-5/8 x 2-3/8 x 2-5/8	3/8	249 (A)	16-7
1-1	Byron Jackson	Cooling Water	2-3/16 x 3-3/16 x 3-1/8	1/2	249 (A)	16-7
1-1	Lawrence	Hot Oil	1-3/4 x 2-1/2 x 1-3/4	3/8	234 (A)	16-7
1	Lawrence	Cold Oil	1-3/4 x 2-1/2 x 1-3/4	3/8	234 (A)	16-7
	Peerless ^{7/16}	Brine Circulating	5 x 6-1/2 x 8-1/2	3/4	146 (A)	16-7
1-4A	Peerless ^{7/16} Dayton-Dowd	Magma	1-1/2 x 2-5/16 x 3-3/4	3/8	249 (A)	16-7
	Peerless Dayton-Dowd	Slurry	1-1/2 x 2-5/16 x 3-3/4	3/8	249 (A)	16-7
1-5	LaBour	Condensate	1-1/8 x 1-7/8 x 7 Rings	3/8	249 (A)	16-7
1-5A	Morris ^{7/16}	Brine Circulating	3-1/2 x 5 x 7 Rings	3/4	146 (A)	16-7
1-5A	Lawrence	Mother Liquor	1-1/2 x 2-1/4 x 7 Rings	3/8	249 (A)	16-7
1-7A	Lawrence ^{7/16}	Magma	1-1/2 x 2-1/4 x 7 Rings	3/8	249 (A)	16-7
1-3A	Roots- Connersville	Exhauster	3-3/4 x 4-3/4 x 7 Rings	1/2	249	16-7
1-2A	Patterson	Sodium Weigh Tank Agitators	3-15/16 x 5-7/16 x 10 Rings	3/4	5203	16-7
1-1	Lawrence	Salt Dissolving Pit	1-3/4 x 2-1/2 x 7 Rings	3/8	249 (A)	16-7
1-3A	Lawrence	NaCl Brine	1-3/4 x 2-1/2 x 7 Rings	3/8	249 (A)	16-7
1-4	Lawrence	Barium Chloride	1-1/4 x 2 x 7 Rings	3/8	249 (A)	16-7
1-5	Gould	Caustic Treating	1-1/8 x 1-5/8 x 1-7/8	1/4	249 (A)	16-7
1-5A	Gould	Brine Filter Feed	2-1/4 x 3 x 2-3/4	3/8	249 (A)	16-7
1-7A	Gould	Treated Brine Trans.	1-5/8 x 2-3/8 x 2-5/8	3/8	249 (A)	16-7
1-5A	Lawrence	Filtered Brine	1-3/4 x 2-1/2 x 7 Rings	3/8	249 (A)	16-7
1-5A	Lawrence	Precoat	1-1/2 x 2-1/4 x 7 Rings	3/8	249 (A)	16-7
1-5A		Brine Press Filter	2-7/8 x 3-15/16 x 7 Rings	1/2	249 (A)	16-7
1-13D			2-15/16 x 3 x 7 Rings	5/16	249 (A)	16-7
1-4		Precoat Agitator	1-1/4 x 1-1/2 x 2	1/4	230 (A)	16-6
1-5A		Agitator - Slop & Treating Tanks	3 x 4 x	1/2	811	75-2
1-1A	Lawrence	Lime Dissolving Pit Transfer	1-3/4 x 2-1/2 x 7 Rings	3/8	234 (A)	16-7
1-1B	Lawrence	Lime Dissolving Pit Transfer	1-3/4 x 2-1/2 x 7 Rings	3/8	234 (A)	16-7
1-3	Lawrence	Barium Chloride	1-1/4 x 2 x 7 Rings	3/8	249 (A)	16-7
1-5	Gould	H ₂ SO ₄ Pumpout	1-5/8 x 2-3/8 x 2-5/8	3/8	230 (A)	16-7
1-5A	Lawrence	Milk of Lime	2-5/8 x 3-5/8 x 3-5/8	1/2	234 (A)	16-7
1-5A	Nash Motor	Chlorine Comp.	3-3/4 x 4-3/4 x 7 Rings	1/2	R-4 (A)	16-7
1-5	Buffalo	Cooling Tower Water	1-1/4 x 1-3/4 x 7 Rings	1/4	230 (A)	16-6
	Viking ELECT. CO.	Hot & Cold Oil ELECT. CO. - 76-743 1/3"		1/2"	Super (APJ)	16-7