JUL 2 1985

UNION CARBIDE INTERNAL CORRESPONDENCE

UNION CARBIDE CORPORATION P O BOX 8004, SOUTH CHARLESTON, W V 25303
SILICONES AND URETHANE INTERMEDIATES
SOUTH CHARLESTON PLANT

PLAINTIFF'S EXHIBIT
UC-3604

To: J. R. Dean
P. D. Gossage
B. G. Stump

Date: June 28, 1985

C. E. Fry
D. A. Gosselin
R. W. Holland, Jr., M.D.
D. J. McNeil
T. G. Swanson
Managers Department

Subject: Asbestos Exposure Effects Potential of Non-Insulator Crafts

Asbestos dust measurements in the plant are consistently below OSHA permissible exposure limits (see attached summary). However, when we detect even a fraction of those limits in our air samples I get a feeling of apprehension because I question if any level of inhalation exposure is safe in absence of respiratory protection.

Airborne asbestos dust measurements are expressed in terms of the number of fibers that are 5 microns or more in length in one cubic centimeter of air. Numerical estimates should be evaluated with caution according to OSHA, because air concentrations used are a matter of convenience and "should not be evaluated without interpreting the meaning of the units."(1) For example, the OSHA permissible limit for an 8-hour day is 2.0 fibers (5 μ or longer) per cc of air. This may seem like a small amount of asbestos which is conventionally determined using a microscope, but in my opinion represents a potentially hazardous condition. In physical terms 2.0 f/cc equals 2,000,000 fibers per cubic meter of air (f/m^3). Humans inhale about one cubic meter of air per hour, depending on degree of activity. Thus, at this concentration a worker would inhale roughly 16,000,000 fibers 5 microns in length over an 8-hour day - disregarding the possibility of an infinite number of shorter fibers being present under some conditions.

Based on our measurements such conditions rarely exist in plant workplace environments. Nevertheless, existing, natural defense mechanisms alone (respiratory system mucous and nasal hair) may be inadequate for even concentrations at the lowest reliable detection limits.

I feel good about the manner in which exposure control has improved among Insulator craft groups due to establishment and maintenance of adequate standards. My feeling of apprehension, however, is due to concern about potential chronic health effects among all other crafts whose exposure concentration may be comparatively lower, perhaps less frequent but, in any case, generally without the benefit of respiratory protection.

(1) Bureau of National Affairs, Occupational Safety & Health Reporter, November 11, 1983.

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As you know, total elimination of asbestos-contained materials in the plant is unlikely and impractical because of cost, safety or lack of suitable replacement material-reasons. A gasket failure, for example, due to use of an unsuitable substitute could potentially cause a far more hazardous condition than any conceivable one related to use of asbestos-contained gasket material.

Occupational exposure to asbestos can be effectively controlled in most plant situations by using wet-method handling procedures and an appropriate dust mask commonly used by Insulators throughout the plant. I urge you to consider taking action necessary for strict enforcement of mandatory use of respiratory protection by all employees who use or handle any asbestos-contained materials, e.g., gasket fabrication/removal/disposal, brake lining replacement or even inspections, insulation removal/disturbance related to a wide variety of job tasks performed by various craft groups, etc. Such action would virtually prevent occurrence of any inhalation exposure.

Please call me if you have any questions or comments.

Thank you.

Bill Young

WCY:bl

Attachment

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JOB CLASSIFICATION/EEO CODE

CLASS	JOB CODE EEO 40	EEO 41	EEO 42	SUBCODE EEO 43	
AUTOMECH	H	5	Z		Automobile Mechanic
BLKSMITH	H	9	Z		Blacksmith
BLRMAKR	H	9	Z	1	Boilermaker
C DRIVER	J	4	Z		Non-Plant Truck Driver
C FMAN	B	F	H	2	Non-Plant Foreman or Shift Leader
C MAINT	J	M	Z	3	Non-Plant Maintenance People (Contract, SCWTW, Etc.)
C OPER	H	1	Z	2	Non-Plant Operator
CARPNTR	H	D	Z		Carpenter
CAR UNLD	K	X	Z		Car Unloader
CHEMIST	C	3	Z		Chemist
CORRTECH	D	X	Z	2	Corrosion Technician
ELECTN	H	B	Z		Electrician
XPDITR	G	X	2		Expediter
ENGR	C	7	Z		Engineer
F S ATT	L	S	Z		Fire Station Attendant
FMAN	B	F	H	1	Foreman, Supervisor of Hourly Personnel
GEN FMAN	B	D	Z		General Foreman, Shift Super
H E OPER	H	2	Z		Heavy Equipment Operator
I H TECH	D	X	Z	1	Industrial Hygiene Technician
INDHYGST	C	P	Z		Industrial Hygienist
INSP T&I	J	F	Q		Inspector T&I
INST MECH	H	A	Z		Instrument Mechanic
INSUL	H	Q	Z		Insulator
LAB ASST	D	3	Z	1	Laboratory Assistant
LAB TECH	D	3	Z	2	Laboratory Technician
LABORER	K	B	Z		Laborer
MACH	H	S	Z	1	Machinist
METL WKR	H	V	Z		Sheetmetal Worker
MILWRT	H	S	Z	2	Millwright
OPER	H	1	Z	1	Operator (Chemical, Plant 514 Only, Including Pumper Operator)
PAINTER	H	N	Z		Painter
PIPE FITR	H	R	Z		Pipefitter
P M OPER	H	X	Z	1	Pipeline Machine Operator
P L MECH	H	X	Z	2	Pipeline Mechanic
Q C ANAL	D	F	Z		Quality Control Analyst
REL OPER	H	1	Z	3	Vacation Relief Operator
RIGGER	H	L	Z		Rigger
SALVMECH	J	M	Z	2	Salvage Mechanic
SD BLSTR	H	X	Z		Sandblaster
SR CLERK	G	X	Z		Senior Clerk
S&R CLK	G	X	Z	2	Stores & Receiving Clerk
SUPRVISR	B	F	Z		Supervisor Non Technical (Does Not Supervise Hourly People)
TOOL CLK	G	X	Z	3	Tool Clerk
TK DRIVR	J	4	Z	1	Truck Driver - Plant 514 Only
UTIL MECH	J	M	Z	1	Utility Mechanic
WELDER	H	7	Z		Welder
WGHMASTR	J	G	Z		Weighmaster

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CIHRKLES 3.2.2.3

SUBJECT

LINES 400-490: PERSONNEL DATA

Entries and Comments

Cannot be blank; Z=none. If a respirator is worn, use the appropriate code letter from the following list:

A-Supplied Air, Full Face Mask
B-Supplied Air, Full Face Mask, Positive Pressure Demand
C-Supplied Air, Half Face Mask
D-Supplied Air, Half Face Mase, Positive Pressure Demand
E-Supplied Air, Abrasive Blasting Hood
F-Gas Mask, General Purpose
G-Gas Mask, Specific
H-Cartridge, Dust, Nuisance, Full Face Mask
I-Cartridge, Dust, Nuisance, Half Face Mask
J-Cartridge, Dust, Specific
K-Cartridge, Acid Gas, Full Face Mask
L-Cartridge, Acid Gas, Half Face Mask
M-Cartridge, Organic Vapor, Full Face Mask
N-Cartridge, Organic Vapor, Half Face Mask
O-Cartridge, Specific, Full Face Mask
P- Cartridge, Specific, Half Face Mask
Q-Dust Mask
R-Dust Mask-Disposable
S-Dust Mask, Toxic
T-Supplied Air, Hood
X-Other
Z-None

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CONTAMINANT NAME	DEPT. NO.	PROCESS OR UNIT	AT	JOB CLASS CODE	SAMP TOTL TIME	AIR CONC	8-HOUR T.W.A. CONC.	EXPOSURE RESP STANDARD
ASBESTOS		FABRICATION SHOP	79	03	07	17	.1500	2.000
ASBESTOS		FABRICATION SHOP	79	03	07	17	.5000	2.000
ASBESTOS		IPH	79	09	18	315	.1000	2.000
ASBESTOS		IPH	79	09	18	315	.0100	2.000
ASBESTOS		IPH	79	09	18	314	.1000	2.000
ASBESTOS		IPH	79	09	18	305	.0100	2.000
ASBESTOS		IPH	80	04	22	290	.0170	2.000
ASBESTOS		IPH	80	05	05	360	.0170	2.000
ASBESTOS		IPH	80	05	05	360	.0320	2.000
ASBESTOS		IPH	80	05	05	360	.0130	2.000
ASBESTOS		IPH	80	05	06	420	.0050	2.000
ASBESTOS		IPH	80	05	07	420	.1300	2.000
ASBESTOS		IPH	80	05	08	397	.0210	2.000
ASBESTOS		IPH	80	05	22	425	.0150	2.000
ASBESTOS		IPH	80	05	23	395	.0110	2.000
ASBESTOS		IPH	80	05	27	420	.0210	2.000
ASBESTOS		IPH	80	05	28	415	.0340	2.000
ASBESTOS		IPH	80	05	29	360	.0370	2.000
ASBESTOS		IPH	80	06	04	389	.0200	2.000
ASBESTOS		IPH	80	06	10	386	.0200	2.000
ASBESTOS		IPH	83	10	11	43	.5800	2.000
ASBESTOS		IPH	83	10	11	43	1.0100	2.000
ASBESTOS		IPH	83	10	11	43	.3800	2.000
ASBESTOS		IPH	84	04	06	123	.0860	.500
ASBESTOS		IPH	84	04	06	123	.1040	.500
ASBESTOS		IPH	84	06	14	345	.0230	.500
ASBESTOS		IPH	84	06	14	345	.0310	.500
ASBESTOS		IPH	84	06	14	345	.0270	.500
ASBESTOS		IPH	84	06	14	345	.0240	.500
ASBESTOS		IPH	84	06	14	345	.0110	.500
ASBESTOS		IPH	84	06	14	345	.0120	.500
ASBESTOS		IPH	84	06	14	345	.0330	.500
ASBESTOS		IPH	84	06	14	345	.0360	.500
ASBESTOS		IPH	84	07	03	150	.0740	.500
ASBESTOS		IPH	84	07	03	150	.0840	.500
ASBESTOS		IPH	84	07	03	150	.0640	.500
ASBESTOS		IPH	84	07	03	150	.0740	.500
ASBESTOS		IPH	84	07	09	150	.0930	.500
ASBESTOS		IPH	84	07	09	150	.3590	.500
ASBESTOS		IPH	84	07	09	150	.2310	.500
ASBESTOS		IPH	84	07	09	150	.1130	.500
ASBESTOS		IPH	84	07	10	195	.1020	.500
ASBESTOS		IPH	84	07	10	195	.0940	.500
ASBESTOS		IPH	84	07	10	195	.0640	.500
ASBESTOS		IPH	84	07	10	195	.0600	.500
ASBESTOS		IPH	84	07	11	205	.1290	.500
ASBESTOS		IPH	84	07	11	205	.1440	.500
ASBESTOS		IPH	84	07	11	205	.0970	.500
ASBESTOS		IPH	84	07	11	205	.1470	.500

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CONTAMINANT NAME	DEPT. NO.	PROCESS OR UNIT	AT	JOB CLASS CODE	SAMP TOTL TIME	AIR CONC	8-HOUR T.W.A. CONC.	EXPOSURE STANDARD	RESP
ASBESTOS		LOWER BRIDGE	84 11 27		390	.0010		2.000	
ASBESTOS		LOWER BRIDGE	84 11 27		390	.0010		2.000	
ASBESTOS		LOWER BRIDGE	84 11 27		390	.0010		2.000	
ASBESTOS		LOWER BRIDGE	84 11 27		390	.0010		2.000	
ASBESTOS		MAINTENANCE	83 12 09		43	.1640		.500	
ASBESTOS		MAINTENANCE	84 03 03		300	.0740		.500	
ASBESTOS		MAINTENANCE	84 03 03		300	.0100		.500	
ASBESTOS		MAINTENANCE	84 03 03		300	.0070		.500	
ASBESTOS		MAINTENANCE	84 09 17		160	.3180		.500	
ASBESTOS		MAINTENANCE	84 11 18		40	.1340		2.000	
ASBESTOS		MAINTENANCE	84 11 29		405	.0010		2.000	
ASBESTOS		MAINTENANCE	84 11 29		405	.0010		2.000	
ASBESTOS		MAINTENANCE	84 11 29		405	.0010		2.000	
ASBESTOS		MAINTENANCE	84 11 29		405	.0010		2.000	
ASBESTOS		MAINTENANCE	84 12 20		307	.0010		2.000	
ASBESTOS		MAINTENANCE	84 12 20		306	.0010		2.000	
ASBESTOS		MAINTENANCE	84 12 20		303	.0010		2.000	
ASBESTOS		MAINTENANCE	84 12 20		300	.0010		2.000	
ASBESTOS		MAINTENANCE	84 12 21		297	.0010		2.000	
ASBESTOS		MAINTENANCE	84 12 21		296	.0010		2.000	
ASBESTOS		MAINTENANCE	84 12 21		294	.0010		2.000	
ASBESTOS		MAINTENANCE	84 12 21		294	.0010		2.000	
ASBESTOS		MAINTENANCE	85 02 19		330	.0020		2.000	
ASBESTOS		MAINTENANCE	85 02 19		330	.0020		2.000	
ASBESTOS		MAINTENANCE	85 04 02		450	.0020		2.000	
ASBESTOS		MAINTENANCE	85 04 02		446	.0020		2.000	
ASBESTOS		MAINTENANCE	85 04 02		441	.0020		2.000	
ASBESTOS		MAINTENANCE	85 04 02		434	.0020		2.000	
ASBESTOS		MAINTENANCE	85 04 02		430	.0020		2.000	
ASBESTOS		MAINTENANCE	85 04 03		420	.0020		2.000	
ASBESTOS		MAINTENANCE	85 04 03		420	.0020		2.000	
ASBESTOS		MAINTENANCE	85 04 03		420	.0020		2.000	
ASBESTOS		MAINTENANCE	85 04 03		420	.0020		2.000	
ASBESTOS		MAINTENANCE	85 04 03		420	.0020		2.000	
ASBESTOS		MAINTENANCE	85 04 03		420	.0020		2.000	
ASBESTOS		MAINTENANCE	85 04 03		420	.0020		2.000	
ASBESTOS		MAINTENANCE	85 04 03		420	.0020		2.000	
ASBESTOS		MAINTENANCE	85 04 03		420	.0020		2.000	
ASBESTOS		MAINTENANCE	85 04 03		420	.0020		2.000	
ASBESTOS		MAINTENANCE	85 04 03		420	.0020		2.000	
ASBESTOS		MAINTENANCE	85 04 03		420	.0020		2.000	
ASBESTOS		MAINTENANCE	85 04 03		420	.0020		2.000	
ASBESTOS		MAINTENANCE	85 04 04		420	.0020		2.000	
ASBESTOS		MAINTENANCE	85 04 04		420	.0020		2.000	
ASBESTOS		MAINTENANCE	85 04 04		420	.0020		2.000	
ASBESTOS		MAINTENANCE	85 04 04		420	.0020		2.000	
ASBESTOS		MAINTENANCE	85 04 04		420	.0020		2.000	
ASBESTOS		MAINTENANCE	85 04 04		420	.0020		2.000	
ASBESTOS		MAINTENANCE	85 04 04		420	.0020		2.000	
ASBESTOS		MAINTENANCE	85 04 04		420	.0020		2.000	

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CONTAMINANT NAME	DEPT. NO.	PROCESS OR UNIT	AT	JOB CLASS CODE	SAMP TOTL TIME	AIR CONC	8-HOUR T.W.A. CONC.	EXPOSURE RESP STANDARD
ASBESTOS		MAINTENANCE	85	04 04	420	.0020		2.000
ASBESTOS		MAINTENANCE	85	04 04	420	.0020		2.000
ASBESTOS		MAINTENANCE	85	04 08	435	.0020		2.000
ASBESTOS		MAINTENANCE	85	04 08	435	.0020		2.000
ASBESTOS		MAINTENANCE	85	04 08	435	.0020		2.000
ASBESTOS		MAINTENANCE	85	04 08	435	.0020		2.000
ASBESTOS		MAINTENANCE	85	04 08	435	.0020		2.000
ASBESTOS		MAINTENANCE	85	04 08	435	.0020		2.000
ASBESTOS		MAINTENANCE	85	04 09	465	.0030		2.000
ASBESTOS		MAINTENANCE	85	04 09	465	.0030		2.000
ASBESTOS		MAINTENANCE	85	04 09	465	.0030		2.000
ASBESTOS		MAINTENANCE	85	04 09	465	.0030		2.000
ASBESTOS		MAINTENANCE	85	04 09	465	.0030		2.000
ASBESTOS		MAINTENANCE	85	04 09	465	.0030		2.000
ASBESTOS		MAINTENANCE	85	04 16	465	.0020		2.000
ASBESTOS		MAINTENANCE	85	04 16	465	.0020		2.000
ASBESTOS		MAINTENANCE	85	04 16	465	.0020		2.000
ASBESTOS		MAINTENANCE	85	04 16	465	.0020		2.000
ASBESTOS		MAINTENANCE	85	04 16	465	.0020		2.000
ASBESTOS		MAINTENANCE	85	04 16	465	.0020		2.000
ASBESTOS		MAINTENANCE	85	04 17	450	.0020		2.000
ASBESTOS		MAINTENANCE	85	04 17	450	.0020		2.000
ASBESTOS		MAINTENANCE	85	04 17	450	.0020		2.000
ASBESTOS		MAINTENANCE	85	04 17	450	.0020		2.000
ASBESTOS		MAINTENANCE	85	04 17	450	.0020		2.000
ASBESTOS		MAINTENANCE	85	04 17	450	.0020		2.000
ASBESTOS		MAINTENANCE	85	04 19	435	.0020		2.000
ASBESTOS		MAINTENANCE	85	04 19	435	.0020		2.000
ASBESTOS		MAINTENANCE	85	04 19	435	.0020		2.000
ASBESTOS		MAINTENANCE	85	04 19	435	.0020		2.000
ASBESTOS		MAINTENANCE	85	04 19	435	.0020		2.000
ASBESTOS		MAINTENANCE	85	04 19	435	.0020		2.000
ASBESTOS		MAINTENANCE	85	04 23	485	.0020		2.000
ASBESTOS		MAINTENANCE	85	04 23	485	.0020		2.000
ASBESTOS		MAINTENANCE	85	04 23	485	.0200		2.000
ASBESTOS		MAINTENANCE	85	04 23	485	.0030		2.000
ASBESTOS		MAINTENANCE	85	04 23	485	.0020		2.000
ASBESTOS		MAINTENANCE	85	04 23	485	.0020		2.000
ASBESTOS		MAINTENANCE	85	04 25	460	.0020		2.000
ASBESTOS		MAINTENANCE	85	04 25	460	.0020		2.000
ASBESTOS		MAINTENANCE	85	04 25	460	.0020		2.000
ASBESTOS		MAINTENANCE	85	04 25	460	.0090		2.000
ASBESTOS		MAINTENANCE	85	04 25	460	.0020		2.000
ASBESTOS		MAINTENANCE	85	04 25	460	.0020		2.000
ASBESTOS		MAINTENANCE	85	05 01	480	.0020		2.000
ASBESTOS		MAINTENANCE	85	05 01	480	.0030		2.000
ASBESTOS		MAINTENANCE	85	05 01	480	.0020		2.000
ASBESTOS		MAINTENANCE	85	05 01	480	.0020		2.000
ASBESTOS		MAINTENANCE	85	05 01	480	.0020		2.000

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CONTAMINANT NAME	DEPT. NO.	PROCESS OR UNIT	AT	JOB CLASS CODE	SAMP TOTL TIME	AIR CONC	8-HOUR T.W.A. CONC.	EXPOSURE STANDARD	RESP
ASBESTOS		MAINTENANCE	85 05 01		480	.0020		2.000	
ASBESTOS		MAINTENANCE	85 05 06		450	.0020		2.000	
ASBESTOS		MAINTENANCE	85 05 06		450	.0020		2.000	
ASBESTOS		MAINTENANCE	85 05 06		450	.0020		2.000	
ASBESTOS		MAINTENANCE	85 05 06		450	.0020		2.000	
ASBESTOS		MAINTENANCE	85 05 06		450	.0020		2.000	
ASBESTOS		MAINTENANCE	85 05 06		450	.0020		2.000	
ASBESTOS		MAINTENANCE	85 05 09		450	.0020		2.000	
ASBESTOS		MAINTENANCE	85 05 09		450	.0020		2.000	
ASBESTOS		MAINTENANCE	85 05 09		450	.0020		2.000	
ASBESTOS		MAINTENANCE	85 05 09		450	.0020		2.000	
ASBESTOS		MAINTENANCE	85 05 09		450	.0020		2.000	
ASBESTOS		OXIDE ADDUCTS	80 05 29		370	.0170		2.000	
ASBESTOS		OXIDE ADDUCTS	80 05 29		370	.0130		2.000	
ASBESTOS		OXIDE ADDUCTS	80 05 30		415	.0430		2.000	
ASBESTOS		OXIDE ADDUCTS	80 05 30		415	.0140		2.000	
ASBESTOS		OXIDE ADDUCTS	80 06 05		114	.0580		2.000	
ASBESTOS		OXIDE ADDUCTS	80 06 05		114	.0710		2.000	
ASBESTOS		OXIDE ADDUCTS	80 06 05		114	.1160		2.000	
ASBESTOS		OXIDE ADDUCTS	83 10 17		133	.0270		2.000	
ASBESTOS		OXIDE ADDUCTS	83 10 17		133	.0400		2.000	
ASBESTOS		POLYMER POLYOL	83 12 14		288	.0130		.500	
ASBESTOS		UCAR SOLUTION VINYLS	82 12 15		310	.0700		2.000	
ASBESTOS		UCAR SOLUTION VINYLS	82 12 15		311	2.2000		2.000	
ASBESTOS		UCAR SOLUTION VINYLS	82 12 16		383	.0500		2.000	
ASBESTOS		UCAR SOLUTION VINYLS	82 12 16		383	.3500		2.000	
ASBESTOS		UCAR SOLUTION VINYLS	84 08 15		270	.0930		.500	
ASBESTOS		UCAR SOLUTION VINYLS	84 08 15		270	.1150		.500	
ASBESTOS		UCAR SOLUTION VINYLS	84 08 15		270	.1580		.500	
ASBESTOS		UCAR SOLUTION VINYLS	84 08 15		270	.1230		.500	
ASBESTOS		UCAR SOLUTION VINYLS	84 10 26		32	.5990		.500	
ASBESTOS		UCAR SOLUTION VINYLS	84 10 26		32	.5990		.500	
ASBESTOS	004320	IPH	80 05 05	H1Z1	360	.0130	.0130	2.000	R
ASBESTOS	004320	IPH	80 05 06	H1Z1	400	.4100	.4100	2.000	Z
ASBESTOS	004320	IPH	80 05 07	H1Z1	410	.0130	.0130	2.000	Z
ASBESTOS	004320	IPH	80 05 08	H1Z1	377	.0290	.0290	2.000	Z
ASBESTOS	004320	IPH	80 05 22	H1Z1	400	.0260	.0260	2.000	Z
ASBESTOS	004320	IPH	80 05 22	H1Z1	377	.0230	.0230	2.000	Z
ASBESTOS	004320	IPH	80 05 22	H1Z1	400	.0180	.0180	2.000	Z
ASBESTOS	004320	IPH	80 05 23	H1Z1	397	.0150	.0150	2.000	Z
ASBESTOS	004320	IPH	80 05 23	H1Z1	397	.0180	.0180	2.000	Z
ASBESTOS	004320	IPH	80 05 23	H1Z1	397	.0200	.0200	2.000	Z
ASBESTOS	004320	IPH	80 05 27	H1Z1	425	.0140	.0140	2.000	Z
ASBESTOS	004320	IPH	80 05 27	H1Z1	425	.0610	.0610	2.000	Z
ASBESTOS	004320	IPH	80 05 27	H1Z1	415	.0360	.0360	2.000	Z
ASBESTOS	004320	IPH	80 05 28	H1Z1	417	.0420	.0420	2.000	Z
ASBESTOS	004320	IPH	80 05 28	H1Z1	422	.0470	.0470	2.000	Z
ASBESTOS	004320	IPH	80 05 29	H1Z1	365	.0730	.0730	2.000	Z

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CONTAMINANT NAME	DEPT. NO.	PROCESS OR UNIT	AT	JOB CLASS CODE	SAMP TOTL TIME	AIR CONC	8-HOUR T.W.A. CONC.	EXPOSURE STANDARD	RESP
ASBESTOS	004320	IPH	80	06 04 H1Z1	387	.0710	.0710	2.000	Z
ASBESTOS	004320	IPH	80	06 04 H1Z1	387	.0220	.0220	2.000	Z
ASBESTOS	004320	IPH	80	06 04 H1Z1	407	.0190	.0190	2.000	Z
ASBESTOS	004320	IPH	80	06 10 H1Z1	397	.0190	.0190	2.000	Z
ASBESTOS	004320	IPH	80	06 10 H1Z1	394	.0280	.0280	2.000	Z
ASBESTOS	004320	IPH	80	06 10 H1Z1	395	.0370	.0370	2.000	Z
ASBESTOS	223020	MAINTENANCE	85	02 04 JGZ	85	.3100		2.000	R
ASBESTOS	327000	FABRICATION SHOP	79	03 07 HVZ	17	.2300		2.000	I
ASBESTOS	327000	IPH	79	09 10 HQZ	17	.6700		2.000	R
ASBESTOS	327000	IPH	79	09 10 HQZ	33	.3200		2.000	R
ASBESTOS	327000	IPH	79	09 11 HQZ	80	.1000		2.000	R
ASBESTOS	327000	IPH	79	09 11 HQZ	80	.0500		2.000	R
ASBESTOS	327000	IPH	79	09 11 HQZ	180	.0900	.0500	2.000	R
ASBESTOS	327000	IPH	79	09 11 HQZ	180	.1100	.0500	2.000	R
ASBESTOS	327000	IPH	79	09 19 HQZ	327	.5000	.3400	2.000	R
ASBESTOS	327000	IPH	79	09 19 HQZ	325	.1000	.0700	2.000	R
ASBESTOS	327000	IPH	79	10 01 HQZ	317	.2000	.1300	2.000	R
ASBESTOS	327000	IPH	79	10 02 HQZ	321	.2000	.1600	2.000	R
ASBESTOS	327000	IPH	79	10 02 HQZ	380	.1000	.0800	2.000	R
ASBESTOS	327000	IPH	79	10 02 HQZ	382	.2000	.1600	2.000	R
ASBESTOS	327000	IPH	82	06 23 HQZ	10	.4000		2.000	R
ASBESTOS	327000	IPH	82	06 29 HLZ	5	3.7000		2.000	R
ASBESTOS	327000	IPH	83	04 26 HLZ	65	.2200		2.000	I
ASBESTOS	327000	IPH	83	04 26 HLZ	65	.2300		2.000	Z
ASBESTOS	327000	IPH	83	11 04 HQZ	72	.2910		.500	R
ASBESTOS	327000	IPH	83	11 04 HQZ	69	.1390		.500	R
ASBESTOS	327000	IPH	84	01 11 HQZ	88	.4100		.500	R
ASBESTOS	327000	IPH	84	01 11 HQZ	88	.3600		.500	R
ASBESTOS	327000	IPH	84	01 13 HQZ	30	.4910		.500	R
ASBESTOS	327000	IPH	84	01 13 HQZ	30	.4180		.500	R
ASBESTOS	327000	IPH	84	01 20 HQZ	12	.1840		.500	R
ASBESTOS	327000	IPH	84	01 20 HQZ	12	.0310		.500	R
ASBESTOS	327000	IPH	84	03 02 HQZ	125	.3540		.500	R
ASBESTOS	327000	IPH	84	04 06 HQZ	121	.3010		.500	R
ASBESTOS	327000	IPH	84	04 06 HQZ	120	.2570		.500	R
ASBESTOS	327000	IPH	84	04 17 HQZ	111	.3920		.500	R
ASBESTOS	327000	IPH	84	04 30 HQZ	145	.1270		.500	R
ASBESTOS	327000	IPH	84	04 30 HQZ	145	.3150		.500	I
ASBESTOS	327000	IPH	84	05 21 HQZ	20	.5670		.500	R
ASBESTOS	327000	IPH	84	05 21 HRZ	50	.5900		.500	R
ASBESTOS	327000	IPH	84	05 21 JFQ	40	.3390		.500	R
ASBESTOS	327000	IPH	84	05 21 HLZ	50	.1030		.500	R
ASBESTOS	327000	IPH	85	04 22 HQZ	95	.1710		2.000	R
ASBESTOS	327000	IPH	85	04 22 HQZ	95	.2480		2.000	R
ASBESTOS	327000	LOWER BRIDGE	84	03 17 HQZ	360	.2010	.1507	.500	R
ASBESTOS	327000	LOWER BRIDGE	84	03 17 KBZ	360	.0980	.0735	.500	R
ASBESTOS	327000	LOWER BRIDGE	84	03 17 KBZ	360	.1560	.1170	.500	R
ASBESTOS	327000	LOWER BRIDGE	84	03 17 HQZ	360	.1000	.0750	.500	R
ASBESTOS	327000	LOWER BRIDGE	84	03 17 HQZ	360	.1210	.0907	.500	R

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CONTAMINANT NAME	DEPT. NO.	PROCESS OR UNIT	AT	JOB CLASS CODE	SAMP TOTL TIME	AIR CONC	8-HOUR T.W.A. CONC.	EXPOSURE STANDARD	RESP
ASBESTOS	327000	MAIN CHEM COMPLEX	84 09 11	HQZ	55	.2550		.500	Z
ASBESTOS	327000	MAIN CHEM COMPLEX	84 09 11	HQZ	55	.1920		.500	Z
ASBESTOS	327000	MAINTENANCE	80 09 02	HQZ	45	1.9000		2.000	R
ASBESTOS	327000	MAINTENANCE	80 09 02	HQZ	45	1.0600		2.000	R
ASBESTOS	327000	MAINTENANCE	80 09 02	HQZ	45	2.2800		2.000	R
ASBESTOS	327000	MAINTENANCE	80 10 23	HQZ	25	1.7100		2.000	R
ASBESTOS	327000	MAINTENANCE	80 10 23	HQZ	7	3.9000		2.000	R
ASBESTOS	327000	MAINTENANCE	80 10 23	HQZ	7	3.0500		2.000	R
ASBESTOS	327000	MAINTENANCE	80 10 24	HQZ	30	1.2000		2.000	R
ASBESTOS	327000	MAINTENANCE	80 10 24	HQZ	16	.7400		2.000	R
ASBESTOS	327000	MAINTENANCE	80 10 24	HQZ	30	.5700		2.000	R
ASBESTOS	327000	MAINTENANCE	80 10 24	HQZ	30	.5400		2.000	R
ASBESTOS	327000	MAINTENANCE	80 10 27	HQZ	12	.4300		2.000	R
ASBESTOS	327000	MAINTENANCE	80 10 27	HQZ	12	.3400		2.000	R
ASBESTOS	327000	MAINTENANCE	80 10 27	HQZ	10	.7400		2.000	R
ASBESTOS	327000	MAINTENANCE	80 10 27	HQZ	10	.2900		2.000	R
ASBESTOS	327000	MAINTENANCE	80 10 28	HQZ	13	3.6300		2.000	R
ASBESTOS	327000	MAINTENANCE	80 10 28	HQZ	13	6.1200		2.000	R
ASBESTOS	327000	MAINTENANCE	83 12 09	HQZ	45	3.6030		.500	R
ASBESTOS	327000	MAINTENANCE	83 12 30	HQZ	8	.9210		.500	R
ASBESTOS	327000	MAINTENANCE	84 03 03	HQZ	400	.2250	.2250	.500	R
ASBESTOS	327000	MAINTENANCE	84 03 03	HQZ	400	.1490	.1490	.500	R
ASBESTOS	327000	MAINTENANCE	84 03 03	HLZ	400	.0570	.0570	.500	R
ASBESTOS	327000	MAINTENANCE	84 03 03	HZZ	400	.0280	.0280	.500	R
ASBESTOS	327000	MAINTENANCE	84 03 03	HQZ	400	.1110	.1110	.500	R
ASBESTOS	327000	MAINTENANCE	84 09 06	HQZ	8	.8290		.500	R
ASBESTOS	327000	MAINTENANCE	84 11 18	HQZ	120	.0610		2.000	R
ASBESTOS	327000	MAINTENANCE	84 11 18	HQZ	155	.0290	.0240	2.000	R
ASBESTOS	327000	MAINTENANCE	84 11 18	HQZ	30	.2460		2.000	R
ASBESTOS	327000	MAINTENANCE	84 11 18	HQZ	132	.0850		2.000	R
ASBESTOS	327000	MAINTENANCE	84 11 18	HQZ	113	.0590	.0520	2.000	R
ASBESTOS	327000	MAINTENANCE	84 11 18	HQZ	148	.0810		2.000	R
ASBESTOS	327000	MAINTENANCE	84 11 19	HQZ	127	.2320	.0860	2.000	R
ASBESTOS	327000	MAINTENANCE	84 11 19	HQZ	275	.0290	.0170	2.000	R
ASBESTOS	327000	MAINTENANCE	84 11 19	HQZ	275	.0320	.0180	2.000	R
ASBESTOS	327000	MAINTENANCE	84 11 19	HQZ	150	.2060	.0640	2.000	R
ASBESTOS	327000	MAINTENANCE	84 11 19	HQZ	150	.0880	.0280	2.000	R
ASBESTOS	327000	MAINTENANCE	85 02 04	HQZ	85	.4900		2.000	R
ASBESTOS	327000	MAINTENANCE	85 02 04	HQZ	85	.2300		2.000	R
ASBESTOS	327000	MAINTENANCE	85 02 26	HQZ	255	.0370	.0200	2.000	R
ASBESTOS	327000	MAINTENANCE	85 02 26	HQZ	255	.0340	.0180	2.000	R
ASBESTOS	327000	MICC	84 05 23	HQZ	18	.4090		.500	R
ASBESTOS	327000	MICC	84 05 23	HQZ	18	.2460		.500	R
ASBESTOS	327000	MICC	84 05 31	HQZ	32	.7300		.500	R
ASBESTOS	327000	MICC	84 05 31	HQZ	32	2.2100		.500	R
ASBESTOS	327000	MICC	84 06 01	HQZ	170	1.9300		.500	R
ASBESTOS	327000	MICC	84 06 01	HQZ	305	.0510		.500	R
ASBESTOS	327000	MICC	84 06 06	HQZ	45	1.5900		.500	R
ASBESTOS	327000	MICC	84 06 19	HQZ	100	.1400		.500	R

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CONTAMINANT NAME	DEPT. NO.	PROCESS OR UNIT	AT	JOB CLASS CODE	SAMP TOTL TIME	AIR CONC	8-HOUR T.W.A. CONC.	EXPOSURE STANDARD	RESP
ASBESTOS	327000	MICC	84 06 19	HQZ	100	.1400		.500	R
ASBESTOS	327000	OILYARD	80 07 16	HQZ	15	2.2100		2.000	R
ASBESTOS	327000	OILYARD	80 07 16	HQZ	15	2.4600		2.000	R
ASBESTOS	327000	OILYARD	80 07 16	HQZ	15	1.2300		2.000	R
ASBESTOS	327000	OILYARD	80 07 16	HQZ	15	3.3900		2.000	R
ASBESTOS	327000	OILYARD	83 10 24	HQZ	105	.1400		2.000	R
ASBESTOS	327000	OILYARD	83 10 24	HQZ	105	.1330		2.000	R
ASBESTOS	327000	OILYARD	83 11 02	HQZ	42	.8420		2.000	R
ASBESTOS	327000	OILYARD	83 11 02	HQZ	42	.5790		2.000	R
ASBESTOS	327000	OILYARD	84 02 09	HQZ	140	.2160		.500	R
ASBESTOS	327000	OILYARD	84 02 09	HQZ	140	.1210		.500	R
ASBESTOS	327000	OILYARD	84 09 28	HQZ	25	.2950		.500	R
ASBESTOS	327000	OILYARD	84 09 28	HQZ	25	.2650		.500	R
ASBESTOS	327000	OXIDE ADDUCTS	80 05 29	HQZ	370	.1830	.1830	2.000	R
ASBESTOS	327000	OXIDE ADDUCTS	80 05 29	HQZ	370	.2010	.2010	2.000	R
ASBESTOS	327000	OXIDE ADDUCTS	80 05 30	HQZ	425	.1340	.1340	2.000	R
ASBESTOS	327000	OXIDE ADDUCTS	80 05 30	HQZ	425	.2220	.2220	2.000	R
ASBESTOS	327000	OXIDE ADDUCTS	80 06 05	HQZ	117	.8690	.2120	2.000	Z
ASBESTOS	327000	OXIDE ADDUCTS	83 10 17	HQZ	36	.0680		2.000	R
ASBESTOS	327000	OXIDE ADDUCTS	83 10 17	HQZ	45	.1370		2.000	R
ASBESTOS	327000	OXIDE ADDUCTS	83 10 17	HQZ	40	.0570		2.000	R
ASBESTOS	327000	OXIDE ADDUCTS	84 02 10	HQZ	29	.3050		.500	R
ASBESTOS	327000	OXIDE ADDUCTS	84 02 10	HQZ	29	.3810		.500	R
ASBESTOS	327000	OXIDE ADDUCTS	84 02 17	HQZ	310	.0790	.0510	.500	R
ASBESTOS	327000	OXIDE ADDUCTS	84 02 17	HQZ	310	.4490	.2900	.500	R
ASBESTOS	327000	OXIDE ADDUCTS	84 02 23	HQZ	330	.0660	.0454	.500	P
ASBESTOS	327000	OXIDE ADDUCTS	84 02 23	HQZ	330	.4260	.2929	.500	P
ASBESTOS	327000	OXIDE ADDUCTS	84 02 23	HQZ	330	.0870	.0598	.500	R
ASBESTOS	327000	OXIDE ADDUCTS	84 05 18	HQZ	15	.4910		.500	R
ASBESTOS	327000	OXIDE ADDUCTS	84 05 18	HQZ	15	.2950		.500	R
ASBESTOS	327000	PLANT MIXTURES	80 06 23	HQZ	15	2.3600		2.000	R
ASBESTOS	327000	PLANT MIXTURES	80 06 23	HQZ	15	4.7700		2.000	R
ASBESTOS	327000	PLANT MIXTURES	80 07 01	HQZ	15	1.3800		2.000	R
ASBESTOS	327000	PLANT MIXTURES	80 07 01	HQZ	15	1.0100		2.000	R
ASBESTOS	327000	PLANT MIXTURES	80 07 01	HQZ	15	2.8500		2.000	R
ASBESTOS	327000	PLANT MIXTURES	80 07 01	HQZ	15	2.3600		2.000	R
ASBESTOS	327000	POLYMER POLYOL	83 12 12	HQZ	33	.6250		.500	R
ASBESTOS	327000	POLYMER POLYOL	83 12 12	HQZ	33	.5140		.500	R
ASBESTOS	327000	POLYMER POLYOL	83 12 14	HQZ	195	.1400	.0569	.500	R
ASBESTOS	327000	POLYMER POLYOL	83 12 14	HQZ	206	.1250	.0536	.500	R
ASBESTOS	327000	POLYMER POLYOL	83 12 14	HQZ	206	.1860	.0798	.500	R
ASBESTOS	327000	POLYMER POLYOL	83 12 14	HQZ	206	.2760	.1185	.500	R
ASBESTOS	327000	POLYMER POLYOL	84 07 05	HQZ	30	.3690		.500	R
ASBESTOS	327000	UCAR SOLUTION VINYLS	84 02 16	HQZ	75	1.2410		.500	R
ASBESTOS	327000	UCAR SOLUTION VINYLS	84 02 16	HQZ	75	.5640		.500	P
ASBESTOS	327000	UCAR SOLUTION VINYLS	84 07 30	HQZ	33	.5140		.500	R
ASBESTOS	327000	UCAR SOLUTION VINYLS	84 07 30	HQZ	33	.2900		.500	R
ASBESTOS	327000	UCAR SOLUTION VINYLS	84 09 28	HQZ	60	.3560	.0440	.500	R
ASBESTOS	327000	UCAR SOLUTION VINYLS	84 09 28	HQZ	60	.4550	.0560	.500	P

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CONTAMINANT NAME	DEPT. NO.	PROCESS OR UNIT	AT	JOB CLASS CODE	SAMP TOTL TIME	AIR CONC	8-HOUR T.W.A. CONC.	EXPOSURE STANDARD	RESP
ASBESTOS	327000	UCAR SOLUTION VINYLS	84 10 26	HQZ	32	.8750		.500	R
ASBESTOS	327000	UCAR SOLUTION VINYLS	84 10 26	HQZ	32	1.1980		.500	R
ASBESTOS	327000	UICC	84 01 06	HQZ	53	.5250		.500	R
ASBESTOS	327000	UICC	84 01 06	HQZ	53	.6950		.500	R
ASBESTOS	327000	UICC	84 01 06	HQZ	25	.3540		.500	R
ASBESTOS	327000	UICC	85 03 20	HQZ	30	.2500		2.000	I
ASBESTOS	327000	UICC	85 03 20	HQZ	30	.1600		2.000	R
ASBESTOS	327000	UICC	85 03 29	HQZ	210	.3600		2.000	R
ASBESTOS	327000	UICC	85 03 29	HQZ	210	.3500		2.000	R
ASBESTOS	327010	IPM	85 03 15	HQZ	25	.9700		2.000	I
ASBESTOS	327010	IPM	85 03 15	HQZ	25	1.3500		2.000	I
ASBESTOS	327010	MAINTENANCE	84 12 26	HQZ	15	.0490		2.000	I
ASBESTOS	327010	MAINTENANCE	84 12 28	HQZ	17	.2600		2.000	I
ASBESTOS	327010	MAINTENANCE	85 02 20	HQZ	190	.2100		2.000	R
ASBESTOS	327010	MAINTENANCE	85 03 12	HQZ	35	.0200		2.000	I
ASBESTOS	327010	MAINTENANCE	85 03 12	HQZ	20	.0400		2.000	I
ASBESTOS	327880	MAINTENANCE	85 02 20	JGZ	190	.0400		2.000	R
ASBESTOS	327680	MAINTENANCE	85 02 26	H1Z1	255	.0060	.0030	2.000	R
ASBESTOS	350010	GARAGE	83 04 05	H5Z	30	3.9300	.2456	2.000	Z
ASBESTOS	350010	GARAGE	83 04 05	H5Z	30	2.0900	.1306	2.000	Z

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