

US EPA ARCHIVE DOCUMENT



SDMS DocID 464466

Superfund Records Center
SITE: Wells G&H
BREAK: 11.9
OTHER: EXHIBIT 2
464466

QUITCLAIM DEED

EMERSON & CUMING, INC., a Delaware corporation, with an office and place of business at 59 Walpole Street, Canton, Massachusetts, in consideration of Six Hundred and Fifty Thousand Dollars (\$650,000) hereby GRANTS unto Alan S. Curtis, as trustee of DEAN-CURTIS TRUST, under Declaration of Trust dated as of September 23, 1988, recorded in Hampden County Registry of Deeds as Document No. _____, with a place of business at 33 Winter Street, Springfield, Massachusetts, with QUITCLAIM covenants, that certain parcel of land, together with any buildings and other improvements thereon, situated along Ramah Circle, Agawam, Massachusetts, as described in Exhibit A attached hereto and made part hereof.

The premises are subject to the matters set forth in Exhibit B attached hereto and made a part hereof.

The premises hereby conveyed do not comprise all or substantially all of the grantor's assets situated in Massachusetts.

IN WITNESS WHEREOF, the said EMERSON & CUMING, INC., has caused its corporate seal to be affixed hereto and these present to be signed acknowledged and delivered in its name and behalf by its President and Treasurer hereto authorized, this 23rd day of September, 1988.

Signed and Sealed in the presence of:

EMERSON & CUMING, INC.

Barbara E. Kadun
Witness

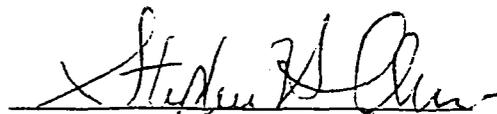
By: [Signature]
President

By: [Signature]
Treasurer

COMMONWEALTH OF MASSACHUSETTS)
)
) ss.
)
MIDDLESEX COUNTY

September 23, 1988

Then personally appeared the above-named E.S. Wood,
the President of Emerson & Cuming, Inc. and Larry T. Parkinson,
the Treasurer of Emerson & Cuming, Inc., who acknowledged the
foregoing instrument to be the free act and deed of Emerson &
Cuming, Inc., the grantor corporation, before me,


Notary Public

My Commission Expires: 11-25-88

US EPA ARCHIVE DOCUMENT

EXHIBIT A

Parcel I

Certain real estate situate in Agawam, Hampden County, Massachusetts, being more particularly bounded and described as follows:

Beginning at a stone bound in the Southeasterly line of Ramah Circle South at the Southwesterly corner of land now or formerly of Worthy Realty Corp., and running thence,

SOUTHWESTERLY	along said Ramah Circle South, Two Hundred (200) Feet to an iron pin, and running thence
South 63° 4' 15" East	Two Hundred Fifty-Nine and 40/100 (259.40) Feet to the center of a brook, and running thence
NORTHEASTERLY	along the center line of the brook about Two Hundred Sixteen (216) Feet to land now or formerly of one Mazza, thence
NORTHWESTERLY	along land now or formerly of said Mazza, land now or formerly of Louis and Raphella Mercandante and land now or formerly of Worthy Realty Corp., Three Hundred Ten and 13/100 (310.13) Feet to the point of beginning.

PARCEL II

Certain real estate situated in Agawam, Hampden County, Massachusetts, being more particularly bounded and described as follows:

Beginning at a point in the Southeasterly line of Ramah Circle South as the Southwesterly corner of that certain premises conveyed by James J. Mercandante, et ux, to Merk Realty Corp., dated May 5, 1960, and recorded in the Registry of Deeds for the County of Hampden in Book 2759, Page 285, and running thence

S 63° 4' 15" E	along last named land, Two Hundred Fifty-Nine and 40/100 (259.40) Feet to the center of a brook and running thence
SOUTHWESTERLY	along the center of the brook, about Two Hundred Fifty-Four (254) Feet to a point in the Easterly line of a Fifty (50) Foot right of way known as Washington Street, thence

NORTHWESTERLY along the Easterly line of said Washington Street, One Hundred Fifteen and 58/100 (115.58) Feet to a point in the Southeasterly line of said Ramah Circle South, thence
NORTHEASTERLY along said Ramah Circle South, a distance of Seventy and 86/100 (70.86) Feet to the point of beginning.

Together with the right to use Ramah Circle South and Washington Street, in common with others.

Being the same premises conveyed to Emerson & Cuming, Inc., by deed of Tex-Tech Industries, Inc., dated March 5, 1985 and recorded in Hampden County Registry of Deed, Book 5772, Page 386.

EXHIBIT B

The premises are subject to:

1. Real estate taxes for the Fiscal Year 1988 and Fiscal Year 1989.
2. Easement to Western Massachusetts Electric Company and to New England Telephone and Telegraph Company as set forth in instrument dated October 14, 1952, and recorded in Book 2203, Page 420.
3. Title to and rights of others, if any, in and to the uninterrupted flow of the brook located along the southerly portion of the premises.
4. Taking by the Town of Agawam dated October 30, 1972, and recorded in Book 3748, Page 505.

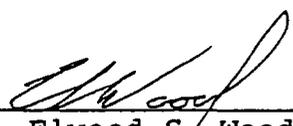
September 23, 1988

Alan S. Curtis
REDACTED - PERSONAL PRIVACY

Dear Mr. Curtis:

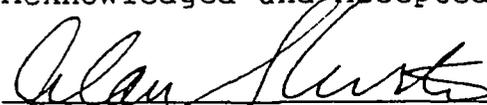
Reference is made to the Real Estate Purchase and Sale Agreement, dated as of May 31, 1988, by and between Emerson & Cuming, Inc., a Delaware Corporation, and yourself as amended by an Addendum to that Agreement, dated September 23, 1988, (the said Agreement and Addendum are hereinafter referred to as the "Agreement").

Subject to the terms and conditions of the Agreement, all representations and warranties made by Emerson & Cuming, Inc. under Paragraph 6 and all subparagraphs thereof the Agreement are true, complete and accurate as of the date of closing, September 23, 1988.



Elwood S. Wood
President
Emerson & Cuming, Inc.

Acknowledged and Accepted by:



Alan S. Curtis

AGA-1E

Section 1445 of the Internal Revenue Code provides that a transferee of a U.S. real property interest must withhold tax if the transferor is a foreign person. To inform the transferee that withholding of tax is not required upon the disposition of a U.S. real estate interest by EMERSON & CUMING, INC., the undersigned hereby certifies the following on behalf of EMERSON & CUMING, INC.:

1. EMERSON & CUMING, INC. is not a foreign corporation, foreign partnership, foreign trust, or foreign estate (as those terms are defined in the Internal Revenue Code and Income Tax Regulations);
2. EMERSON & CUMING, INC.'s U.S. employer identification number is 22-2312556; and
3. EMERSON & CUMING, INC.'s office address is 59 Walpole Street, Canton, Massachusetts, 02021. EMERSON & CUMING, INC. understands that this certification may be disclosed to the Internal Revenue Service by transferee and that any false statement contained herein could be punished by fine, imprisonment, or both.

Under penalties of perjury, I declare that I have examined this certification and to the best of my knowledge and belief it is true, correct and complete, and I further declare that I have authority to sign this document on behalf of EMERSON & CUMING, INC.

9-23-88

Date



President
Emerson & Cuming, Inc.

Commonwealth of Massachusetts)
)
) ss.
)
County of Middlesex)

AFFIDAVIT

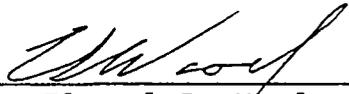
1. I, Elwood S. Wood, am President of Emerson & Cuming, Inc. ("E&C"), a Delaware corporation, and am a Vice President of W. R. Grace & Co.-Conn. ("Grace"), a Connecticut corporation, and have signed this affidavit in a representative capacity on behalf of E&C and Grace.

2. During 1987 and 1988, until March 31, 1988 when the facility was closed for production purposes, E&C's facility at 21 Ramah Circle, Agawam, Massachusetts (the "Agawam facility") was a manufacturing and office facility of an E&C unit which reports to me as President of the Polyfibron Division of Grace.

3. On knowledge and belief of E&C and Grace, based upon inquiry of Gary W. Schuerfeld and Sharon M. Schuerfeld, who are employees of E&C, from July 17, 1987 to the date hereof there has been no release of oil or hazardous material or substances into the environment at the Agawam facility in reportable quantities, except releases which would be permitted by Government permit or license. For purposes of this affidavit, the terms "release", "oil", "hazardous material", "hazardous substances", and "environment" shall have the same meanings as provided in Title 42 U.S. Code, Section 9601 of the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 USC Sec. 9601 et seq., and in Section 2 of the Massachusetts Oil and Hazardous Material Release Prevention and Response Act, M.G.L.c.21E.

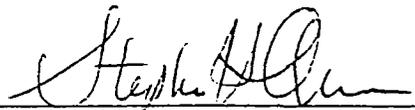
4. This Affidavit shall be subject to the terms and conditions of the Real Estate Purchase and Sale Agreement dated as of May 31, 1988, by and between Emerson & Cuming, Inc. and Alan S. Curtis concerning the Agawam facility.

FURTHER AFFIANT SAYETH NOT.



Elwood S. Wood

Subscribed and sworn to before me this 19th day of
September, 1988.



Notary Public

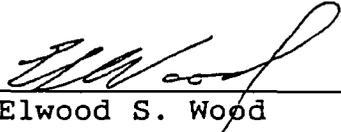
My Commission Expires 11-25-89

COMMONWEALTH OF MASSACHUSETTS)
)
) ss.
)
COUNTY OF MIDDLESEX)

AFFIDAVIT

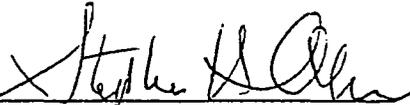
1. I, Elwood S. Wood, am President of Emerson & Cuming, Inc. ("E&C"), a Delaware corporation, and have signed this affidavit in a representative capacity on behalf of E&C.
2. E&C owns in Canton, Massachusetts: an office, plant and land located at 869 Washington Street; and another office, plant and land at 59 Walpole Street.
3. A substantial portion of the machinery, equipment and other personal property formerly used in E&C's operations at 21 Ramah Circle, Agawam, Massachusetts, are owned by E&C at the date of this Affidavit and have been relocated to E&C's plant at 59 Walpole Street, Canton, Massachusetts, for use in E&C's operations there.
4. The real property located at 21 Ramah Circle, Agawam, Massachusetts, to be conveyed to Alan S. Curtis, in combination with the permanent fixtures, equipment and other personal property, located at the said real property, to be sold and assigned to Alan S. Curtis does not constitute all or substantially all of the assets of Emerson & Cuming, Inc. situated in the Commonwealth of Massachusetts.

FURTHER AFFIANT SAYETH NOT.



Elwood S. Wood

Subscribed and sworn to before me this 19th day of
September, 1988.



Notary Public

My Commission Expires: 11-25-88

Commonwealth of Massachusetts)
)
) ss.
)
County of Norfolk)

AFFIDAVIT

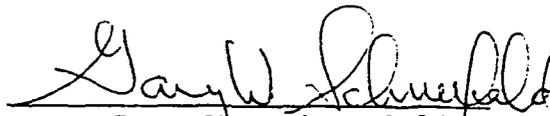
1. I, Gary W. Schuerfeld, am an employee of Emerson & Cuming, Inc. ("E&C"), a Delaware corporation, and have prepared and signed this affidavit in a representative capacity on behalf of E&C.

2. I am presently the Manufacturing Manager for composite materials at E&C's facility on Walpole Street in Canton, Massachusetts and, between April, 1986 and March 31, 1988, when the facility was closed for production purposes, was the Plant Manager for E&C's facility at 21 Ramah Circle, Agawam, Massachusetts (the "Agawam facility"). As part of my responsibilities as Plant Manager of the Agawam facility, I was to maintain the Agawam facility in compliance with Federal, state and local environmental laws and regulations and acted as an emergency coordinator to act in the event of a release of oil or hazardous materials or substances into the environment at the Agawam facility.

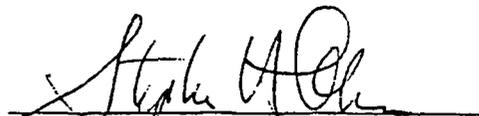
3. On knowledge and belief, from July 17, 1987 to the date hereof there has been no release of oil or hazardous material or substances into the environment at the Agawam facility in reportable quantities, except releases which would be permitted by Government permit or license. For purposes of this affidavit, the terms "release", "oil", "hazardous Material", "hazardous substances", and "environment" shall have the same meanings as provided in Title 42 U.S. Code, Section 9601 of the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 USC Sec. 9601 et seq., and in Section 2 of the Massachusetts Oil and Hazardous Material Release Prevention and Response Act, M.G.L.c.21E.

4. This Affidavit shall be subject to the terms and conditions of the Real Estate Purchase and Sale Agreement dated as of May 31, 1988, by and between Emerson & Cuming, Inc. and Alan S. Curtis concerning the Agawam facility.

FURTHER AFFIANT SAYETH NOT.


Gary W. Schuerfeld

Subscribed and sworn to before me this 19th day of
September, 1988.


Notary Public

My Commission Expires 11-25-88

EMERSON & CUMING

Emerson & Cuming, Inc. A GRACE Co.
Composite Technologies - Agawam

21 Ramah Circle
Agawam, Massachusetts 01001
Telephone (413) 786-0410

17 June 1986

JUN 23 1986

Mr. David Howland
Chief Air Quality Control Section
Dept. of Environmental Quality
Engineering
Western Region
436 Dwight Street, Fourth Floor
Springfield, MA 01103

Dear Mr. Howland:

Enclosed are the completed 1985 Air Emission Inventory
Forms covering our plant on Ramah Circle, in Agawam,
Massachusetts.

Yours truly,



Sharon Schuerfeld
Safety Coordinator

SS:jn
Enclosures

FUEL BURNING EQUIPMENT REGISTRATION

Form AP-1 DEQE 85

Send original to DEQE office, retain a copy.

Commonwealth of Massachusetts
Department of Environmental Quality Engineering
Division of Air Quality Control

For Period Jan. 1 to Dec. 31, 1985

134,15
BOILER NO.

ZONE _____
UTM X _____
Y _____
SOURCE ID. NO. _____
REVIEWED BY _____

LEGAL NAME		ADDRESS		PHONE					
W. R. GRACE Polyfibron		55 Hayden Ave. Lexington, MA		(617) 861-6600					
LOCATION 21 Ramah Circle <i>AAAWAM 01103</i>				(413) 786-0410					
FUEL BURNING EQUIPMENT	TYPE (E.G. BOILER, SPACE HEATER, DRYER, PROCESSING EQPT.) Gas Oven	MANUFACTURER W.S. Rockwell	MODEL NO. S975G	DATE EQUIPMENT (BOILER, ETC.) PUT IN SERVICE: 1964					
AIR POLLUTION CONTROL EQUIP.	TYPE (SCRUBBER, ESP, ETC.) NONE	MANUFACTURER NA	MODEL NO. NA	PURPOSE NA EFFICIENCY NA					
TYPES OF FUEL USED	FUEL	GRADES	SULFUR CONTENT	ASH CONTENT	ANNUAL USAGE TONS, GALS, FEET ³ JAN 1 TO DEC 31	MAXIMUM HOURLY FIRING RATE PER UNIT LBS, GALS, FT ³ /HR BTU/HR	FUEL SUPPLIER NAME	CITY OR TOWN	
	COAL <input type="checkbox"/>	Bituminous	%	%					
		Anthracite	%	%					
	OIL <input type="checkbox"/>	2	%	%					
		4	%	%					
		5	%	%					
		6	%	%					
	MFTD GAS <input type="checkbox"/>								
NAT. GAS <input checked="" type="checkbox"/>					8421 CCF	375 CFH	Bay State Gas	Boston, MA	
WOOD <input type="checkbox"/>									
Other (specify)									
FUEL ADDITIVE USED (IF ANY):		Manufacturer	NA	Trade name	NA				
FUEL USAGE BREAKDOWN:				% used for heating	% used for cooling	% used to generate electricity	% used for process		
BURNER EQUIPMENT	Manufacturer(s)	1 W.S. Rockwell	Size and model no.	1 _____	Date of installation	1 1964			
		2 _____		2 _____		2 _____			
TYPE OF SOLID FUEL BURNER	<input type="checkbox"/> Hand fired <input type="checkbox"/> Under feed stoker <input type="checkbox"/> Traveling grate <input type="checkbox"/> Chain grate <input type="checkbox"/> Spreader stoker <input type="checkbox"/> Stoker w/gas reinjection <input type="checkbox"/> Cyclone <input type="checkbox"/> Pulverized <input type="checkbox"/> Other: (specify) _____								
TYPE OF GAS/OIL BURNER	<input type="checkbox"/> Rotary cup <input type="checkbox"/> Mechanical atomizer <input type="checkbox"/> Steam atomizer <input checked="" type="checkbox"/> Air atomizer <input type="checkbox"/> Other (specify): _____							Viscosity controller?	<input checked="" type="checkbox"/> No
DRAFT TYPE	<input type="checkbox"/> Forced <input type="checkbox"/> Induced <input type="checkbox"/> Natural <input type="checkbox"/> Combination of _____ and _____						Rain hat on stack?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
EQUIPMENT INFORMATION	Breeching gas temp	500°F	Economizer?	<input checked="" type="checkbox"/> No	Equipment operating hours:	8 per day 3.6 days per week	Total hrs / year	150	
STACK INFORMATION	Exit direction	Exit dimensions (inches)		Height	Lining:				
	<input type="checkbox"/> Horiz <input checked="" type="checkbox"/> Vert	Diameter 5 or l.	x w.	above ground 14.3 ft	<input checked="" type="checkbox"/> Metal <input type="checkbox"/> Refractory <input type="checkbox"/> Other (specify): _____				
	Smoke indicator	Make and model no.		Type of alarm	Soot blowing:				
	<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes - Indicator:	NA Recorder: -			How often? NO per day at _____ m. / _____ per week				
REMARKS	This oven has been removed from the premises as of 12-85				General Information: Number of employees at installation 75 Standard Industrial Classif. code 3079				

DECLARATION I certify that I have examined the above and to the best of my knowledge it is true and complete. (Signature subjects signer to provisions of the General Statutes regarding false and misleading statements)

James F. Murphy, Jr. James F. Murphy, Jr. Assistant Vice President 6/24/86
DATE

FUEL BURNING EQUIPMENT REGISTRATION

Form AP-1 DEQE 85

Send original to DEQE office, retain a copy.

Commonwealth of Massachusetts
Department of Environmental Quality Engineering
Division of Air Quality Control

For Period Jan. 1 to Dec. 31, 1985

Area to be completed by DEQE
BOILER NO. 1
ZONE _____ SCORE _____
UTM X _____ ID. NO. _____
Y _____ REVIEWED BY _____

FIRM	W. R. GRACE	ADDRESS	PHONE
DIVISION	Polyfibron	55 Hayden Avenue, Lexington, MA	(617)861-6600
AGENT			
LOCATION	21 Ramah Circle <u>Agawam 01001</u>		(413)786-0410
FUEL BURNING EQUIPMENT	TYPE (E.G. BOILER, SPACE HEATER, DRYER, PROCESSING EQUIPT.) Cast Iron HWH Boiler	MANUFACTURER American Standard	MODEL NO. G-609
AIR POLLUTION CONTROL EQUIP.	TYPE (SCRUBBER, ESP, ETC.) NONE	MANUFACTURER NA	MODEL NO. NA
TYPES OF FUEL USED		PURPOSE NA	EFFICIENCY NA

FUEL	GRADES	SULFUR CONTENT	ASH CONTENT DRY WEIGHT	ANNUAL USAGE TONS, GALS, FEET ³ JAN 1 TO DEC 31	MAXIMUM HOURLY FIRING RATE PER UNIT		FUEL SUPPLIER	
					LBS, GALS, FT ³ /HR	BTU/HR	NAME	CITY OR TOWN
COAL <input type="checkbox"/>	Bituminous Anthracite	% %	% %					
OIL <input type="checkbox"/>	2	%						
	4	%						
	5	%						
	6	%						
MFTD GAS <input type="checkbox"/>								
NAT. GAS <input checked="" type="checkbox"/>				3334 CCF	1,160,000 BTU		Bay State Gas	Boston, MA
WOOD <input type="checkbox"/>								
Other(specify)								

error. fine 4/6/89
3334 CCF

FUEL ADDITIVE USED (IF ANY): Manufacturer _____ Trade name _____
FUEL USAGE BREAKDOWN: % used for heating _____ % used for cooling _____ % used to generate electricity _____ % used for process _____

BURNER EQUIPMENT Manufacturer(s) 1 American Standard Size and model no. 2 Date of installation 1 1960

TYPE OF SOLID FUEL BURNER Hand fired Under feed stoker Traveling grate Chain grate Spreader stoker Stoker w/gas reinjection Cyclone Pulverized Other: (specify) _____

TYPE OF GAS/OIL BURNER Rotary cup Mechanical atomizer Steam atomizer Air atomizer Other (specify): _____ Viscosity controller? No Yes -- Type: _____

DRAFT TYPE Forced Induced Natural Combination of _____ and _____ Rain hat on stack? Yes No

EQUIPMENT INFORMATION Breaching gas temp 420 F Economizer? No Yes - Exit temp. F Equipment operating hours: 12 per day 7 days per week 2544 Total hrs / year 7mo

STACK INFORMATION Exit direction Horiz Vert Diameter 42 or l. x w. Height above ground 21 ft Lining: Metal Refractory Other (specify): _____
Smoke indicator: No Yes -- Indicator: NA Recorder: NA Type of alarm: NA Soot blowing: NO How often? NO per day at _____ m. / _____ per week

REMARKS _____ General Information: Number of employees at installation 75 Standard Industrial Classif. code 3079

DECLARATION I certify that I have examined the above and to the best of my knowledge it is true and complete. (Signature subjects signer to provisions of the General Statutes regarding false and misleading statements)
James F. Murphy, Jr. Vice President 6/24/86

	LEGAL NAME		ADDRESS		PHONE
FIRM	W. R. GRACE		55 Hayden Avenue Lexington MA		(617) 861-6600
DIVISION	Polyfibron Division				
AGENT					
LOCATION	21 Ramah Circle, <u>Agawam 01001</u>				(413) 786-0410
PROCESS STEP NO.	1	2	3	4	5
LOCATION OF EQUIP.	PAINT BOOTH	MACHINE SHOP	GRINDING BOOTH	COMPRESSION MOLDING	
MAJOR STEPS IN PROCESS	Painting	Machining Planer	Grinding	Curing pre-preg	
OPERATING SCHEDULE	Painting is done periodically.		4 hrs/batch @16 Batches		Total 64 hrs/yr
Hours per day			X 4		
Days per week	During the year		5		2-3
Weeks per year	X 3 weeks		50		50
TYPE OF EQUIP'T USED	Paint Sprayers	Sanders, Planer	Sanders	Electric Oven	
RAW MATERIAL - TYPE	Solvent based paints	Fiberglass-Syn-tactic foam composites	Fiberglass-Syn-tactic foam composites	Epoxy resin & Graphite cloth	
Maximum per hour					
Total per year	.093	Variable	Variable	Variable	
FINISHED MATERIAL-TYPE	Fiberglass Composites	Fiberglass-Syntactic foam composites	Fiberglass-Syntactic foam composites	Graphite pre-preg	
Maximum per hour					
Total per year	177	Variable	Variable	Variable	
STACK/VENT DATA					
Stack number	#19	20	21	#2	
Exit direction	Verticle	Verticle	Verticle	Verticle	
Inside diameter at top	3'	No stack: self	No stack: self	6"	
Height above ground	19'	Contained unit	Contained unit	18 5'	
GAS EXIT TEMPERATURE	Ambient	Ambient	Ambient	150° F	
GAS QTY. (ACFM)					
EMISSION CONTROL		Exhaust & Filter System 6-17-80	Exhaust & Filter System 6-17-80	NONE	
Type and date installed	NONE				
Manufacturer	-	Sterling Blower	Sterling Blower	Grieve TB-500	
Efficiency	-	95%	95%	-	
EMISSIONS	Solvents from paints	Composite dust	Composite dust	Epoxy-Solvent fumes	
Pollutant emitted					
Tons per year emitted	.042 Tons	.050 Tons	.017 Tons	.032 Tons	

Provide a plan of the roof, showing location of stacks and vents, and indicate the height of same. Standard Industrial Classification code for installation 3079

CERTIFICATION I certify that I have examined the above and to the best of my knowledge it is true and complete. (Signature subjects signer to provisions of the General Statutes regarding false and misleading statements)

James F. Murphy
SIGNATURE

James F. Murphy
PRINTED NAME

Assistant Vice President
TITLE

6/24/86
DATE

VOLATILE ORGANIC COMPOUND USAGE

Form AP - 5 DEQE - 85

Send original to DEQE Regional Office, retain a copy.

Commonwealth of Massachusetts
Department of Environmental Quality Engineering
Division of Air Quality Control

For Period Jan. 1 to Dec. 31, 19 85

This area to be completed by DEQE.

New Source Existing source

STATE	COUNTY	AQCR	PLANT ID NO.	RECORD YR.	DATE DAY	RPA ID	CITY	UTM ZONE	OWN. FR	UTM Coord. HORIZ. VERT.
1	13	17	110	14	116	19	136	40	42	

Facility Identification: 31079

PERSON TO CONTACT: JAMES F. MURPHY SIC: 617 AREA CD: 158 PHONE NUMBER: 861 6600 Update code: 01

BUSINESS NAME (EX: UNION PUMP PARTS DIVISION): W. R. GRACE BUSINESS ADDRESS (EX: 14 ROWE ST. BOSTON): 21 RAMAH CIRCLE AGAWAM MA NO. OF EMPLOYEES: 75 (Zero fill to left)

MAILING ADDRESS: 55 HAYDEN AVE CITY OR TOWN: LEXINGTON STATE: MA ZIP CODE: 02178

Usage no. ▶	1	2	3	4
1. Usage category	PAINTING	CLEANING	CLEANING	PRE-PREG
2. Type of material coated, cleaned, processed	Fiberglass/composites	Fiberglass/syntactic foam	Fiberglass, syntactic foam, composites	Graphite Cloth
3. Description of process equipment or coating method	Spray Painting	Equip. Cleaning	Equipment and composite cleaning	Dip Coating
4. Amt. of material processed per yr.	177 parts	variable	variable	variable
5. Drying method (air, drying oven, etc)	Air	Air	Air	Oven dried
6. Annual usage of VOC containing formulation (gal per yr)	17	1760	508	32.1
7. Weight % of VOC in formulation	X .45	100	100	X .45
8. Chemical name of VOC	attached sheet	methylene chloride	Acetone	attached sheet
9. Density of VOC containing formulation shown in item 6 (lbs per gal)	X 13.45	8.9	7.03	10.2
10. Density of component VOC shown in item 8 (lbs per gal)	Varies	8.9	7.03	7.88
11. Chemical name of solvent thinner added to above formulation	None	None	None	None
12. Volume of thinner used (gal per yr)	0	0	0	0
13. Density of VOC thinner (lbs per gal)	0	0	0	0
14. Wt. of recovered, reclaimed, or disposed VOC (off-site) which was not emitted to ambient air (lbs per year)	0	7800	0	0
15. Recovery, reclamation, or disposal method	None	Hazardous Waste	None	None
16. Wt. of VOC combined with product and not emitted to ambient air (lbs/yr)	0	0	0	0
17. Type of add-on control equipment	None	None	None	None
18. Total control efficiency	0	0	0	0
19. Weight of VOC controlled (lbs/yr)	0	0	0	0
20. VOC emissions (tons per year)	.05	3.9	1.8	.07
21. Indicate applicable stack numbers AP-2 or general ventilation	#19	General Ventilation	General Ventilation	#2

Please list the name and address of the companies from whom you purchase, or contract to dispose, recover or reclaim the VOC containing formulations:

COMPANY	ADDRESS	TYPE OF MATERIAL	PURPOSE OF CO
1. Astro Chemicals	Springfield, MA	Acetone & Methylene-Chloride	Purchase
2. Clean Harbors	Natick, MA	Methylene Chloride	Disposal
3. Dupont DeNemours	Wilmington, DE	NR-150	Purchase
4.			

In total, how many gallons of VOC containing formulations, such as cleaning fluids, coatings, adhesives, inks, or solvents are purchased by this facility annually? 2317 gallons per year

Remarks: See Attachment #1 for further description of VOCs in Usage #1 and

CERTIFICATION I certify that I have examined the above and to the best of my knowledge it is true and complete.

James F. Murphy, Jr. Assistant Vice President 6/2

Attachment #1

#1 VOC present in paints consist of:

- Methyl Ethyl Ketone
- Tolvane
- Methyl N-Butyl Ketone
- Butyl Cellosolve
- Xylene
- Iso Butyl Alcohol
- N-Butyl Acetate
- Ethyl Acetate
- Cellosolve Acetate
- Ethylene Glycol Mono ethyl Ether

#4 VOC present in pre-preg material consist of:

- Diethylene Glycol Dimethyl Ether
- 2,2,-BIS (3,4 Dicarboxy Phenyl Hexafluro Propane

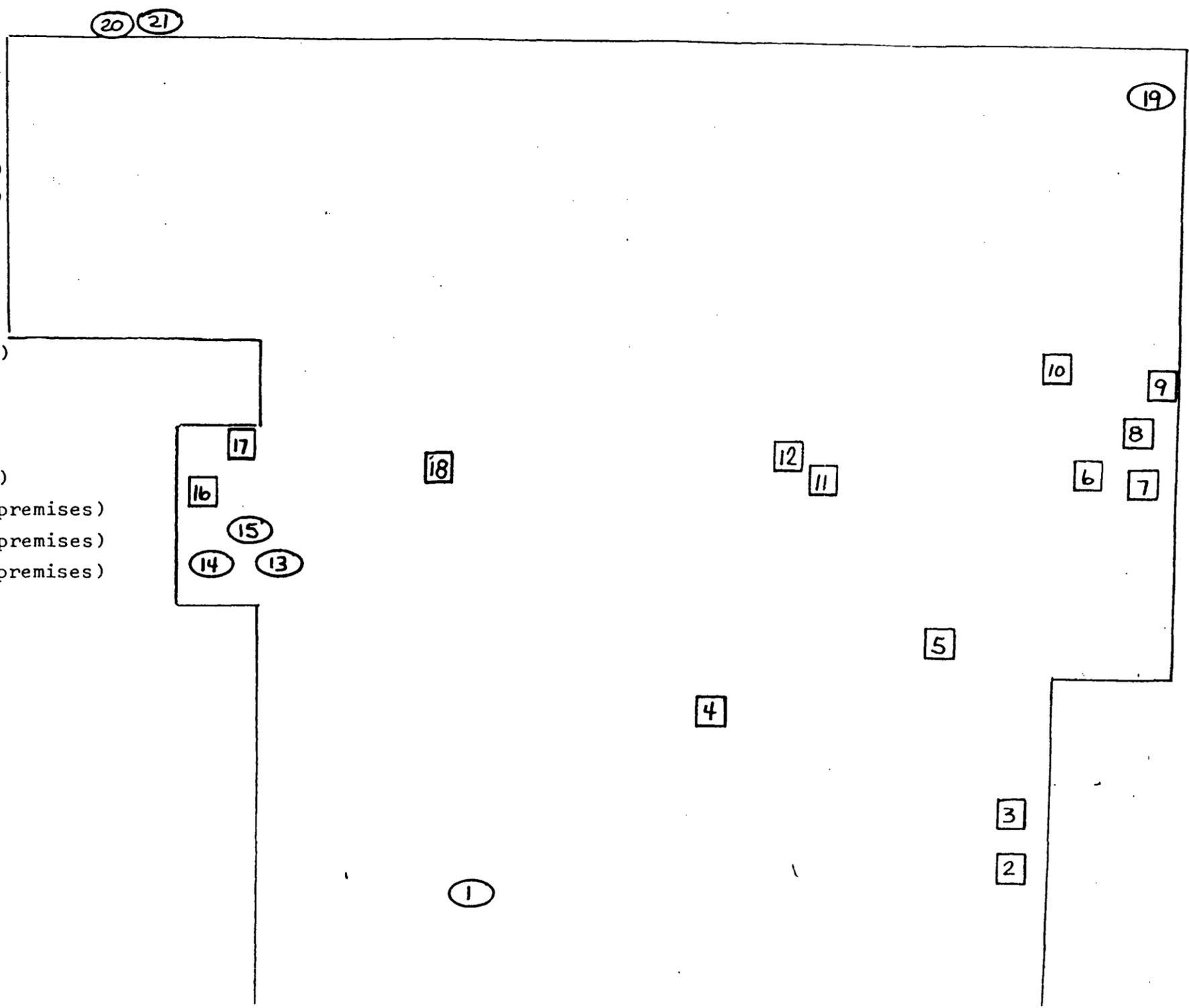
SS
6/17/86

Stack Location Key

- 1. Gas Boiler
- 2. Electric Oven (Not Used)
- 3. Electric Oven (Not Used)
- 4. Electric Exhaust (CM)
- 5. Electric Oven (GY)
- 6. Electric Oven (LAB)
- 7. Electric Oven (LAB)
- 8. Exhaust Stack (not used)
- 9. Lab Hood
- 10. Electric Oven (LAB)
- 11. Electric Hood (GY)
- 12. Exhaust Stack (not used)
- 13. Gas Oven (no longer on premises)
- 14. Gas Oven (no longer on premises)
- 15. Gas Oven (no longer on premises)
- 16. Electric Oven (MOLD)
- 17. Electric Oven (MOLD)
- 18. Exhaust Hood (MOLD)
- 19. Paint Booth
- 20. Dust Collector
- 21. Dust Collector

Emerson & Cuming, Inc.
 Composite Technologies
 21 Ramah Circle
 Agawam, Massachusetts

Facility Roof Plan



ASSETS PURCHASE AGREEMENT

REINFORCED PLASTICS BUSINESS - TEX-TECH INDUSTRIES, INC.

AGREEMENT dated March 5, 1985 between EMERSON & CUMING, INC., a Delaware corporation having its principal executive offices at 869 Washington Street, Canton, Massachusetts 02021 and TEX-TECH INDUSTRIES, INC., a Delaware corporation having its principal executive offices at 150 Industrial Park Road, Middletown, Connecticut 06457,

In consideration of the mutual covenants and agreements herein contained, the parties hereto agree as follows:

1. Definitions

As used in this Agreement, the following defined terms shall have the meanings set forth in this Article. All Article and Section numbers used in this Agreement refer to Articles and Sections of this Agreement unless otherwise specifically described.

1.01 "Buyer" means Emerson & Cuming, Inc., a Delaware corporation.

1.02 "Seller" means TEX-TECH Industries, Inc., a Delaware corporation.

1.03 "RPD" means the division of Seller engaged in the RP Business.

1.04 "RP Business" means the business presently conducted by Seller relating to the research, development, manufacture and sale of reinforced plastics and syntactic foam materials, but excluding the Excluded Business.

1.05 "Excluded Business" means that portion of the business of Seller which pertains principally to the research, development, manufacture and sale of either (a) riser pipe buoyancy modules made from syntactic foam used in offshore oil and gas drilling, or (b) one-piece seamless spheres and/or exotherm resins, whether or not for use in connection with such riser pipe buoyancy modules.

1.06 "Subject Assets" means all of the assets, properties and rights of Seller, tangible or intangible, real, personal or mixed which relate to or are used in the RP Business, including, but not limited to, the Subject Technology, the trade name Warco and the Warco logo (both subject to the limitations of Section 8.02) and such other assets as are reflected in the Schedule of Assets, except (a) the Excluded Assets, and (b) such assets, properties and rights as may have been disposed of after November 30, 1984 and prior to the Closing (i) in the ordinary course of business without involving any misrepresentation or breach of warranty or covenant by Seller, or (ii) with the express written consent of Buyer.

1.07 "Excluded Assets" means (a) the trade name "Syncom" and the trademark "Warcofloat" U.S. Registration

No. 1,079,902, including confusingly similar variations thereof or combinations therewith, (b) U.S. Patent Nos. 4,482,590, 4,040,165, 3,996,654, 4,410,639 and 4,412,012 and the Excluded Technology, and all files, documents, papers, agreements, formulae and other records pertaining to such patents or the Excluded Technology, (c) all properties, assets and rights of Seller, tangible or intangible, real, personal or mixed, which relate principally to or are used principally in the Excluded Business, including, without limitation, those assets designated in the schedule to this Section, and (i) all machinery, equipment, raw materials and supplies used principally in the production of, and all completed inventory and work in process of, riser pipe buoyancy modules, one-piece seamless spheres or exotherm resins, (ii) all accounts receivable arising from, and executory contracts for the sale of, riser pipe buoyancy modules, (iii) the leased property of Seller located in Roach Bank, England and all leasehold improvements and other assets contained therein, and (iv) all files, documents, papers, agreements, formulae and other records relating principally to the Excluded Business, (d) certain tools, dies and molds provided by Seller to Crellin, Inc., an Affiliate of Seller, for use in producing two-piece seamed spheres supplied by Crellin, Inc. to Seller, (e) Seller's real property, including the buildings situated thereon and improvements contained therein, located in Enfield, Connecticut, (f) existing employee, management or consulting contracts between Seller and present or past employees or consultants,

(g) claims for refund of taxes and other governmental charges of whatever nature for all periods prior to the Closing, (h) cash, cash items and interests in bank accounts (except as otherwise specifically provided in Section 2.08), (i) rights and funds in connection with retirement, employee benefit and similar plans (except as otherwise specifically provided in Article 7), (j) all interests in and rights to insurance contracts and policies and any prepaid insurance premiums with respect thereto and all claims under such contracts and policies, (k) all claims, actions, suits, proceedings and other rights of recovery (excluding any of the foregoing relating to the collection of accounts receivable included among the Subject Assets) relating to the conduct by Seller of the RP Business prior to March 4, and (l) all other assets, properties and rights listed in the schedule to this Section.

1.08 "Excluded Technology" means (a) all technology and know-how covered by the claims of U.S. Patent Nos. 4,482,590, 4,040,165, 3,996,654, 4,410,639 and 4,412,012, and (b) all other technology and know-how of Seller which pertains to (i) the manufacture of seamless spheres and/or exotherm resins, (ii) the use of Seller's seamless spheres, the seamed spheres produced from Seller's tools, dies and molds and/or Seller's exotherm resins in the manufacture of syntactic foam modules or (iii) the method of attachment of syntactic foam modules incorporating Seller's seamless spheres or Seller's seamed spheres and/or Seller's exotherm resins to, or the incorporation of such syntactic foam modules in, devices which require buoyancy.

1.09 "Subject Technology" means all technology and know-how of Seller which pertains to the RP Business, other than Excluded Technology.

1.10 "Assumed Liabilities" means, to the extent not paid or satisfied prior to the Closing, (a) all trade accounts payable of Seller which (i) were incurred in the ordinary course of the RP Business and are listed in the schedule to this Section, other than those accounts which are, under the terms of the invoices related thereto, more than 30 days overdue or (ii) were incurred in the ordinary course of the RP Business after March 1, 1985, other than any such payable which, individually, is for an amount greater than \$500.00, and (b) any sales taxes relating to the sale of merchandise which is the subject of accounts receivable acquired by Buyer hereunder.

1.11 "Assumed Obligations" means (a) the obligations to be performed and fulfilled by Seller on and after the Closing under (i) the executory contracts, purchase orders and agreements listed in the schedule to this Section to the extent such contracts, purchase orders and agreements are either duly and effectively assigned to Buyer at the Closing or are duly assigned to Buyer and such assignment is recognized by the other party thereto, and (ii) such other executory contracts, purchase orders and agreements which (x) exist on the date of the Closing, (y) were entered into in the ordinary course by Seller in connection with its conduct of the RPBusiness, and (z) pertain either to the sale

of products in the course of the RP Business or the purchase of raw materials, equipment or supplies for use in the RP Business, to the extent such executory contracts, purchase orders and agreements are either duly and effectively assigned to Buyer at the Closing or are duly assigned to Buyer and such assignment is recognized by the other party thereto, and provided that no such executory contract, purchase order or agreement is for an amount greater than \$1,000 individually, (b) ad valorem real or personal property taxes on the Subject Assets for the period after March 3, 1985, and (c) all liabilities and obligations (including, but not limited to, product and other tort liability and warranty obligations) relating to or arising from (i) the performance by Buyer after the date of the Closing of any contract, purchase order or agreement included in clause (a) of this Section 1.09 or (ii) any inventory or work in process included in the Subject Assets.

1.12 "Closing" means the actions carried out on the date hereof as described in Article 2.

1.13 "Schedule of Assets" means the Schedule of Assets and Liabilities of RPD as of November 30, 1984, certified by the President of Seller and previously delivered by Seller to Buyer.

1.14 "Schedule Date" means November 30, 1984.

1.15 "Seamless and Seamed Spheres Supply Agreement" means the Supply Agreement of even date herewith

between Seller and Buyer relating to the sale of seamless and seamed spheres.

1.16 "Exotherm Resins Supply Agreement" means the Supply Agreement of even date herewith between Seller and Buyer relating to the sale of exotherm resins.

1.17 "Closing Statement", "Working Capital Amount", "Inventory Amount" and "Receivables" have the respective meanings specified in Article 3.

1.18 "Affiliate" of any person or entity means any corporation, partnership, association, entity or enterprise which directly or indirectly controls, is controlled by, or is under common control with, such person or entity.

1.19 "Code" means the Internal Revenue Code of 1954, as amended.

1.20 "ERISA" means the Employee Retirement Income Security Act of 1974, as amended.

1.21 "AIC" means Albany International Corp., a New York corporation and prior owner of the RP Business.

1.22 "CHUSA" means Charterhouse Group International, Inc., a Delaware corporation and Affiliate of Seller.

2. Purchase and Sale of Subject Assets; consideration;
operation of business by Seller on March 4

2.01 On the terms and subject to the conditions of this Agreement, at the Closing Seller is selling to

Buyer the RP Business and the Subject Assets.

2.02 In reliance on the representations and warranties of Seller contained in this Agreement, and on the terms and subject to the conditions of this Agreement, Buyer is purchasing the Subject Assets at the Closing.

2.03 At the Closing, in full consideration of the purchase of the Subject Assets provided for in Section 2.02 and in full payment therefor, Buyer is:

(a) delivering \$1,725,000 to Seller; and

(b) executing and delivering to Seller an assumption agreement pursuant to which it is assuming and agreeing to perform and fulfill the Assumed Obligations and to pay and discharge the Assumed Liabilities.

2.04 Except as otherwise provided in Section 2.03, Buyer is not assuming any liabilities or obligations of Seller, regardless of whether such liabilities or obligations were incurred in connection with the Subject Assets or RP Business.

2.05 At the Closing, Seller is:

(a) executing and delivering to Buyer bills of sale, endorsements, assignments and other instruments of sale, conveyance, transfer and assignment with all required federal, state and local documentary and transfer stamps, if any, affixed, containing warranties consistent with the representations and warranties contained in this Agreement, in order effectively to

vest in Buyer title to the Subject Assets; and

(b) delivering to Buyer all files, documents, papers, agreements, formulae and other records pertaining to the Subject Assets.

2.06 At the Closing Seller and Buyer are entering into the Seamless and Seamed Spheres Supply Agreement and the Exotherm Resins Supply Agreement.

2.07 At any time and from time to time after the Closing, Seller shall, at the request of Buyer, or Buyer shall, at the request of Seller, execute and deliver or cause to be executed and delivered all such deeds, bills of sale, endorsements, assignments, consents and other instruments of sale, conveyance, transfer and assignment, and take or cause to be taken all such other actions as Buyer or Seller, as the case may be, may deem necessary or desirable to more fully and effectively vest in Buyer or to confirm Buyer's title to and possession of the Subject Assets or to assist Buyer or Seller, as the case may be, in exercising rights with respect thereto or otherwise to carry out the intents and purposes of this Agreement.

2.08 Buyer shall have the right to receive all cash and other receipts relating to the RP Business which are received by Seller on, or are accruable as of March 4, 1985. All payroll expenses for the period beginning March 4, 1985

which are associated with those employees of Seller listed on the schedule to Section 8.01 who transfer to the employ of Buyer on the date hereof shall be for Buyer's account. Normal and usual operating expenses associated with the operation of Seller's facility in Agawam, Massachusetts on March 4, 1985 shall be for Buyer's account.

2.09 Ad valorem real or personal property taxes relating to the Subject Assets for the tax period in which the Closing occurs shall be prorated between Seller and Buyer as of 12:01 A.M. on March 4, 1985.

3. Post-Closing Adjustment

3.01 The books of Seller relating to RPD were closed as of the close of business on March 1, 1985 and inventories relating to RPD were taken following such close of business. Seller did not operate the RP Business on March 2 or 3, 1985.

3.02 As soon as practicable after the Closing, but in any event not later than 15 days following the Closing, Seller shall deliver to Buyer a statement (the "Closing Statement") setting forth the amount of working capital as of the date of the Closing ("Working Capital Amount"), computed in accordance with Section 3.03. Seller and Buyer shall provide access to facilities and make available the services of their employees to the extent reasonably required for the purpose of determining the Working Capital Amount.

3.03 The Working Capital Amount shall be an amount equal to the sum, as of the close of business on March 1, 1985, of (a) the value of the inventory included in the Subject Assets (the "Inventory Amount"), as determined in accordance with Section 3.04(a); and (b) the value of notes and accounts receivable included in the Subject Assets ("Receivables"), as determined in accordance with Section 3.04(b), less (c) the value of the Assumed Liabilities, as determined in accordance with Section 3.04(c).

3.04(a) The Inventory Amount shall be determined in accordance with the schedule to this Section.

(b) The value of the Receivables shall be the face amount thereof less such reserve, if any, as shall be reasonably required to reflect the existence of doubtful accounts in accordance with generally accepted accounting principles.

(c) The value of the Assumed Liabilities shall be the sum of their respective stated amounts.

3.05 In the event that Buyer does not object to the Working Capital Amount by written notice of objection delivered to Seller within 15 calendar days after Buyer's receipt of the Working Capital Amount, setting forth objections thereto in reasonable detail, then the Working Capital Amount delivered by Buyer shall be deemed conclusive and binding as between the parties.

3.06 If Buyer does so object to the Working Capital Amount, then Buyer and Seller shall promptly endeavor

to agree upon the proper amount of the Working Capital Amount. In the event that a written agreement determining the Working Capital Amount has not been reached within 30 calendar days after Seller's receipt from Buyer of Buyer's notice of objection to the Working Capital Amount, then either Buyer or Seller may, by notice to the other, submit for determination in accordance with this Section the question of what adjustments, if any, must be made in the Working Capital Amount as set forth in the Closing Statement delivered by Seller to Buyer in order for the Working Capital Amount to be determined in accordance with the provisions of this Agreement. Any such determination shall be made by a nationally-recognized firm of independent accountants (the "Arbitrator") agreed upon by Buyer and Seller, or, if an agreement choosing the Arbitrator has not been reached in writing within 10 calendar days after written request therefor by one such party to the other, then the Arbitrator shall be chosen by the President of the American Arbitration Association from among candidates proposed by Buyer and Seller, it being agreed that such candidates shall not include Price Waterhouse or Coopers & Lybrand. Any such determination made by the Arbitrator shall be conclusive and binding on Buyer and Seller. The fee of the Arbitrator associated with such determination shall be shared by Buyer and Seller as follows: Each such party shall bear that portion of such fee equal to such fee multiplied by a fraction, the numerator of which shall be the difference between the Working

Capital Amount as determined by the Arbitrator and the Working Capital Amount as proposed by such party, and the denominator of which shall be the difference between the Working Capital Amount as proposed by Buyer and the Working Capital Amount as proposed by Seller. In the event that the Working Capital Amount as determined by the Arbitrator shall be either more than the higher of the Working Capital Amounts proposed by a party hereto or less than the lower of the Working Capital Amounts proposed by a party hereto, then, for purposes of determining the allocation as between Buyer and Seller of the fee of the Arbitrator hereunder, the Working Capital Amount as determined by the Arbitrator shall be deemed to be either the higher of the Working Capital Amounts so proposed or the lower of the Working Capital Amounts so proposed, as the case may be. All other costs and expenses of arbitration shall be borne by the party incurring the same.

3.07 Promptly after determination of the Working Capital Amount by notice without objection as provided in Section 3.05, or by written agreement between Buyer and Seller or action of the Arbitrator as provided in Section 3.06, an adjusting payment shall be made in accordance with this Section. If the Working Capital Amount is less than \$ 690,000, then Seller shall pay to Buyer in cash an

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amount equal to the difference between the Working Capital Amount and such sum, provided that if the difference between the Working Capital Amount and such sum exceeds an amount equal to 10 percent of such sum, then Seller's liability to Buyer on account of such difference shall be limited to 10 percent of such sum. If the Working Capital Amount is more than \$ 690,000, then Buyer shall pay to Seller in cash an amount equal to the difference between the Working Capital Amount and such sum, provided that if the difference between the Working Capital Amount and such sum exceeds an amount equal to 10 percent of such sum, then Buyer's liability to Seller on account of such difference shall be limited to 10 percent of such sum. If any such adjusting payment exceeds \$10,000, interest shall be paid on the excess over \$10,000 for the period from the date of the Closing to and until the date such payment is made, at the rate of 10 percent per annum.

3.08 Nothing herein shall be construed to authorize or permit the Arbitrator to determine any question or matter whatever under or in connection with this Agreement except the determination of what adjustments, if any, must be made in one or more of the individual items listed in the Closing Statement delivered by Buyer in order for the Working Capital Amount to be determined in accordance with the provisions of

this Agreement. Nothing herein shall be construed to require the Arbitrator to follow the rules or procedures of the American Arbitration Association.

4. Representations and Warranties by Seller

Each of the schedules described in this Article is dated the date of this Agreement, identified specifically as a schedule to a particular Section, certified by the President of Seller, and has been delivered to Buyer by Seller. Where representations are made in this Article to the knowledge of Seller, Seller shall be deemed to have knowledge only with respect to those matters which, after due inquiry of Messrs. Carl Franz and Mitchell Turek and such other executive or supervisory employees of Seller as may be expected to have knowledge of such matters, or which, after reasonable investigation of the files of Donald Reinhard in the possession of Seller, formerly an employee of Seller, are actually known to Arthur M. Spiro, its Chairman of the Board, Anthony J. Centofanti, its President, or Charles Godleski, its Vice President and General Manager--Syncom International Division.

Seller represents and warrants to Buyer as follows:

4.01 Seller is a corporation duly organized, validly existing and in good standing under the laws of the State of Delaware with full corporate power and authority to carry on

the RP Business as and to the extent now being conducted by it and to own the Subject Assets. Seller is not qualified to do business as a foreign corporation in any jurisdiction other than the States of Connecticut, Massachusetts, Maine and Arizona and no state has notified Seller of any claim by it that Seller is required to so qualify in such other state as a result of the RP Business. In connection with its RP Business Seller does not own any real property or utilize leased premises or regularly locate any of its personal property in any jurisdiction other than states in which Seller is qualified to do business as a foreign corporation, other than Roach Bank, England.

4.02 The execution and delivery of this Agreement and the consummation of the transactions contemplated hereby will not (a) result in the breach of any of the terms or conditions of, or constitute a default under, the charter documents or the by-laws of Seller or any contract, agreement, commitment, indenture, mortgage, pledge agreement, note, bond, license or other instrument or obligation to which Seller is now a party or by which Seller or any of the properties or assets of Seller may be bound or affected, or (b) violate any law, or any rule or regulation of any administrative agency or governmental body, or any order, writ, injunction or decree of any court, administrative agency or governmental body applicable to Seller.

4.03 The execution and delivery of this Agreement by Seller and the consummation of the transactions contemplated hereby have been duly and validly authorized by all necessary corporate action on the part of Seller. This Agreement has been duly executed and delivered by Seller and is legally binding on Seller.

4.04 Except as set forth in the schedule to this Section, or as otherwise contemplated in the Seamless and Seamed Spheres Supply Agreement and the Exotherm Resins Supply Agreement,

(a) neither Seller nor any director, officer, or principal executive of Seller, nor to the knowledge of Seller, CHUSA, owns, directly or indirectly, any interest in, or is a director, officer or employee of, or consultant to, any corporation, partnership, firm, association or business organization, entity or enterprise which is a competitor, supplier or customer of the RP Business, provided that ownership of not more than 2% of the capital stock of any corporation listed on a national securities exchange or quoted in the NASDAQ System shall not be deemed to be ownership of an interest in such corporation for purposes of this Section;

(b) no director, officer, principal executive, nor to the knowledge of Seller, employee, of Seller, owns, and

CHUSA does not own, directly or indirectly, in whole or in part, any property, asset or right, tangible or intangible (including, but not limited to, any patent, trademark, service-mark, trade name, brand name, copyright, pending application for any patent, trademark, servicemark or copyright, invention, process, know-how, or technology), which Seller is presently operating or using in the RP Business or the use of which is necessary for the RP Business, provided that ownership of not more than 2% of the capital stock of any corporation listed on a national securities exchange or quoted in the NASDAQ System shall not be deemed to be ownership of an interest in such a property, asset or right for purposes of this Section; and

(c) since December 30, 1983, neither CHUSA nor any director, officer, principal executive or, to the knowledge of Seller, employee of Seller, has, directly or indirectly, engaged in any transaction with RPD, except transactions inherent in the capacities of director, officer, employee, consultant or stockholder.

4.05 Except as specifically set forth in the schedule to this Section, there has not been since the Schedule Date:

(a) any change in the condition (financial or other), properties, assets, liabilities or business of RPD except normal

and usual changes in the ordinary course of business which have not in any one case or in the aggregate been materially adverse;

(b) any damage, destruction or loss (whether or not covered by insurance) materially and adversely affecting the Subject Assets;

(c) any change in the accounting methods or practices followed by Seller as it relates to the RP Business or any change in depreciation, amortization or inventory valuation policies or rates theretofore used or adopted;

(d) any sale, lease, abandonment or other disposition by Seller of any interest in real property relating to the RP Business, or, other than in the ordinary course of business, of any machinery, equipment or other operating property relating to the RP Business, or any sale, assignment, transfer, license or other disposition by Seller of any patent, trademark, servicemark, trade name, brand name, copyright (or pending application for any patent, trademark, servicemark or copyright), invention, process, know-how, technology or other intangible asset relating to the RP Business;

(e) any change in the sales personnel of RPD or the customers of RPD which adversely affects or, in Seller's reasonable judgment, may adversely affect the RP Business; or

(f) any other occurrence, event or condition which adversely affects or, in Seller's reasonable judgment, may adversely affect the properties, assets or business of RPD.

4.06 Seller has cooperated fully with Price Waterhouse in the special review of the financial statements of Seller relating to RPD made by Price Waterhouse prior to the date hereof, and has made available to Price Waterhouse all data and information relating to RPD which Price Waterhouse has requested.

4.07 The schedule to this Section sets forth a complete description by metes and bounds or lot, block and section of each parcel of real property owned by Seller which is included in the Subject Assets, together with a summary description of the buildings, structures and improvements thereon. Except as specifically set forth in the schedule to this Section, Seller has good and marketable title in fee simple absolute to all such real property and to the buildings, structures and improvements thereon, in each case free and clear of all security interests, liens, encumbrances, mortgages, pledges, equities, charges, assessments, easements, covenants, restrictions, reservations, defects in title, encroachments and other burdens, whether or not the same render the title to such real property unmarketable, except for (a) liens securing the claims or

demands of materialmen, mechanics or warehousemen, provided such claims or demands are not presently due and owing and (b) liens in favor of Manufacturers Hanover Commercial Corporation ("MHCC"), which liens are being released or satisfied simultaneously with the Closing.

4.08 None of the real property or premises, buildings and improvements included in the Subject Assets is subject to any contract, agreement, concession, lease or other commitment relating to or affecting such real property or premises, buildings and improvements, except for nonmaterial contracts or agreements entered into in the ordinary course of business.

4.09 Seller has all easements and rights of ingress and egress necessary for utilities and services, and for all operations conducted by it, at sites included in the Subject Assets. Neither the whole nor any portion of any real property included in the Subject Assets has been condemned, requisitioned or otherwise taken by any public authority, and, to Seller's knowledge, no such condemnation, requisition or taking is threatened or contemplated.

4.10 Except as specifically set forth in the schedule to this Section, Seller has good title to all personal property included in the Subject Assets which it

purports to own free and clear of all security interests, liens, encumbrances, pledges, defects in title, restrictions and other burdens, except for (a) liens in favor of MHCC, which liens are being released or satisfied simultaneously with the Closing, (b) the claims or interests of vendees in goods which may be included in inventory under outstanding purchase orders with such vendees, and (c) liens securing the claims or demands of materialmen, mechanics or warehousemen, provided such claims or demands are not presently due and owing.

4.11 The schedule to this Section sets forth (a) a list of all machinery, equipment, vehicles, and other tangible personal property covered by each lease of personal property included in the Subject Assets to which Seller is a party, (b) a description of all other interests (except ownership interests) of Seller in tangible personal property relating to RPD, and (c) a list of all contracts, agreements, leases and commitments relating to or affecting any interest in tangible personal property relating to RPD to which Seller is a party or by which Seller or any property of Seller relating to RPD is in any way bound, other than those required to be listed in the schedule to Section 4.19 or which would be required to be so listed but for the dollar or other limitations set forth in such Section, together with all amendments and supplements thereto and modifications thereof

(each such list setting forth general categories rather than specific items in the case of routine and immaterial matters). Seller has heretofore delivered to Buyer true and complete copies of all such contracts, agreements, leases, commitments, amendments, supplements and modifications, all of which are legally valid and binding and in full force and effect; and there are no defaults thereunder. Except as specifically set forth in the schedule to this Section or in the schedule to Section 4.10, no such leasehold or other interest of Seller in tangible personal property relating to RPD is subject or subordinate to any security interest, lien, encumbrance, mortgage, pledge, equity, defect in title or other burden, except for (a) liens in favor of MHCC, which liens are being released or satisfied simultaneously with the Closing, (b) liens securing the claims or demands of materialmen, mechanics or warehousemen, provided such claims or demands are not presently due and owing, and (c) the claims or interests of vendees in goods which may be included in inventory under outstanding purchase orders with such vendees. None of the rights of Seller under any such leasehold or other interest in tangible personal property will be impaired by the consummation of the transactions contemplated by this Agreement, and all of such rights will be enforceable by Buyer after the Closing without the consent or agreement of any other party, except consents and agreements specifically described in the schedule to this Section.

4.12 Except as specifically set forth in the schedule to this Section, all buildings, offices, shops and other structures and all machinery, equipment, tools, dies, fixtures, vehicles, spare parts and other properties owned, leased or used by Seller included in the Subject Assets have, since the date of their acquisition or lease by Seller, been maintained in accordance with customary manufacturing standards and are currently in such condition as may be reasonably expected, given such maintenance, the age thereof and the nature and extent of the prior use thereof.

4.13 Except as specifically set forth in the schedule to this Section, none of the real or personal property included in the Subject Assets owned, leased, occupied or operated by Seller, or the ownership, leasing, occupancy or operation thereof, is in violation of any applicable law, code, rule, regulation, ordinance, license or permit, including, but not limited to, those related to building, zoning, environmental matters or employee health and safety, and no notice from any governmental body or other person has been served upon Seller or, since December 30, 1983, upon any such property owned, leased, occupied or operated by Seller claiming any violation of any such law, code, rule, regulation, ordinance, license or permit, or requiring, or calling attention to the need for, any work,

repairs, construction, alterations or installation on or in connection with such property which has not been complied with. Seller has the right to use the Subject Assets for all operations relating to the RP Business. None of the rights of Seller to use the Subject Assets will be impaired by the consummation of the transactions contemplated by this Agreement, and all of such rights will be enforceable by Buyer after the Closing without the consent or agreement of any party, except consents and agreements specifically described in the schedule to this Section.

4.14 The inventories of Seller included in the Subject Assets consist of items of a quality and quantity in all material respects usable or salable in the normal course of the RP Business.

4.15 All notes and accounts receivable of Seller included in the Subject Assets have arisen in the ordinary course of business.

4.16 Except for items included among the Excluded Assets, there are no U.S. or foreign patents or patent applications owned or controlled (in the sense of having the right to license others) by Seller, or under which Seller holds any license or other right, and which relate to the RP Business. For the conduct by Buyer of the RP Business as now conducted by Seller, no right, license, consent or

other agreement (other than the Seamless and Seamed Spheres Supply Agreement and the Exotherm Resins Supply Agreement) will be required with respect to any patent, invention, know-how or technology existing as of the date of the Closing. No infringement by Seller of any U.S. or foreign patent rights has occurred or been involved since December 30, 1983 in connection with the conduct by Seller of the RP Business. To the knowledge of Seller, no claim of any such patent infringement by Seller has been made and there is no patent or patent application anywhere which poses or, in Seller's reasonable judgment, may pose any such infringement questions or issue.

4.17 As used in this Section, the term "Proprietary Name" means any trademark, servicemark, trade name, brand name or the like, whether registered or unregistered, not included among the Excluded Assets. Except for the trade name "Warco" and the Warco logo, there are no Proprietary Names owned or controlled (in the sense of having the right to license others) by Seller, used by Seller or under which Seller holds any license or other right and which relate to the RP Business. For the conduct by Buyer of the RP Business as now conducted by Seller, no right, license, consent or other agreement is or will be required with respect to any

Proprietary Name or copyright existing as of the date of the Closing, other than the rights to Warco and the Warco logo, being transferred by Seller to Buyer in accordance with the terms hereof. No infringement by Seller of any Proprietary Name or copyright has occurred or been involved since December 30, 1983 in connection with the conduct by Seller of the RP Business. To the knowledge of Seller, no claim of any such infringement by Seller has been made and there is no Proprietary Name or copyright anywhere which poses or, in Seller's reasonable judgment, may pose any such infringement question or issue. To the knowledge of Seller, (a) there has been no threat or, in Seller's reasonable judgment, other indication that any such proceeding hereafter will be commenced, (b) there is no reasonable basis for any such proceeding hereafter to be commenced, (c) Warco and the Warco logo are not being infringed by others and (d) since December 30, 1983 no other person has used or registered, or has sought to use or register, the trade name Warco or the Warco logo in any jurisdiction or for any use that would infringe upon or otherwise conflict with the current use of Warco or the Warco logo in connection with the RP Business.

4.18 To the knowledge of Seller, no employee of RPD has entered into any agreement which is now in effect with any person, corporation, partnership or other business entity (other than Seller) requiring such employee to assign any interest in inventions or trade secrets or to keep confidential any trade secrets or containing any prohibition or restriction of competition or solicitation of customers.

4.19 The schedule to this Section lists specifically each of the following contracts, agreements, commitments to which Seller is a party and which relate to the RP Business or by which any of the Subject Assets is in any way affected or bound, including all amendments and supplements thereto and modifications thereof:

(a) each contract, agreement or commitment in respect of the sale of products or the performance of services, or for the purchase of inventories, equipment, raw materials, supplies, services or utilities which (i) involves payments or receipts by Seller of \$10,000 or more in the aggregate, or (ii) is not terminable by Seller on no more than 30 days notice, without penalty, or (iii) is not to be fully performed within six months from the date of this Agreement;

(b) each sales agency, distributorship or brokerage agreement, license or franchise;

(c) each collective bargaining, union, employment, noncompetition or secrecy agreement;

(d) each loan or credit agreement, security agreement, guaranty, indenture, mortgage, pledge, conditional sale or title retention agreement, equipment obligation, lease purchase agreement or other instrument evidencing indebtedness, other than the documents, dated December 30, 1983 or August 17, 1984, as the case may be, evidencing those certain loans by MHCC to Seller;

(e) each partnership, joint venture, joint operating or similar agreement; and

(f) each contract, agreement or commitment (other than those of the types covered by subsections (a) through (e), inclusive, of this Section) which (i) involves payments or receipts by Seller of \$10,000 or more in the aggregate, or (ii) is not terminable by Seller on no more than 30 days notice, without penalty, or (iii) is not to be fully performed within six months from the date of this Agreement, or (iv) otherwise materially affects the condition (financial or other) of the Subject Assets or the RP Business.

Seller has delivered to Buyer true and complete copies of all such contracts, agreements, commitments, amendments, supplements and modifications (or the schedule

to this Section includes a description of any such item that is not in writing). All of such contracts, agreements, commitments, amendments, supplements and modifications are legally valid and binding and in full force and effect, and there are no defaults thereunder. None of the rights of Seller thereunder will be impaired by the consummation of the transactions contemplated by this Agreement, and all of the rights of Seller thereunder will be enforceable by Buyer after the Closing without the consent or agreement of any other party except consents and agreements specifically listed in the schedule to this Section.

4.20 Seller is not, and to the knowledge of Seller, is not alleged to be, in default under, or in breach of any term or provision of, any contract, agreement, lease, license, commitment, instrument or other obligation relating to the RP Business. To the knowledge of Seller, no other party to any contract, agreement, lease, license, commitment, instrument or fiduciary of other obligation relating to the RP Business to which Seller is a party is in default thereunder or in breach of any term or provision thereof. There exists no condition or event which, after notice or lapse of time or both, would constitute a default by Seller or, to the knowledge of Seller, any other party to any such contract, agreement, lease, license, commitment, instrument or fiduciary or other obligation.

4.21 There is (a) no suit, action or claim (including, but not limited to, workers compensation claims), (b) no investigation or inquiry by any administrative agency or governmental body, and (c) no legal, administrative or arbitration proceeding pending or, to the knowledge of Seller, threatened, against Seller or an Affiliate of Seller which relates to the RP Business or the Subject Assets, or to which Seller or to the knowledge of Seller, an Affiliate of Seller, is a party which relates to the RP Business or the Subject Assets, and, in the reasonable judgment of Seller, there is no basis or grounds for any such suit, action, claim, investigation, inquiry or proceeding, except as specifically set forth in the schedule to this Section, which schedule also specifies each suit, action, claim, investigation, inquiry or proceeding of a type referred to in this Section. Except as specified in the schedule to this Section, there is no outstanding order, writ, injunction or decree of any court, administrative agency or governmental body or arbitration tribunal against or affecting Seller or, to the knowledge of Seller, an Affiliate of Seller which relates to the RP Business or any of the Subject Assets.

4.22(a) Seller has all governmental leases, licenses and permits necessary to conduct the RP Business as presently conducted by Seller and to operate the Subject Assets, and

such leases, licenses and permits are in full force and effect. No violations exist, and no material violations have existed since December 31, 1983, in respect of any such governmental lease, license or permit of Seller. No proceeding is pending or, to the knowledge of Seller, threatened looking toward the revocation or limitation of any such governmental lease, license or permit and, to the knowledge of Seller, there is no basis or grounds for any such revocation or limitation, except as specifically set forth in the schedule to Section 4.21. In the conduct of the RP Business since December 30, 1983, Seller has complied with all laws, rules, regulations, ordinances, codes, orders, licenses and permits relating to or applicable to the RP Business including, but not limited to, the labor, equal employment opportunity, occupational safety and health, environmental and antitrust laws.

(b) No event, condition, circumstance, activity, practice, incident, action or plan (collectively, an "Event") has occurred since December 30, 1983, and Seller has not received notice of, and to the knowledge of Seller, there was not, any Event prior to December 30, 1983, which may (i) interfere with or prevent continued compliance with any applicable law, regulation, ordinance, code, order, license or permit existing as of the date of the Closing, (ii) give

rise to any common law or legal liability, or (iii) otherwise provide the reasonable basis for any claim, action, suit, proceeding, hearing or investigation, based upon or related to the manufacture, processing, distribution, use, treatment, storage, disposal, transport or handling, or the emission, discharge or actual or threatened release into the environment, of any pollutant, contaminate, hazardous or toxic material, waste material, effluent or atmospheric or other discharge (whether or not regulated under any applicable law, ordinance, code, rule or regulation, having for its purpose the safety of persons or the protection of health or the environment) in connection with the conduct of the RP Business (whether or not by Seller) at any location included in the Subject Assets.

4.23 The schedule to this Section sets forth:

(a) a description of each waste material, effluent or atmospheric or other discharge, whether or not regulated under any applicable law, ordinance, code, rule or regulation having for its purpose the safety of persons or the protection of health or the environment, which is or has been generated incident to the manufacture of each product presently or previously manufactured since December 30, 1983 at any location included in the Subject Assets;

(b) copies of all data (including, but not limited to, reports of laboratory work, animal studies, statistical analysis, epidemiological studies, morbidity studies, and literature references) in the control or possession of Seller relating to or describing the effect on animals or persons of exposure to any of the products, or materials used to make such products, presently or previously manufactured since December 30, 1983 at any location included in the Subject Assets;

(c) a description or summary by reference to, and in sole reliance on, Seller's employee medical records of the effect on past or present employees of Seller employed in the RP Business or at any location included in the Subject Assets, of exposure to each material, effluent or discharge listed pursuant to subsection (a) of this Section, or to any material presently or previously used since December 30, 1983 in the course of the RP Business or at any location included in the Subject Assets; and

(d) a description of the past and present waste disposal practices to the extent related to any of the Subject Assets, including, to the knowledge of Seller, the names and addresses of owners or operators of each location to which wastes were sent for treatment, storage or disposal at any time prior to the Closing, along with a description of each such waste.

4.24 The schedule to this Section lists specifically each of the following, including all amendments and supplements thereto and modifications thereof:

(a) each contract, agreement, arrangement or commitment entered into after December 30, 1983, whether or not fully performed, pursuant to which Seller has acquired or disposed of any substantial portion of its business or assets relating to RPD;

(b) (i) each inspection report, questionnaire, inquiry, demand or request for information relating to RPD received after December 30, 1983 by Seller or, to the knowledge of Seller, by an Affiliate of Seller (and each response of Seller, or, to the knowledge of Seller, such Affiliate thereto), and each statement, report or other document relating to RPD filed after December 30, 1983 by Seller or, to the knowledge of Seller, an Affiliate of Seller with any federal, state or local governmental body or administrative agency (including, but not limited to, the Department of Defense, Securities and Exchange Commission, Federal Trade Commission, Department of Justice, Department of Labor, National Labor Relations Board, Interstate Commerce Commission and equal employment opportunity, health and environmental agencies), or any stock exchange, other than any request for information received from or any filings with

the Internal Revenue Service or state or local taxing authorities in connection with their audits of income tax returns, or routine questionnaires and requests for information received generally by members of the industry in which RPD operates, and (ii) if in the possession or control of Seller or, to the knowledge of Seller, if in the possession or control of an Affiliate of Seller, each inspection report, questionnaire, inquiry, demand or request for information relating to RPD received after January 1, 1980 by AIC from (and, each response by AIC, thereto), and each statement, report or other documents relating to RPD filed after January 1, 1980 by AIC with any federal, state or local governmental body or administrative agency (including, but not limited to, the Department of Defense, Securities and Exchange Commission, Federal Trade Commission, Department of Justice, Department of Labor, National Labor Relations Board, Interstate Commerce Commission and equal employment opportunity, health and environmental agencies) or any stock exchange, other than any request for information received from or any filings with the Internal Revenue Service or state or local taxing authorities in connection with their audits of income tax returns, or routine questionnaires and requests for information received generally by members of the industry in which RPD operates;

(c) each audit report submitted to Seller or, to the knowledge of Seller, an Affiliate of Seller after December 30, 1983 or, if in the possession and control of Seller or, to the knowledge of Seller, such Affiliate, submitted to AIC after January 1, 1980 with respect to RPD;

(d) each market survey, management study, engineering report or other special report or study concerning the business or assets of RPD submitted to Seller or, to the knowledge of Seller, an Affiliate of Seller or, if in the possession and control of Seller or, to the knowledge of Seller, an Affiliate of Seller, submitted to AIC after January 1, 1980, by any independent business, marketing, engineering or other consultant, other than CHUSA; and

(e) each statement (including, but not limited to, completed questionnaires) received after December 30, 1983 by Seller or, to the knowledge of Seller, an Affiliate of Seller or, if in the possession and control of Seller, or, to the knowledge of Seller, an Affiliate of Seller, received after January 1, 1980 by AIC from any employees of RPD concerning conflicts of interest as such employees.

Seller has delivered to Buyer true and complete copies of all of the items listed in the schedule to this Section (or the schedule to this Section includes a description of any such item that is material and is not in writing).

Seller disclaims any representation or warranty with respect to the data or statements set forth or conclusions reached in the reports or studies referred to in Subsection 4.24(d).

4.25 Since December 30, 1983, there has not been any matter under discussion by Seller with any labor union or any strike, work stoppage or labor trouble relating to employees of Seller who are employed in the RP Business, except as specified in the schedule to this Section. Since December 30, 1983 there has not been any change in the relationship or course of dealing between Seller and any of its suppliers or customers that has had or, in the reasonable judgment of Seller, could have an adverse effect on the business of the RP Business, except as set forth in the schedule to this Section.

4.26 The schedule to this Section sets forth (a) the name and current annual salary and other compensation or the rate of compensation (including, but not limited to, normal bonus, profit sharing and other extra compensation) payable by Seller or an Affiliate of Seller to each employee of Seller employed in the RP Business who is a Transferring Salaried Employee (as defined in Section 7.01) and whose total current annual compensation or estimated compensation from Seller or an Affiliate of Seller is \$30,000 or more, (b) any increase, since December 30, 1983, in the total compensation or in the rate of total compensation now payable or to become payable

after the Closing by Seller or an Affiliate of Seller to each such person, (c) any general increase, since December 30, 1983, in the total compensation or rate of total compensation now payable or to become payable after the Closing Date by Seller or an Affiliate of Seller to its salaried employees employed in the RP Business other than those specified in clause (a) of this Section or hourly employees of Seller employed in the RP Business, and (d) all presently outstanding loans and advances (other than routine travel advances repaid or formally accounted for within 60 days and routine vacation advances) made by Seller or an Affiliate of Seller to, or made to Seller or an Affiliate of Seller by, employees of Seller employed in the RP Business and each such loan or advance made since December 30, 1983, and the current status thereof, whether or not presently outstanding. For purposes of this Section "general increase" means any increase generally applicable to a class or group of employees and not including increases granted to individual employees for merit, change in position or responsibility or other reasons applicable to specific employees and not generally to a class or group thereof.

4.27(a) Seller is not a party to, and does not make, and is not required to make, employer contributions to, any pension, profit-sharing, retirement, deferred compensation,

bonus, stock purchase, hospitalization, insurance or other similar plan, agreement, arrangement or understanding maintained for the benefit of the employees employed in the RP Business (an "Employee Benefit Plan"), except the Employee Benefit Plans listed in the schedule to this Section.

(b) Each Employee Benefit Plan complies currently, and has complied in the past, both as to form and operation, with the provisions of the Code, ERISA, and other applicable law (including foreign law), and has been administered to date in compliance with the requirements of the Code.

(c) Seller has paid or accrued all amounts due from it under the terms and actuarial assumptions, if applicable, of each Employee Benefit Plan or ERISA with respect to each Employee Benefit Plan as of the date of the Closing. With respect to a defined benefit pension plan subject to Section 412 of the Code, this shall mean the amount necessary to satisfy the minimum funding standards under such Section 412.

(d) The plans listed in the schedule to this Section as intending to qualify under Section 401(a) of the Code (the "Pension Plans") have applied for favorable determination letters from the Internal Revenue Service.

(e) The aggregate of the annual employer contributions paid to the Pension Plans since their inception is set forth in the schedule to this Section.

(f) No "reportable event" for which a 30-day notice to the Pension Benefit Guaranty Corporation is not waived under 29 C.F.R. Part 2615 (formerly Part 2617) has occurred with respect to the Pension Plans. To the knowledge of Seller, all material reporting and disclosure requirements applicable under the Code or ERISA, and the regulations promulgated thereunder, have been substantially satisfied with respect to all of the Employee Benefit Plans. Neither Seller nor any Affiliate of Seller, nor, to the knowledge of Seller, any other "party in interest", has engaged in a nonexempt "prohibited transaction" (as such terms are defined in Section 3(14) and 406 of ERISA, respectively) with respect to the Pension Plans. Of said Employee Benefit Plans, the defined benefit Pension Plans are the only plans which are subject to Title IV of ERISA.

(g) No lien in favor of the Pension Benefit Guaranty Corporation exists upon the Subject Assets pursuant to Section 4068 of ERISA nor have any events occurred on or before the Closing which could justify the imposition of any such lien.

4.28 The schedule to this Section sets forth each insurance policy, other than those policies which are "employee benefit plans" as described in Section 4.27 (specifying the insurer, the amount of the coverage, the type of insurance, the policy number, the expiration date, the annual premium, any pending claims thereunder and any claims paid thereunder since December 30, 1983), maintained by Seller on the Subject Assets or with respect to the RP Business or personnel, and a list of the most recent inspection reports, if any, received from insurance underwriters as to the condition of the Subject Assets or the conduct of the RP Business. Seller has delivered to Buyer true and complete copies of each such policy and inspection report. Seller is not in default with respect to any provision contained in any such insurance.

4.29 To the knowledge of Seller, no employee, agent or other representative of RPD, acting on behalf of Seller has, directly or indirectly, made or authorized any payment, contribution or gift of money, property or services, whether or not in contravention of applicable law, (a) as a kickback or bribe to any person, or (b) to any political organization or the holder of, or any aspirant to, any elective or appointive office of any nation, state, county, city or other political subdivision or governmental body.

4.30 The affidavit furnished by Seller to Buyer pursuant to Section 1445(b)(3) of the Code stating that Seller is not a foreign person and setting forth the Seller's United States taxpayers identification number is accurate.

5. Representations and Warranties by Buyer

Buyer represents and warrants to Seller as follows:

5.01 Buyer is a corporation duly organized, validly existing and in good standing under the laws of the State of Delaware.

5.02 Buyer is qualified to do business and is in good standing under the laws of the State of Massachusetts.

5.03 The execution and delivery of this Agreement and the consummation of the transactions contemplated hereby will not (a) result in the breach of any of the terms or conditions of, or constitute a default under, the charter documents or by-laws of Buyer or any contract, agreement, commitment, indenture, mortgage, pledge agreement, note, bond, license or other instrument or obligation to which Buyer is now a party or by which Buyer or any of the properties or assets of Buyer may be bound, or (b) violate any law, or any rule or regulation of any administrative agency or governmental body applicable to Buyer.

5.04 The execution and delivery of this Agreement by Buyer and the consummation of the transactions contemplated hereby have been duly and validly authorized by all necessary corporate action of Buyer. This Agreement has been duly executed and delivered by Buyer and is legally binding on Buyer.

5.05 To the knowledge of Buyer, no infringement by Seller of any U.S. or foreign patent rights or Proprietary Names (as such term is defined in Section 4.17) owned or controlled (in the sense of having the right to license others) by Buyer which relate to the RP Business has occurred or been involved since December 30, 1983 in connection with the conduct by Seller of the RP Business. For purposes of this Section 5.05, Buyer shall be deemed to have knowledge only with respect to those matters which, after due inquiry of such executive or supervisory employees of Buyer who are responsible for Buyer's reinforced plastics business as may be expected to have knowledge of such matters, are actually known by Charles H. Ehlers, its President and Richard E. Schnyer, its Vice President.

6. Disclaimer of Additional and Implied Warranties

6.01 Buyer acknowledges that except for the explicit representations and warranties of Seller contained in Article 4, Seller is making no other representations or warranties, express or implied, of any nature whatsoever.

6.02 Seller acknowledges that except for the explicit representations and warranties of Buyer contained in Article 5, Buyer is making no other representations or warranties, express or implied, of any nature whatsoever.

7. Benefit Plans

7.01 Promptly after the date of the Closing, but effective as of the date of the Closing, Seller shall cease benefit accruals under the TEX-TECH Industries, Inc. Pension Plan for Salaried Employees ("TEX-TECH Salaried Plan") and the TEX-TECH Industries, Inc. Hourly Retirement Plan (the "TEX-TECH Hourly Plan") with respect to the participants in those plans who are transferring to the employ of Buyer on the date of the Closing (the "Transferring Salaried Employees" and the "Transferring Hourly Employees", respectively) and shall amend those plans to (a) grant to the Transferring Salaried Employees and the Transferring Hourly Employees 100% vesting in their accrued benefits under the provisions of those plans and (b) provide that any benefits payable to the Transferring Salaried Employees or the Transferring Hourly Employees under those plans will be payable no earlier than upon termination of service with Buyer (or any other entity treated as the same "employer" as Buyer under Section 414(b) or (c) of the Code) with the same effect as if the employees' service with Buyer (or such other entity) were service with Seller.

7.02 Promptly after the date of the Closing, Seller shall supply Buyer with a listing of the accrued benefits payable in the form of a straight life annuity commencing at age 65 to each Transferring Salaried Employee under the TEX-TECH Salaried Plan and to each Transferring Hourly Employee under the TEX-TECH Hourly Plan. Such listing shall set forth the years of service credited for benefit accrual purposes for each Transferring Salaried Employee and each Transferring Hourly Employee.

7.03 Buyer shall promptly notify Seller of the date each Transferring Salaried Employee and each Transferring Hourly Employee terminates service with Buyer (or any other entity treated as the same "employer" as Buyer under Section 414(b) or (c) of the Code).

7.04 Seller shall cause the trust fund of the Syncom International, Inc. Investment Plan for Salaried Employees ("Syncom Investment Trust Fund") to transfer to the trust fund of the W. R. Grace & Co. Salaried Employee Savings and Investment Plan ("Grace S&I Trust Fund") an amount in cash equal to the value (as determined below) of the assets held in the Syncom Investment Trust Fund with respect to the Transferring Salaried Employees. The assets shall be valued as of March 31, 1985. The transfer shall

occur on June 30, 1985. No later than July 31, 1985, the assets shall be revalued as of June 30, 1985. In the event that the value of the assets determined as of June 30, 1985 shall be greater than the value of the assets determined as of March 31, 1985, Seller shall cause the Syncom Investment Trust Fund to pay to the Grace S&I Trust Fund the amount of any such difference. In the event that the value of the assets determined as of June 30, 1985 shall be less than the value of the assets determined as of March 31, 1985, Buyer shall cause the Grace S&I Trust Fund to pay to the Syncom Investment Trust Fund the amount of any such difference.

7.05 Seller shall promptly after March 31, 1985 and again promptly after July 31, 1985 supply Buyer with a listing of the account balances of each Transferring Salaried Employee in the Syncom Investment Trust Fund. Such listing shall set forth for each Transferring Salaried Employee the balance in his Salary Deferral Account, Employer Matching Contribution Account, Nondeductible Voluntary Contribution Account, and Rollover Account as such terms are defined in Section 7.01 of the Syncom International, Inc. Investment Plan for Salaried Employees.

7.06 Seller shall transfer to the Grace S&I Trust Fund any amounts received from the trust fund of the Albany

International, Inc. Investment Plan for Salaried Employees ("Albany Investment Trust Fund") with respect to the Transferring Salaried Employees promptly after receipt of such amounts. Seller shall supply Buyer with a listing of the amount transferred with respect to each Transferring Salaried Employer. Such listing shall set forth for each Transferring Salaried Employer the amount of pretax employee contributions, after tax employee contributions, employer contributions and any rollover amounts with earnings thereon.

8. Use of trade names, etc.; Employment matters

8.01 Buyer shall have the right to use the "Syncom" name in its conduct of the RP Business (a) to the extent that such is reasonably necessary to use up existing inventories of packaging materials, provided that Buyer removes, covers or otherwise makes illegible the "Syncom" name appearing thereon, (b) to the extent that it is not practicable to remove such name from physical assets, and (c) on building signs and on vehicles until changes to a different name can be made in an orderly manner. During the period that Buyer is permitted to use the Syncom name, Buyer shall not assert to any person or entity that Buyer is affiliated in any way with Seller.

8.02 Buyer shall not, without the prior written consent of Seller, use the trade name "Warco", the Warco logo or any other trade name confusingly similar to the trademark "Warcofloat", U.S. Registration No. 1,079,902, at any time

after the Closing in connection with any aspect of Buyer's business involving syntactic foam materials; provided that Buyer shall be entitled for nine months after the date of the Closing to use the trade name Warco and the Warco logo in connection with those syntactic foam product lines included in the RP Business for which that name and/or logo is currently being used.

8.03 In connection with its continuation of the RP Business, Buyer shall offer employment, effective the date of Closing, upon such terms as Buyer shall deem appropriate, to the employees of Seller listed on the schedule to this Section.

8.04 Buyer shall not, without the prior written consent of Seller, induce or attempt to influence any employee of Seller to terminate his or her employment with Seller. The prohibition contained in this Section 8.03 shall terminate on March 5, 1986.

9. Expenses; access to books and records

9.01 Except as specifically provided in Section 9.03, Seller shall pay and discharge (a) all taxes and expenses arising out of the sale, conveyance, transfer, assignment and delivery of the Subject Assets to Buyer, and (b) all liabilities and expenses incurred by or on behalf of Seller in connection with the preparation, authorization, execution and performance of this Agreement, including, but not limited to, the following: (i) all fees and expenses of agents, representatives, counsel and accountants, (ii) all

fees, taxes, charges and expenses required to be paid by Seller upon any withdrawal from states in which it is qualified to do business, and (iii) all amounts payable with respect to any claim for brokerage or finder's fees or other commissions in respect of the transactions contemplated by this Agreement based in any way on any agreement, arrangements or understanding made by or on behalf of Seller.

9.02 Buyer shall pay and discharge all liabilities and expenses incurred by or on behalf of Buyer in connection with the preparation, authorization, execution and performance of this Agreement, including, but not limited to, the following: (a) all fees and expenses of agents, representatives, counsel and accountants, and (b) all amounts payable with respect to any claims for brokerage or finder's fees or other commissions with respect to the transactions contemplated by this Agreement based in any way on any agreement, arrangement or understanding made by Buyer.

9.03 Seller and Buyer shall each pay 50 percent of all transfer taxes associated with the conveyance by Seller to Buyer of Seller's real property located in Agawam, Massachusetts included among the Subject Assets.

9.04 Buyer shall retain and preserve the files and records of Seller in its possession which relate to the Subject Assets or RP Business until December 31, 1993 and shall

allow Seller or, at Seller's request, AIC, and their respective counsel, accountants and other representatives to review such files and records during normal business hours and make copies and extracts therefrom.

10. Survival of Representations and Warranties; indemnification

10.01 All covenants, agreements, representations and warranties of Seller under this Agreement shall survive the Closing and the delivery of instruments of conveyance and assignment hereunder, and shall remain effective regardless of any investigation at any time made by or on behalf of Buyer or of any information Buyer may have with respect thereto, except that all representations and warranties of Seller in Article 4 of this Agreement, other than those set forth in Sections 4.01, 4.02, 4.03, 4.22(b) and 4.23, shall expire as of, and no claim for indemnification (under this Article 10 or otherwise) on account of any alleged inaccuracy in any such representation or warranty may be asserted by Buyer against Seller unless written notice thereof is given by Buyer to Seller on or before March 5, 1986.

10.02 Notwithstanding the Closing, and regardless of any investigation made at any time by or on behalf of Buyer or any information Buyer may have, Seller shall indemnify Buyer and save and hold Buyer harmless from and against any damage, liability, loss, cost or deficiency (including, but not

limited to, reasonable attorneys' fees and other costs and expenses incident to proceedings or investigations or the defense of any claim) (herein collectively referred to as "Damages") arising out of, resulting from or related to, and pay Buyer on demand the full amount of any sum which Buyer pays or becomes obligated to pay on account of, (a) any inaccuracy in any representation or the breach of any warranty of Seller contained in this Agreement, (b) any failure of Seller to duly perform or observe any term, provision, covenant or agreement to be performed or observed by Seller pursuant to this Agreement, (c) any taxes of any kind whatever (except taxes which are imposed on income), or expenses, interest or penalties relating thereto, which arise out of or result from the transactions contemplated by this Agreement, or (d) the imposition upon Buyer or assessment against Buyer of any obligation or liability relating to the conduct of the RP Business (including the manufacture of products) prior to the Closing, or any liability of Seller, in each case, except to the extent expressly assumed by Buyer pursuant to this Agreement. Buyer shall be deemed to have suffered such damage, liability, loss, cost or deficiency if the same shall have been suffered by a direct stockholder or subsidiary of Buyer, and the amount thereof deemed to have been suffered by Buyer, shall be the amount thereof suffered by such stockholder or subsidiary.

10.03 Notwithstanding the Closing, and regardless of any investigation made at any time by or on behalf of Seller or any information Seller may have, Buyer hereby agrees to indemnify Seller and hold Seller harmless from and against any Damages incurred or sustained by Seller arising out of, resulting from, or related to (a) any inaccuracy in any representation or the breach of any warranty of Buyer under this Agreement, or (b) any failure of Buyer duly to perform or observe any of the Assumed Liabilities or Assumed Obligations or any term, provision, covenant or agreement to be performed or observed by Buyer pursuant to this Agreement or the assumption agreement referred to in Section 2.03(b) of this Agreement. Seller shall be deemed to have suffered such damage, liability, loss, cost or deficiency if the same shall have been suffered by a direct stockholder or subsidiary of Seller, and the amount thereof deemed to have been suffered by Seller, shall be the amount thereof suffered by such stockholder, subsidiary or CHUSA.

10.04 If any legal proceedings are instituted or any claim or demand is asserted by any person not a party to this Agreement in respect of which either party (the "Indemnitee") may seek payments from the other (the "Indemnitor") under this Article 10, the Indemnitee shall promptly cause written notice of the assertion of any claims of which it has knowledge and which is covered by this indemnity to be forwarded to the Indemnitor. The Indemnitor shall have the right, at

its option and expense, to be represented by counsel of its own choice, which counsel shall be reasonably satisfactory to the Indemnitee, and to defend against, negotiate, settle or otherwise deal with any proceeding, claim or demand which relates to any Damages indemnified against hereunder, provided that (a) the Indemnitee may participate in any such proceeding with counsel of its choice and at its expense, and (b) if such proceeding, claim or demand involves any matter which directly or indirectly would prejudice the ability of the Indemnitee to conduct its business in substantially the same manner as prior to the making of such claim or demand or the institution of such proceeding, the Indemnitor may not settle such claim, demand or proceeding without the written consent of the Indemnitee, which consent shall not be unreasonably withheld. In the event that such claim, demand or proceeding involves such a matter, the Indemnitee shall have the right to settle or dispose of such claim, demand or proceeding in good faith and the Indemnitor shall only be entitled to contest the questions of whether the settlement or disposition was or was not a matter for which the Indemnitee would be entitled to indemnification and whether the Indemnitee settled or disposed of such claim, demand or proceeding in good faith. To the extent the Indemnitor elects not to defend such proceeding, claim or demand and the Indemnitee defends against, settles or otherwise deals with any such proceeding, claim or demand, which settlement may be made

without the consent of the Indemnitor, the Indemnitee will act reasonably and in accordance with its good faith business judgment. The parties agree to cooperate fully with each other in connection with the defense, negotiation or settlement of any such legal proceeding, claim or demand.

10.05 Neither party to this Agreement shall be entitled to indemnification for Damages arising out of, resulting from or related to any inaccuracy in any representation or the breach of any warranty by the other party contained in this Agreement unless and until the aggregate amount of such Damages equals or exceeds \$75,000.

11. Notices

11.01 All notices, requests, demands and other communications required or permitted to be given hereunder shall be deemed to have been duly given if in writing and delivered personally or mailed first-class, postage prepaid, registered or certified mail, addressed as follows:

If to Buyer--

Emerson & Cuming, Inc.
869 Washington Street
Canton, Massachusetts 02021

Attention: President

cc: W. R. Grace & Co.
1114 Avenue of the Americas
New York, New York 10036

Attention: Secretary

If to Seller--

TEX-TECH Industries, Inc.
150 Industrial Park Road
Middletown, Connecticut 06457

Attention: President

cc: TEX-TECH Industries, Inc.
c/o Charterhouse Group International, Inc.
535 Madison Avenue
New York, New York 10022

Attention: Arthur M. Spiro,
Chairman

Steven I. Siller, Esq.
Feit & Ahrens
488 Madison Avenue
New York, New York 10022

11.02 Buyer, Seller or the Stockholder may change the address to which such communications are to be directed to it by giving notice to the others in the manner provided in Section 11.01.

12. General

12.01 This Agreement and the performance of the transactions contemplated hereby shall be governed by and construed and enforced in accordance with the laws of the State of New York, other than the conflict-of-laws provisions thereof.

12.02 This Agreement and the schedules hereto set forth the entire agreement and understanding of the parties in respect of the transactions contemplated hereby and supersede all prior agreements, arrangements and understandings

relating to the subject matter hereof. No representation, promise, inducement or statement of intention has been made by Buyer or Seller which is not embodied in this Agreement or in the documents referred to herein, and neither Buyer nor Seller shall be bound by or liable for any alleged representation, promise, inducement or statement of intention not so set forth.

12.03 In the event of the merger of Seller into another corporation or the consolidation of Seller with one or more corporations in which Seller shall not be the surviving entity, or the sale or other disposition of all or substantially all the assets of Seller, the surviving entity or transferee of assets, as the case may be, shall promptly deliver to Buyer an executed agreement, reasonably satisfactory to Buyer, assuming all obligations, covenants and responsibilities of Seller hereunder, and Seller covenants that it will not so merge or consolidate or sell or otherwise dispose of all or substantially all its assets unless such agreement shall have been executed prior to or simultaneously with such merger, consolidation or sale.

12.04 All of the terms, covenants, representations, warranties and conditions of this Agreement shall be binding upon, and inure to the benefit of and be enforceable by, the parties hereto and their respective successors, but this

Agreement and the rights and obligations hereunder shall not be transferred or assigned except in accordance with Section 12.03.

12.05 This Agreement may be amended, modified, superseded or cancelled, and any of the terms, covenants, representations, warranties or conditions hereof may be waived, only by a written instrument executed by Buyer and Seller, or in the case of a waiver, by or on behalf of the party waiving compliance. The failure of any party at any time or times to require performance of any provision hereof shall in no manner affect the right at a later time to enforce the same. No waiver by any party of any condition, or of any breach of any term, covenant, representation or warranty, contained in this Agreement, in any one or more instances, shall be deemed to be or construed as a further or continuing waiver of any such condition or breach or a waiver of any other condition or of any breach of any other term, covenant, representation or warranty.

12.06 The article headings contained in this Agreement are for convenient reference only, and shall not in any way affect the meaning or interpretation of this Agreement. This Agreement may be executed in two or more counterparts, each of which shall be deemed an original, but all of which shall constitute one and the same instrument.

IN WITNESS WHEREOF, the parties have duly executed
this instrument on the date first above written.

EMERSON & CUMING, INC.

By Richard E. Schuyler
(Title) Vice President

TEX-TECH INDUSTRIES, INC.

By William J. Centofanti
(Title) President

CAMBRIDGE

To: Distribution

Date: 29 April 1985

From: P. M. Connor

cc: V. M. Bakeman

H. A. Eschenbach

R. C. Niles

Cambridge

Subject: Methylene Chloride Toxicity

A recent report by the National Toxicology Program (NTP) states that methylene chloride (dichloromethane) caused cancer in rodents in a two-year inhalation study. The draft technical report cited evidence of lung and liver cancer in male and female mice. The report also cited evidence of mammary gland tumors in female rats and weak evidence of mammary gland tumors in male rats.

Methylene chloride is widely used throughout industry and because there are no readily available substitutes for some uses, we are not able to recommend an alternate solvent. At this time we recommend that you review the use of methylene chloride to see if its use can be reduced or eliminated. In those operations where it must be used, we recommend the following:

1. Inform all employees of the latest health information on methylene chloride. This will soon be mandatory under OSHA's Hazard Communication regulation, and all supplier Material Safety Data Sheets will be changed to reflect the new information.
2. Employee inhalation exposures should not exceed the new Grace internal limit (GIL) of 10 parts per million (ppm) for any 8-hour Time-Weighted Average (TWA). This new value is 10 times lower than the former GIL of 100 ppm.
3. Employee skin contact with methylene chloride must not be permitted. Protective gloves or other suitable clothing should be worn when handling methylene chloride.

When choosing a suitable impermeable glove material, the following rating guide should be used:

<u>Good</u>	<u>Fair</u>	<u>Poor</u>
Polyurethane	Butyl Rubber	Natural Rubber
Polyvinyl Alcohol	Nitrile/Polyvinyl Chloride	Neoprene
Viton	Chlorinated Polyethylene	Nitrile Rubber
		Polyethylene
		Polyvinyl Chloride



Paul M. Connor
Health, Safety & Environmental Services

PMC/al

C074

EMERSON & CUMING

Emerson & Cuming, Inc. A GRACE Co.
Composite Technologies - Agawam

21 Ramah Circle
Agawam, Massachusetts 01001
Telephone (413) 786-0410

May 3, 1985

Attention: MT, MH, AM, RE, CM, GM, DT, JL, GS, TBM

Subject: Methylene Chloride

A memo has been issued from Health Safety & Environmental Services of W. R. Grace Company specifying a new risk assessment associated with the use of Methylene Chloride (chemical name: Dichloromethane). In a two year inhalation study, Methylene Chloride was found to cause cancer in rodents. For this reason, the H.S.E. Services has recommended the following:

- Reduce or eliminate use where possible.
- Inform all employees.
- Inhalation exposures should not exceed a new internal unit of 10 ppm.
- Employee skin contact must not be permitted.

Recommended glove material has been noted. Gloves are currently being ordered. I am requesting that you notify your group of the update and will assist you if necessary.

Sharon Schuerfeld

Sharon Schuerfeld

SS/mhb

GRACE MEMO

to: Charles Godleski

date: 5/3/85

from: Sharon Schuerfeld

subject: OSHA Industrial Hygienist Inspection

OSHA sent an industrial hygienist to our plant this week in response to an IH referral submitted as a result of an inspection made April 16, 1985. Irene Smith inspected the questionable areas and concluded that further testing is needed. The areas of concern are as follows:

- Goodyear: Concentrations of methylene chloride.
- Helix: Grinding of finished part - results in possible toxic dust.
- Bushings/
Washers: Both bushing presses should be enclosed to provide proper ventilation against out gassing of resins at the higher cure temperatures.
- Slurry: Vapors of pre-heated resins will be monitored.

Ms. Smith will be returning some time in May to test for exposure levels. The testing will include placing monitors on employees who are directly involved with the mentioned areas. Exposure levels will be obtained from the monitored samples and results will determine the course of action.

Sharon Schuerfeld

Sharon Schuerfeld

GRACE MEMO

to: ALL EMPLOYEES

date: August 23, 1985

from: Sharon M. Schuerfeld

cc: file

subject: Methylene Chloride

I have contacted the Health Safety and Toxicology Department for W.R. Grace and have discussed the citation and conditions relating to Methylene Chloride. The following items have been discussed and recommended:

*Exposure levels are going to be retested to confirm OSHA's findings.

*Paul Connor and Tom Hamilton (Industrial Hygenists for W.R. Grace) will be here next Wednesday, August 28, 1985, to evaluate the situation and help with corrective action.

*In the meantime:

1. Continue to wear a full face respirator with organic cartridge for protection when using the solvent.
2. You are receiving adequate protection from your respirator if you cannot smell the material you are working with. As soon as you smell Methylene Chloride - Change the cartridges.
3. If you do not have a full face respirator and PVA gloves - Do NOT work with the material.
4. Also -- as a reminder - Wear your SAFETY GOGGLES!

If you have any questions or concerns, do not hesitate to see me.

Thank you,

Sharon

May 1, 1985

Visit from CSHA pertaining to IH referral Industrial Hygienist
as Irene Smith Irene quickly toured the plant

May 2, 1985

Levist from Irene Smith for a more detailed view of the
workplace Irene read the air quality report from
Chubb's insurance and felt it was directed mainly
toward dust. Irene feels there are other areas of
concern mainly:

- Asbestos from the R398 which is
being ground off the floor
- Bostons & Wacker area: each piece
should be completely enclosed
- Methylene Chloride concentration
buildup in GADYEAR -

Irene will be back to place memos on the
employees involved in those areas.

Received a memo from Grace referring to
Safety policy. Two statements have been
received and posted on the premise.

MAY 3, 1985

Received memo from Health, Safety & Environmental
Services stating a new risk assessment
for Methylene Chloride. - I paraphrased
the memo and sent a copy to all supervisors.
- Memo recommended good glove protection. Viton
material was the only gloves available. Was only
allowed to try 3 pairs due to the expense
and possibility of them tearing.

June 17, 1985.

Called the Dept of LABOR -

ASKED Specific QUESTIONS pertaining to R.T.K. Did training consist of each specific chemical dealt with by the employees - No! The training can be done on a generic basis. I explained my approach so far & was told it was sufficient.

July 18, 1985.

Save R.T.K. training to new employees.

Note: quite a few depts. use airpressure to clean themselves off with. No Good

Goodgear has the habit of leaving methylene chloride paint containers uncovered

① - covers and containers are inadequate

② when left open (in storage shed) fumes fill up the shed which increases the exposure level for those who enter.

NOTICED METHYLENE CHLORIDE DRUM OF material left outside of Building in the SON. Definite signs of pressure build up were noticed. Asked Bob Eaton to have someone take drum inside.

Irene Smith from OSHA came in on Tuesday afternoon take another sample in Goodgear for methylene chloride. Apparently our values are quite high. 230ppm for Ed. Deuso AND 3 ppm for Rick Devine however the meth reading on Rick Devine was accidentally found.

Irene used a Bendix Gester model 400 hand pump. (25% error) calib date 4-28-86. reading was 400 ppm.

also used this visit: on Jim Gagnon AND Rick Devine were char tubes

to restrict items which are needed. We will pay for the restricted items.

Received a phone call from Irene Smith informing me of citations we will be receiving within the week. The citations cover two categories: Serious AND Non Serious -

Non Serious:

1. cited for person not wearing adequate foot protection when moving "large" foam molds.
2. not monitoring / knowing the levels of lead exposure when persons are soldering the screening for the MAST FAKER.

Serious:

Methylene Chloride.

Irene's samples indicated an extremely high level of exposure on one individual in goddya and a relatively high level on another individual.

The citation will address the exposure values (TLV) as well as the fact that we had not monitored the levels of methylene chloride.

I have contacted Paul Connor (Cambridge) and informed him of the problem. He is to get BACK TO me with an approach to the SITUATION.

Aug 1985.

Monitored Good year Room for entire day: Will Wright and submit a summarized memo stating observations and recommendations.

Aug 21, 1985.

Obtained information from Irene Smith stating the sections under OSHA which will be used for citations - We will be receiving the citations @ the beginning of next week -
Phoned Paul Connor giving him the citation designations He/Tom Hamilton will be in Agawam. next Monday or Tuesday.

Started haz waste list of chemicals needed to be disposed of via lab packs -
Contacted new Co. ENVIRONMENTAL Waste Removal Inc. need to send a list identifying chemicals and quantities - list for lab is complete - list for freezer must be done - However, overcrowding in freezer prevented me from taking inventory - meant to have it checked out - Arranged.

→ Citations:

SERIOUS: Methylene Chloride:

- 1910.1000 (B)(2) over exposure.
- 1910.134 (B)(8) failure to monitor levels.
- 1910.134 (B)(11) insufficient respirator for exposed levels.

Non Serious:

- 1910.132 (A) insufficient protection for

US EPA ARCHIVE DOCUMENT

U.S. DEPARTMENT OF LABOR
Occupational Safety and Health Administration

Form Approved
OMB No. 44-R1387

MATERIAL SAFETY DATA SHEET

Required under USDL Safety and Health Regulations for Ship Repairing,
Shipbuilding, and Shipbreaking (29 CFR 1915, 1916, 1917)

SECTION I

MANUFACTURER'S NAME FREKOTE, INC.		EMERGENCY TELEPHONE NO. (305) 395-3083
ADDRESS (Number, Street, City, State, and ZIP Code) 170 Spanish River Blvd. W., Boca Raton, Florida 33431		
CHEMICAL NAME AND SYNONYMS		TRADE NAME AND SYNONYMS PROPRIETARY
CHEMICAL FAMILY SILICONE	FORMULA PROPRIETARY	

SECTION II - HAZARDOUS INGREDIENTS

PAINTS, PRESERVATIVES, & SOLVENTS	%	TLV (Units)	ALLOYS AND METALLIC COATINGS	%	TLV (Units)
PIGMENTS			BASE METAL		
CATALYST			ALLOYS		
VEHICLE			METALLIC COATINGS		
SOLVENTS			FILLER METAL PLUS COATING OR CORE FLUX		
ADDITIVES			OTHERS		
OTHERS					

HAZARDOUS MIXTURES OF OTHER LIQUIDS, SOLIDS, OR GASES	CAS NO.	%	TLV (Units)
ALIPHATIC NAPHTHA, BOILING 206-224°F	64742-89-8	4.3	
** SILICON BLEND			
** TRICHLOROMONOFLUOROETHANE			
** DICHLORODIFLUOROMETHANE	75-71-8		

SECTION III - PHYSICAL DATA

BOILING POINT (°F.) (BULK CON)	206-224 °F	SPECIFIC GRAVITY (H ₂ O=1)	1.32 - 1.34
VAPOR PRESSURE (mm Hg.) (Aerosol)	70 psi	PERCENT, VOLATILE BY VOLUME (%)	96
VAPOR DENSITY (AIR=1)	> 4	EVAPORATION RATE (_____ =1)	N.A.
SOLUBILITY IN WATER	Negligible		
APPEARANCE AND ODOR	Colorless; fluorocarbon odor		

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (Method used)	NON FLAMMABLE	FLAMMABLE LIMITS	LeI	UeI
EXTINGUISHING MEDIA	** CO ₂ , FOAM DRY CHEMICAL			
SPECIAL FIRE FIGHTING PROCEDURES	None			
UNUSUAL FIRE AND EXPLOSION HAZARDS	Do not store aerosol cans above 120°F Do not incinerate cans.			

SECTION V - HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE

500 PPM

EFFECTS OF OVEREXPOSURE

May cause eye irritation. High concentrations may cause narcosis and anesthesia.

EMERGENCY AND FIRST AID PROCEDURES

Inhalation - Remove to fresh air

Skin and Eyes - Flush with clean water

SECTION VI - REACTIVITY DATA

STABILITY

UNSTABLE

CONDITIONS TO AVOID

STABLE

X

INCOMPATIBILITY (Materials to avoid)

None known

HAZARDOUS DECOMPOSITION PRODUCTS

HCL, HF, Silicon oxides

HAZARDOUS POLYMERIZATION

MAY OCCUR

CONDITIONS TO AVOID

WILL NOT OCCUR

X

SECTION VII - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

Ventilate area, mop, wipe

or soak up excess with absorbent materials.

WASTE DISPOSAL METHOD

Do not incinerate cans. Refer to local regulations.

SECTION VIII - SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION (Specify type)

NOT REQUIRED UNLESS NORMAL VENTILATION IS INADEQUATE

VENTILATION

LOCAL EXHAUST

**

NORMAL SOLVENT VENTILATION

SPECIAL

MECHANICAL (General)

X

OTHER

PROTECTIVE GLOVES

Rubber or Plastic

EYE PROTECTION

Safety Glasses

OTHER PROTECTIVE EQUIPMENT

**

APPROPRIATE CLOTHING TO AVOID SKIN CONTACT

SECTION IX - SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING

Do not store aerosol cans above 120°F.

OTHER PRECAUTIONS

**

USE ADEQUATE VENTILATION

6/21/83

DESCRIPTION

FREKOTE 1711 is the most versatile of the silicone-based release agents available. Capable of releasing virtually any resin or polymer.

- Excellent release characteristics
- Semi-gloss
- Versatility reduces release product inventory
- Broad time range
- Releases most polyurethane systems

APPLICATION

1. Clean mold surface to be treated with FREKOTE Mold Cleaner or suitable solvent.
2. Spray, wipe or brush on one or two light continuous coats.
3. Allow solvent to evaporate.

Note: Drying time is determined by the evaporation rate of the solvent used and the mold temperature. This will vary from virtually instantaneous to about 60 seconds.

4. Begin molding.
5. Touch up with one coat as required.

Product Finishing—If a molded product is to be bonded, painted, or stained, it should be washed with a suitable solvent or vapor degreased with a chlorinated solvent.

The FREKOTE 1711 Release Agent series is available in a variety of solvent carriers to meet your specific molding requirements.

FREKOTE 1711 Aerosol

Formulated for convenient aerosol application. Non-flammable. Extremely fast evaporation. Suitable for rapid mold cycling. Convenient aerosol can may be used at any angle, even upside down.

FREKOTE 1711 I

The carrier for the active ingredient is Isopar C. Flammable with low flash point, 40°F (4.4°C). Low-cost formulation. Moderate evaporation.

FREKOTE 1711 MC

The carrier for the active ingredient is methylene chloride. Nonflammable. Evaporation moderate. Suitable for intermediate molding cycle rates. Use with adequate ventilation.

FREKOTE 1711 MCF

The carrier for the active ingredient is methylene chloride and Freon MF. Nonflammable. Very fast evaporation. Suitable for rapid molding cycles.

FREKOTE 1711 TF

The carrier for the active ingredient is Freon TF. Non-flammable. Fast evaporation. Suitable for rapid molding cycles. Works well with high or low mold temperature.

Occupational Safety & Health Administration

SAFETY DATA SHEET

SECTION I

MANUFACTURER'S NAME E. I. duPont de Nemours & Co. (Inc.)		EMERGENCY TELEPHONE NO. (302) 774-2421
ADDRESS (Number, Street, City, State, and ZIP Code) 1007 Market Street, Wilmington, DE 19898		
CHEMICAL NAME AND SYNONYMS Polyimide Precursors in Solvent (see below)		TRADE NAME AND SYNONYMS NR-150B2 S6X
CHEMICAL FAMILY (see below)	FORMULA Mixture (see below)	

SECTION II HAZARDOUS INGREDIENTS

PAINTS, PRESERVATIVES, & SOLVENTS	%	TLV (Units)	ALLOYS AND METALLIC COATINGS	%	TLV (Units)
PIGMENTS			BASE METAL		
CATALYST			ALLOYS		
VEHICLE			METALLIC COATINGS		
SOLVENTS			FILLER METAL PLUS COATING OR CORE FLUX		
ADDITIVES			OTHERS		
OTHERS					

HAZARDOUS MIXTURES OF OTHER LIQUIDS, SOLIDS, OR GASES	WT. %	TLV (Units)
diethylene glycol dimethyl ether (diglyme) solvent	45.3	estab not
2,2-bis(3',4'-dicarboxyphenyl) hexafluoropropane	44.7	estab
p-phenylenediamine CAS# 106-50-3	9.5	0.1 mg/m ³ not
m-phenylenediamine	0.5	estab

SECTION III PHYSICAL DATA

BOILING POINT (F.I.) of diglyme solvent	324°F	SPECIFIC GRAVITY (H ₂ O=1) of NR-150B2 S6X solution	1.22
VAPOR PRESSURE (mm Hg.) of diglyme solvent at 70°F	0.04psi	PERCENT VOLATILE BY VOLUME (%)	52
VAPOR DENSITY (AIR=1) of diglyme solvent	4.62	EVAPORATION RATE (1)	-
SOLUBILITY IN WATER	-		
APPEARANCE AND ODOR of NR-150B2 S6X solution	Dark amber to purple liquid. Sweet, ether-like odor.		

SECTION IV FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (Method used) of diglyme solvent 158°F (open cup)	FLAMMABLE LIMITS	Uel	Uel
EXTINGUISHING MEDIA Water, CO ₂ , "Freon", Dry Chemical, foam			
SPECIAL FIRE FIGHTING PROCEDURES None normally required, but air masks can be used to prevent smoke inhalation.			
UNUSUAL FIRE AND EXPLOSION HAZARDS None, if handled with ordinary care.			

NOTICE FROM DU PONT

The data in this Material Safety Data Sheet relates only to the specific material designated herein and does not

SECTION V. HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE
See Section II

EFFECTS OF OVEREXPOSURE
Eye and skin irritation, nausea, burning sensation on inhalation.

EMERGENCY AND FIRST AID PROCEDURES
Contact: Immediately flush eyes or skin with fresh water for at least 15 minutes. Call a physician. Wash clothing before reuse.

SECTION VI REACTIVITY DATA

STABILITY	UNSTABLE		CONDITIONS TO AVOID
	STABLE	X	

INCOMPATIBILITY (Materials to avoid) None.

HAZARDOUS DECOMPOSITION PRODUCTS
On burning, CO and small amounts of HF may be formed.

HAZARDOUS POLYMERIZATION	MAY OCCUR		CONDITIONS TO AVOID
	WILL NOT OCCUR	X	

SECTION VII SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED
Avoid skin contact, avoid breathing vapors, remove sources of ignition.
Soak up excess solution with an absorbent material such as vermiculite.
Wipe up remainder with a cloth or paper towel soaked in a suitable solvent such as methanol or acetone.

WASTE DISPOSAL METHOD
Waste material should be disposed of by complete incineration.

SECTION VIII SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION (Specify type) None for normal use in well ventilated areas. If needed, use NIOSH-approved respirators for organic vapors.

VENTILATION	LOCAL EXHAUST Area (hood with exhaust fan) Use grounded equipment.	SPECIAL Keep away from ignition sources (heat, sparks) OTHER open flame)
-------------	--	---

PROTECTIVE GLOVES Use solvent resistant gloves. EYE PROTECTION Use splash-proof safety goggles.

OTHER PROTECTIVE EQUIPMENT
Use of aprons is suggested.

SECTION IX SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING
Polyethylene or polyethylene-lined containers are recommended because of the slightly acidic nature of the solution. Keep containers tightly closed. Avoid breathing vapors. Use with adequate ventilation. Keep

OTHER PRECAUTIONS
away from sources of ignition. Wash thoroughly after handling.

June, 1980

MATERIAL SAFETY DATA SHEET

Required under USDL Safety and Health Regulations for Ship Repairing,
Shipbuilding, and Shipbreaking (29 CFR 1915, 1916, 1917)

1 case of 120 cc. each

SECTION I

MANUFACTURER'S NAME FREKOTE INCORPORATED		EMERGENCY TELEPHONE NO. (305) 395-3083
ADDRESS (Number, Street, City, State, and ZIP Code) P. O. BOX 825, BOCA RATON, FLORIDA 33432		
CHEMICAL NAME AND SYNONYMS PROPRIETARY		TRADE NAME AND SYNONYMS FREKOTE HMT
CHEMICAL FAMILY POLYMERIC RESIN	FORMULA PROPRIETARY	

SECTION II - HAZARDOUS INGREDIENTS

PAINTS, PRESERVATIVES, & SOLVENTS	%	TLV (Units)	ALLOYS AND METALLIC COATINGS	%	TLV (Units)
PIGMENTS			BASE METAL		
CATALYST			ALLOYS		
VEHICLE			METALLIC COATINGS		
SOLVENTS SEE BELOW			FILLER METAL PLUS COATING OR CORE FLUX		
ADDITIVES			OTHERS		
OTHERS					
HAZARDOUS MIXTURES OF OTHER LIQUIDS, SOLIDS, OR GASES				%	TLV (Units)
DIBUTYL ETHER		<i>CA. 142-96-1</i>		33.0	
AROMATIC HYDROCARBON, BOILING 326-348°F				22.0	
ALIPHATIC HYDROCARBON, BOILING 350-406°F				44.5	
POLYMERIC RESIN				0.5	

SECTION III - PHYSICAL DATA

BOILING POINT (°F.)	N.A.	SPECIFIC GRAVITY (H ₂ O=1)	0.8197
VAPOR PRESSURE (mm Hg.)	N.A.	PERCENT. VOLATILE BY VOLUME (%)	99.5
VAPOR DENSITY (AIR=1)	N.A.	EVAPORATION RATE (--- = 1)	N.A.
SOLUBILITY IN WATER	SLIGHT		
APPEARANCE AND COLOR	COLORLESS; MILD		

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (Method used)	129°F (Open Cup)	FLAMMABLE LIMITS	Le ^l	Ue ^l
EXTINGUISHING MEDIA	POWDER OR FOAM RECOMMENDED			
SPECIAL FIRE FIGHTING PROCEDURES				
UNUSUAL FIRE AND EXPLOSION HAZARDS	N.A.			
	N.A.			

EMERSON & CUMING

Emerson & Cuming, Inc. A GRACE Co.
Composite Technologies - Agawam

21 Ramoth Circle
Agawam, Massachusetts 01001
Telephone (413) 786-0410

September 12, 1985

U.S. Department of Labor
Occupational Safety and Health Administration
Springfield Area Office
1550 Main Street, Room 532
Springfield, Massachusetts 01103

Attention: Rudolph Bayerle

Subject: Violation Citation 29 CFR 1910.1025 (d) (2)

Gentlemen:

In accordance with our understanding, based upon OSHA's statement in the recent internal conference, that the above referenced citation will be dropped upon written confirmation of the Agawam plant soldering procedures. I am providing the following information:

1. We have one Navy contract for nine mast fairings requiring the soldering of two copper nickel bars to a bronze screen, scheduled over a fifteen month period.
2. This soldering operation takes approximately three hours per assembly.
3. The bars are installed into a fixture on a work bench covered with wrapping paper. The bronze screen is overlaid in position and soldered accordingly.
4. Our employees are instructed to utilize a face mask and position a fan so as to remove any fumes that may be generated away from them.
5. Upon completion of this operation, they are to clean up their respective area and dispose of the wrapping paper containing any run-off solder.
6. Currently this contract is on hold. We haven't soldered any screens for the past eight weeks. Originally we had scheduled to solder one screen every three to four weeks.

Yours truly,



Mitchell C. Turek
Manufacturing Manager

MCT/sb

cc: SMS, CRG, MS, file

RECEIVED BY

SEP 16 1985

LEGAL DEPARTMENT
CAMBRIDGE, MA

RECEIVED BY

GRACE MEMO

JUL 20 1987

to: GARY SEIGEL
from: SHARON SCHUERFELD
subject:

LEGAL DEPARTMENT
CAMBRIDGE, MA

date: 15 July 1987
cc: GWR, GWS, &
Mark Stoler

Per our conversation of July 15, 1987, I am recording the following information into a memorandum file:

As a result of editing the Haley & Aldrich report on oil and hazardous materials site assessment, I have discovered that this facility has been using an incorrect EPA identification number for manifest recording, since 1983.

The correct EPA ID# is MAD057989246. Errors in recording have been:

1. MA0057989246
2. MA0052989246
3. MA0052989246

Per your recommendation, clarification of this error will be noted in this memorandum and use of the correct EPA # will resume as of this date.



Sharon Schuerfeld

SS:jn

SOLID, LIQUID, AND HAZARDOUS WASTE

DISPOSAL



RECYCLING

Commercial Disposal Co., Inc.

P.O. Box 304 - West Springfield, Ma. 01090-0304

Service 737-1129 Office 737-3244

COMMERCIAL, INDUSTRIAL, MUNICIPAL

Richard E. Gagnon

President

Bot I - 10.3.1

REPORT ON
OIL AND HAZARDOUS MATERIALS SITE ASSESSMENT
GRACE COMPOSITE TECHNOLOGIES FACILITY
AGAWAM, MASSACHUSETTS

For

Emerson & Cuming, Inc.
Canton, Massachusetts

File No. 595990

July 1987



Haley & Aldrich, Inc.

Consulting
Geotechnical Engineers,
Geologists and
Hydrogeologists



238 Main Street
P.O. Box 60
Cambridge, MA 02142

17 July 1987 617/492-6460
File No. 595990

Emerson & Cuming, Inc.
59 Walpole Street
Canton, Massachusetts 02021

Attention: Mr. Graham W. Rowe

Subject: Oil and Hazardous Materials Site Assessment
Grace Composite Technologies Facility
Agawam, Massachusetts

Gentlemen:

This letter presents the results of our oil and hazardous material site evaluation of the above-referenced parcel, located at 21 Ramah Circle in Agawam, Massachusetts. The work performed by Haley & Aldrich, Inc., has been carried out in accordance with our proposal to Mr. Gary W. Siegel, dated 9 January 1987.

The objectives of the assessment were three-fold:

- o Evaluate the potential for subsurface oil and hazardous materials contamination to exist on the site.
- o Determine the probable applicability of the Massachusetts Oil and Hazardous Materials Release Prevention Act, Chapter 21E of the Massachusetts General Laws.
- o Review and summarize the available information into a report suitable for submittal to prospective site buyers as well as regulatory agencies.

Branch Offices
Glastonbury, Connecticut
Portland, Maine

Affiliate
H & A of New York
Rochester, New York

The following tasks were performed for the assessment.

- o Site visit and observation of existing conditions.
- o Interviews of long time employees regarding past and present handling procedures for oil and hazardous materials.
- o Site history and development investigation.
- o Discussions with local, state, and federal agencies regarding previous releases of oil and hazardous materials in the vicinity of the site. Pertinent solid waste, incident response, RCRA, and site assessment files were reviewed at the Massachusetts Department of Environmental Quality Engineering (DEQE) office in Springfield, Massachusetts.
- o Soil vapor sampling and analysis program.
- o Test Borings.
- o HNU screening of soil samples.
- o Observation well installations.
- o Chemical analyses of representative soil, groundwater, and surface water samples.
- o Groundwater contour plan development.
- o Analysis of observation well headspace vapors.

Site Location, Use and General Description

The subject property occupies a 1.7 acre parcel along Ramah Circle in Agawam, Massachusetts as shown on Figure 1, the project Locus (1).* The site is irregular in shape and contains a office/manufacturing building which encompasses approximately 28,000 square feet in plan view (2,3). Ramah Circle bounds the site to the northwest and Washington Street bounds the site to the southwest (4). A brook abuts the site along its southern and eastern borders. Two adjacent parcels,

* Refer to the Sources of Information list attached to this letter.



one containing a small shopping plaza and one containing a tavern, lie alongside the northeastern end of the site (4).

Currently, Emerson & Cuming, Inc. (a subsidiary of W.R. Grace & Co.) utilizes the facilities at the site for the manufacturing of composite material products. The majority of the products manufactured at the site are formed mainly of fiberglass composites and syntactic foam and are purchased by the United States Defense Department.

The physical features of the site are dominated by the office/manufacturing building as shown on Figure 2. Offices are located within the front portion of the building, along Ramah Circle. The remaining three quarters of the building house laboratory, manufacturing, and maintenance areas. A large, walk-in cooler, an oven, and two storage sheds abut the building to its rear. Two large storage trailers are also located behind the building in the southern end of the parcel. A hazardous material storage shed is located within the asphalt-paved parking area in the southern portion of the site.

The site is zoned as industrial property (5). Drinking water is supplied to the site through the Agawam public works department (6). Sanitary wastewater from the site is routed to the Bondi Island wastewater treatment plant via the Agawam, Massachusetts sewer system (6). Reportedly, the site has used the public water and sewer systems since its original development (3).

Site History, Current Use, and Hazardous Material Handling Procedures

Early maps indicate that the site was undeveloped until some time between 1958 and 1961 (7,8,9,10,11,12,13,14,15). During this period, some form of the existing brook traversed the area of the site (10,11). One map of the site area, dated 1870, indicates that a mineral spring existed on or near the site (10). A low lying wetlands area which exists just south of the site was also prevalent during the undeveloped period of the site (8).

In or about 1960, the Saint Stephen Realty Company developed the site as part of a small industrial park on Ramah Circle (16,17). A furniture manufacturing firm, Standard Wood Products, then occupied the site approximately from 1960 until 1963 (8,18,19).



Development and manufacturing of composite material products began at the site in 1963 when a joint venture between Mr. W.R. Cooksley and the Albany Felt Company purchased the site and began WARCO (3). The goal of WARCO was to develop the military market for reinforced, thermosetting, composite material structures (3). Since 1963, the site has been used for manufacturing of composite materials. In 1967, WARCO was bought by Albany International, Inc. and operated as a wholly owned subsidiary of Albany International until 1980 (3). WARCO consolidated with Walters Precision Belting in 1980 and became the Precision Compound Division of Albany International, Inc. (3). Between 1980 and 1985 the site facilities and manufacturing processes were bought and sold via a series of transactions with Emerson & Cuming (part of the Polyfibron Division of W.R. Grace & Company) gaining control of the site facilities in March of 1985 (3). Another site owner during the early 1980s was Syncom International (3). Since 1985, W.R. Grace & Co. (through Emerson & Cuming) has owned and operated the site (3).

The physical development of the site building occurred in three phases as shown on Figure 2. The original 13,000 square foot building was erected in or about 1960 (3,9). In or about 1967 the first addition to the building was constructed (3). The second addition, which brought the building to its current configuration, was completed in or about 1979 (3).

The activities at the site have dealt with manufacturing and development of composite materials since 1963. Currently, this type of work at the site falls into two categories; fiberglass reinforced plastics and syntactic foam products (2). Fiberglass reinforced plastics combine fiberglass along with epoxy resins and hardeners to form shells for housing equipment and other purposes (2). Syntactic foam is formed and hardened in molds and mixed with "microballons" to provide buoyancy (2). Microballons are borosilicate, hollow spheres which are microns in size (2). Syntactic foam is used to form buoys and housings for naval equipment (2).

Hazardous materials have been and are used at the site. The site is assigned a hazardous waste generator number, MAD057989246 (3). DEQE inspection reports of the site list the following compounds (mostly in small quantities) as being present on the site in the past: acetaldehyde, acetone, methanol, methylene chloride, n-butyl alcohol, nitrobenzene, phenol, pyridine, toluene, trichlorofluoromethane, waste oil, and xylene (21). Hazardous materials in addition to the



above are also handled at the site. These include: fluorocarbon compounds (trichlorotrifluoroethane and trichloromonofluoroethane), compressor oil, fiberglass, epoxy paints, epoxy resins, and epoxy hardeners (2,3,16,20). Manifests from 1985 indicate that fifteen, 55 gallon drums of hazardous materials were hauled off-site by disposal contractors (21). DEQE records did not reference manifests from other years (21).

Storage of hazardous materials at the site is handled several ways. The majority of the hazardous materials are kept in small quantities. However, several compounds are bought and stored in 55 gallon drums. Acetone (used as a parts cleaner), methylene chloride (used to clean syntactic foam molds), and fluorocarbon compounds (used as mold releases) are all stored in 55 gallon drums on the site (2). Generally, compounds kept in 55 gallon drums are stored inside the site hazardous material storage shed, just south of the main manufacturing building (2). However, fluorocarbon compounds are stored in the shipping and receiving area, inside the building (2). See Figure 2. The shed was designed specifically for housing hazardous materials and has been permitted by the Agawam, Massachusetts Fire Department (19). A concrete berm along the inside perimeter acts as a secondary containment barrier for the shed (2). Compounds in continuous use, such as methylene chloride, acetone, and fluorocarbons, are located through out the working areas of the building in containers ranging in size from 55 gallon drums to one pint cans (2).

Along the western side of the site building are several storage areas as shown on Figure 2. The two storage sheds contain chemical epoxy systems and miscellaneous solvents, mostly in containers smaller than one gallon in size (16). The cooler is used to store epoxy systems and Reliabond 398 (a composite material binder and strengthener containing traces of asbestos) (16). The two storage trailers house equipment and reportedly do not contain any hazardous materials (16). The oven shown on Figure 2 is used to cure composite materials and is lined with an insulating board which may containing asbestos (16).

Waste materials are not stored on-site permanently. Waste hazardous liquids are stored within the on-site hazardous material shed and eventually hauled off-site periodically by Clean Harbors, Inc. (2). Empty drums are stored outside, horizontally in racks and are either crushed for disposal or eventually removed by Astro Chemical, Inc. (2). Empty, non-hazardous material drums are stored outside and then crushed for disposal in the on-site dumpster (2). Solid wastes

(scrap fiberglass, etc.) generated in the manufacturing processes are oven cured until they are stable and put into the on-site dumpster for disposal (2). Dumpster contents are then hauled off-site by Commercial Disposal Company of West Springfield, Massachusetts (2). The bulk of the solvents used; acetone, fluorocarbon compounds, and methylene chloride, evaporate into the atmosphere during use (2).

Small quantities of hazardous materials have been released into the environment at the site. Syntactic foam molds were sprayed clean by steam prior to using methylene chloride to clean the molds (2). The foam, which may have contained triethylenetetramine from time to time, was flushed on to the ground adjacent to the brook prior to approximately 1981 (2). Methylene chloride is now exclusively used to clean the syntactic foam molds (2). Waste methylene chloride from the cleaning process is hauled off-site (2). Small quantity spills of methylene chloride, acetone, compressor oil, and miscellaneous drum contents have also occurred at the site (2). The discharge point for the building floor drains, a potential route for the release of hazardous liquids is not known (2). However, the existing sewer system is believed to have been in place during construction of the original site building and no known leaching fields exist on the site (6).

DEQE records indicate that several RCRA inspections have occurred at the site (21). On a few occasions the operators of the site were cited for violations regarding labeling protocols for hazardous material containers and lack of employee training (21). All DEQE regulation violations were promptly rectified following notification (21).

No underground tanks are known to exist at the site (2,3,19).

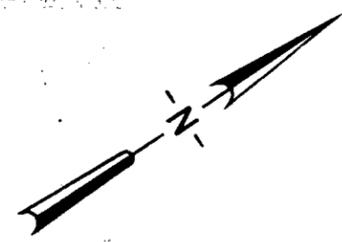
The Agawam, Massachusetts Board of Health, the DEQE, and the United States Environmental Protection Agency (EPA) have no records of releases of hazardous materials at the site (21,22,23).

DEQE water supply protection overlays in Boston, Massachusetts were reviewed. No public water sources or waste sources are within 0.6 miles of the site according to the overlays (24).

Surrounding Land Use

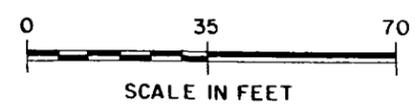
Potential sources of oil and hazardous material releases are abundant near the site. Directly across Ramah Circle, National Aerospace (RCRA generator No. MAD001118686) generates waste oil





NOTES:

- 1. BUILDING ADDITION PLAN ADAPTED FROM A PLANT LAYOUT PLAN DATED 28 NOVEMBER 1984, AS PROVIDED TO HALEY & ALDRICH, INC. BY W. R. GRACE & COMPANY.
- 2. BUILDING WORK AREA INFORMATION PROVIDED BY W. R. GRACE & COMPANY.



HA Haley & Aldrich, Inc.
Consulting Geotechnical Engineers, Geologists and Hydrogeologists

OIL AND HAZARDOUS MATERIAL SITE EVALUATION PLAN
EMERSON & CUMING, INC.
AWAGAM, MASSACHUSETTS

BUILDING ADDITION PLAN

SCALE: AS SHOWN

JULY 1987

FILE NO. 89 59 90 B157

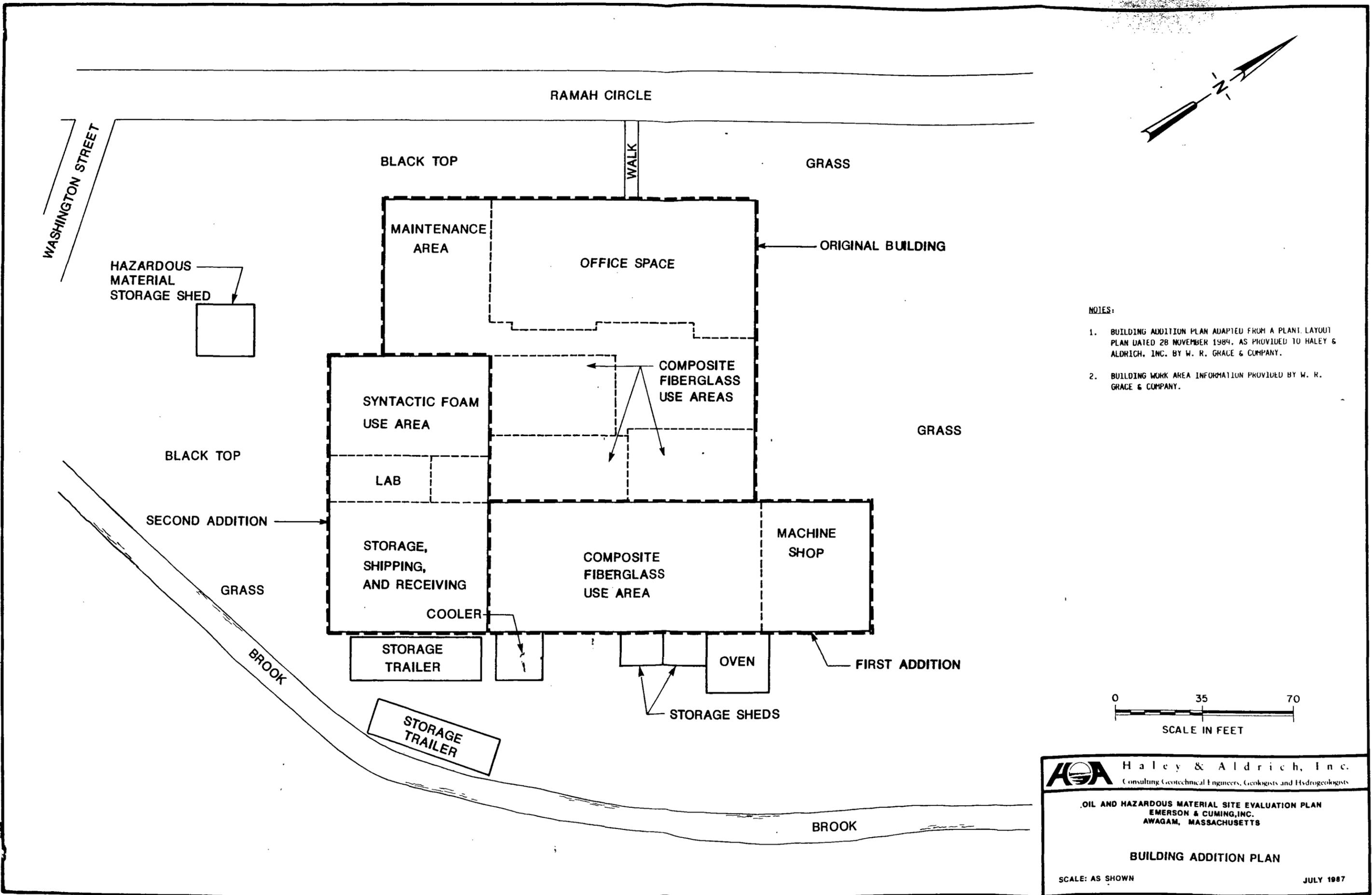


FIGURE 2

1. ~~RE: [REDACTED]~~
2. fill
Hazardous Environmental Waste Issue

EMERSON & CUMING

Emerson & Cuming, Inc. A GRACE Co.
Composite Technologies - Agawam

LEGAL DEPARTMENT
CAMBRIDGE, MA
21 Ramah Circle
Agawam, Massachusetts 01001
Telephone (413) 786-0410

June 04, 1986

JUN 10 1986

RECEIVED BY

Mr. Lee Thomas
Administrator
U.S. Environmental Protection Agency
401 M. Street, S.W.
Washington, D.C. 20460

Dear Mr. Thomas:

This letter of notification is being provided by Emerson & Cuming, Inc. to EPA in accordance with Section 103 (c) of CERCLA. In March of 1985, Emerson & Cuming, Inc. purchased a facility in Agawam, Massachusetts from TEX-TECH Industries, Inc. of Middletown, Connecticut. This facility fabricates fiberglass reinforced plastics and is located on a parcel of approximately one acre. This facility has been at this location since the early 1960's and is on the city water and sewer system. In March of 1986, several long-term employees of this facility brought to our attention incidents of possible on-site waste disposal which occurred prior to the Emerson & Cuming acquisition and apparently prior to June 1981. It is these activities that are the subject of this notification.

Upon learning of this matter Emerson & Cuming promptly investigated these incidents. Based upon information gathered during the past several weeks it is believed that small amounts of waste acetone and methylene chloride were disposed of or spilled on the ground during periods in the 1960's and 1970's. The total amount of material so disposed is uncertain but may have been less than 100 gallons.

In addition, during the 1970's equipment coated with syntactic foam was cleaned with steam or pressurized hot water in an area behind the facility. Although the solidified residues from the washing were removed from the site there is a possibility that some material remained on the property. It is believed that this residue did not meet the definition of hazardous waste as set forth in the RCRA regulations. With one possible exception, there is no evidence that the syntactic foams contained hazardous substances as defined under Section 101 (14) of CERCLA.

Mr. Lee Thomas

June 04, 1986

Page - 2 -

There is a possibility that one type of foam contained triethylenetetramine, a listed hazardous substance, as a constituent.

The information provided in this notification is based upon the recollection by employees of events a number of years ago. We have made a thorough effort to collect and verify this information but under these circumstances Emerson & Cuming does not represent or warranty that all information regarding activities relevant to the provisions of 103 (c) is included herein.

Very truly yours,



Graham W. Rowe

GWR/s

Date of Prep. 9/78/T		Section I	
MANUFACTURER'S NAME REICHHOLD CHEMICALS, INC.			
STREET ADDRESS 525 North Broadway			
CITY, STATE AND ZIP CODE White Plains, New York 10603			
EMERGENCY TELEPHONE NO. (914) 682-5700			
CHEMICAL NAME AND SYNONYMS Modified Diglycidyl Ether of Bisphenol A		TRADE NAME EPOTUF® 37-130	
CHEMICAL FAMILY Epoxy Resin		FORMULA	

Section II – HAZARDOUS INGREDIENTS

PAINTS, PRESERVATIVES, & SOLVENTS

PIGMENTS	%	TLV (Units)	SOLVENTS	%	TLV (Units)
CATALYST			ADDITIVES Butyl Glycidyl Ether	10-13	30 mg/m ³ max per NIOSH
VEHICLE			OTHERS		

HAZARDOUS MIXTURES OF OTHER LIQUIDS, SOLIDS, OR GASES

A preliminary and unverified dominant lethal test for mutagenicity was conducted on BGE. The results of this test indicated that BGE may be mutagenic. Because qualified reviews of these test results have raised several significant questions regarding the experimental design followed in the test, which may have given false results, further work, including repeating the test, is currently being implemented. In the interim, recommended handling procedures should be reviewed and followed.

Section III – PHYSICAL DATA

BOILING POINT (°F.)	NA	SPECIFIC GRAVITY (H ₂ O=1)	1.12 - 1.15
VAPOR PRESSURE (mm Hg.)	NA	PERCENT VOLATILE BY VOLUME (%)	-0-
VAPOR DENSITY (AIR=1)	NA	EVAPORATION RATE (.....-1)	NA
SOLUBILITY IN WATER	Negligible		
APPEARANCE AND ODOR	Straw colored liquid; mild aromatic odor.		

Section IV – FIRE AND EXPLOSION HAZARD DATA

Flash Point (Method Used)	151°F Pensky-Martens	FLAMMABLE LIMITS	NA	Lel	Uel
EXTINGUISHING MEDIA	Foam, CO ₂				
SPECIAL FIRE FIGHTING PROCEDURES	Fire fighters should wear goggles and self-contained breathing apparatus to avoid breathing smoke or vapors.				
UNUSUAL FIRE AND EXPLOSION HAZARDS	None known.				

THIS INFORMATION IS FURNISHED WITHOUT WARRANTY, REPRESENTATION, INDUCEMENT OR LICENSE OF ANY KIND, EXCEPT THAT IT IS ACCURATE TO THE BEST OF REICHHOLD CHEMICALS, INC.'S KNOWLEDGE, OR OBTAINED FROM SOURCES BELIEVED BY REICHHOLD CHEMICALS, INC. TO BE ACCURATE, AND REICHHOLD CHEMICALS, INC. DOES NOT ASSUME ANY LEGAL RESPONSIBILITY FOR USE OR RELIANCE UPON SAME. CUSTOMERS ARE ENCOURAGED TO CONDUCT THEIR OWN TESTS BEFORE USING ANY PRODUCT. READ ITS LABEL.

Section V – HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE

SEE PAGE 3

EFFECTS OF OVEREXPOSURE

EMERGENCY AND FIRST AID PROCEDURES

Section VI – REACTIVITY DATA

STABILITY	UNSTABLE		CONDITIONS TO AVOID
	STABLE		Uncontrolled reaction with amine.
INCOMPATIBILITY (Materials to avoid) Acid, base			
HAZARDOUS DECOMPOSITION PRODUCTS			
HAZARDOUS POLYMERIZATION	MAY OCCUR	X	CONDITIONS TO AVOID
	WILL NOT OCCUR		with amine under uncontrolled conditions.

Section VII – SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED Soak up with absorbent material - avoid skin contact and breathing of fumes. Residual can be removed with non-flammable solvent such as methylene chloride.

Waste Disposal Method Burn in adequate incinerator or bury in landfill.

Section VIII – SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION (Specify type) must be worn to avoid breathing spray mist or heated vapors or when TLV is exceeded.

VENTILATION	LOCAL EXHAUST Required	SPECIAL
	MECHANICAL (General) sufficient to control diluent to less than 30 mg/m ³	OTHER
PROTECTIVE GLOVES chemical resistant rubber or Polyethylene	EYE PROTECTION Chemical goggles	
OTHER PROTECTIVE EQUIPMENT Clean body covering; disposable paper on work areas and disposable containers.		

Section IX – SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING Due to presence of reactive diluent, butyl glycidyl ether, this product may cause skin sensitization. Do not get in eyes, or on skin or clothing. Do not allow contaminated clothing to contact skin. Avoid contact with vapors or fumes.

OTHER PRECAUTIONS.

EPOTUF® EPOXY RESIN

EPOTUF® 37-130 EPOXY RESIN

Type

Rigid epoxy resin based on bisphenol-A. 100% reactive. Low viscosity to permit maximum filler loadings.

Major Uses

Potting and encapsulating of electrical components. Casting. Hand lay-up laminating.

Properties of Epotuf 37-130

Viscosity, Brookfield in cps @ 25°C (77°F)	500-700
Epoxide Equivalent	175-195
Color, Gardner, max	3
Specific Gravity	1.12-1.15
Density, lbs./gallon	9.3-9.6

Typical Properties of Unfilled Castings of Epotuf 37-130 Cured With Various Hardeners

Hardener	Epotuf 37-605 aliphatic amine	Epotuf 37-612 polyamide	BF ₃ MEA** Lewis acid
Parts Hardener/100 Parts Resin	31	60	2
Pot Life, 100 gm. mass, 25°C (77°F), mins.	25-30	50-70	>6 mo.
Barcol Hardness, 934-1	25-30	82 Shore D	30-35
Heat Distortion Temp. °F	150-160	135-145	220-230
Tensile Strength, psi	10-11,000	6,500-7,500	9-10,000
Tensile Elongation, %	6-8	17-19	—
Flexural Strength, psi	16-18,000	10-13,000	16-18,000
Flexural Modulus, psi x 10 ⁻⁵	4.5-5.0	2.8-3.2	4.0-4.3
Compressive Strength, psi	12-14,000	8-9,000	—
Dielectric Strength, S/T, V/M	425-475	450-500	>500
Dielectric Constant:			
@ 60 Hz	4.5-4.6	3.7-3.8	3.7-3.8
@ 10 ⁶ Hz	3.6-3.7	2.9-3.0	3.3-3.4
Water Absorption, %:			
24 hrs. @ 25°C (77°F)	0.20-0.30	0.20-0.30	0.15-0.20
2 hrs. @ 100°C (212°F)	—	—	1.0-1.1
Cure Schedule	24 hrs. @ R.T. + 2 hrs. @ 250°F	24 hrs. @ R.T. + 2 hrs. @ 250°F	4 hrs. @ 200°F + 2 hrs. @ 300°F + 2 hrs. @ 400°F

*Using RVF with Spindle #2

**BF₃MEA-Boron Trifluoride Monoethanolamine Complex—Allied Chemical Corporation or Harshaw Chemical Company

over...

THE INFORMATION HEREIN IS TO ASSIST CUSTOMERS IN DETERMINING WHETHER OUR PRODUCTS ARE SUITABLE FOR THEIR APPLICATIONS. OUR PRODUCTS ARE INTENDED FOR SALE TO INDUSTRIAL AND COMMERCIAL CUSTOMERS. WE REQUEST THAT CUSTOMERS INSPECT AND TEST OUR PRODUCTS BEFORE USE AND SATISFY THEMSELVES AS TO CONTENTS AND SUITABILITY. NOTHING HEREIN SHALL CONSTITUTE A WARRANTY, EXPRESS OR IMPLIED, INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS. NOR IS PROTECTION FROM ANY LAW OR PATENT TO BE INFERRED. ALL PATENT RIGHTS ARE RESERVED. THE EXCLUSIVE REMEDY FOR ALL PROVEN CLAIMS IS REPLACEMENT OF OUR MATERIALS AND IN NO EVENT SHALL WE BE LIABLE FOR SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES.

FUTURE PLANS: As was previously mentioned, the intent is to qualify 37-127 equivalents from several major resin companies. It is felt that DER-324 resin should be reevaluated. Theoretically, all these resins should perform equally, and the low values obtained with DER-324 might be merely the result of a faulty panel. Other candidates will include resins from Celanese, Shell and Ciba-Giegy.

An explanation of the various sample conditions is as follows:

Dry - sample as cured; no special conditioning

Wet - sample tested immediately after two hours in boiling water

30 day Seawater - sample tested after immersion, at room temperature, in artificial seawater.

Results of testing of syntactic foam samples are reported in Table II.

Since the DER-324 resin was yielding unsatisfactory results in the early stages of the laminate test phase, it was dropped from the program in the interests of economy. This is discussed later in this report.

CONCLUSIONS: Based on these results, 37-127 appears to be a viable direct substitute for 37-130 resin in both FRP and syntactic foam applications. No changes in manufacturing procedures or formulations, other than direct substitution, are necessary.

Burn-out tests showed that the 37-127 panel had a significantly higher resin content than did the 37-130 panel, and this might be partially responsible for some of the property differences between the two. However, it is likely that these same results would be obtained in a production situation, since the Epoxide 8 imparts a lower surface tension to the resin; cloth wet-out would thus be more complete. Proctor & Gamble has published data to show that this is indeed the case with glass reinforced laminates.

Essentially, 3312-40-B, with 37-130 resin, was the control panel, 37-130 resin being the primary diluted resin in use at this time. The panels with 37-127 and DER 324 resins were the experimental panels; both these resins contain Epoxide 8 as diluent.

After curing, demolding and trimming, the panels were machined to yield mechanical test specimens which were then tested on a Tinius-Olsen UTM.

SYNTACTIC FOAM: Batches of standard, 3000 ft. module foam were made using 37-130 and 37-127 resins. These foams were cast into appropriate molds for impact strength, hydrostatic water absorption, and compressive strength tests. Specific formulations were:

3312-40-G-1	37-130 resin	1200 pbw
3312-40-G-2	Versamid 140 hardener	400 pbw
	B23/500 microballoons	400 pbw
	D.C. 200	Trace
3312-40-G-3	37-127 resin	1200 pbw
3312-40-G-4	Versamid 140 hardener	400 pbw
	B23/500 microballoons	400 pbw
	D.C. 200	Trace

All samples were allowed to gel overnight at room temperature, then post-cured overnight at 160°F.

DER 324 resin was not included in this evaluation because the results of the FRP testing had eliminated it as a candidate material at this time.

RESULTS: Results of testing of laminate samples are reported in Table I.

Eventually it is planned to test and qualify Epoxide 8 diluted resins from at least three major resin suppliers. However, the scope of the program at this time encompassed only two, Epotuf 37-127 and DER 324, the latter of which was dropped for reasons explained later in this report.

Appendix A of this report lists all materials used in the various test specimens, and gives information concerning their source and chemical composition.

EXPERIMENTAL:

FRP: Three laminate test panels were prepared, using a 30" X 30" X 1/8" mold. In all cases 14 layers of 7781 cloth were used. Normal production resin injection techniques were used. Cure was 8 hours at 300°F. The resin formulations were:

3312-40-B (Control)	37-130 resin	50 pbw
	37-140 resin	50 pbw
	H-45 hardener	20 pbw
	HT accelerator	1.5 pbw
3312-40-C	37-127 resin	50 pbw
	37-140 resin	50 pbw
	H-45 hardener	20 pbw
	HT accelerator	1.5 pbw
3312-40-D	DER 324 resin	50 pbw
	37-140 resin	50 pbw
	H-45 hardener	20 pbw
	HT accelerator	1.5 pbw

EVALUATION OF EPOXY RESIN SUBSTITUTES FOR
BGE DILUTE RESIN

INTRODUCTION: Bisphenol-A epoxy resins diluted with butyl glycidyl ether (BGE) have been standard industrial resins for years. At Warco, they have been used in both FRP and syntactic foam manufacture. Recent studies, however, have shown that BGE is a mutagenic agent, and, as such, it is anticipated that legislation restricting its use will be forthcoming.

In order that Warco not be inadvertently placed in an awkward position regarding the use of its major raw material, a program was initiated to evaluate alternate diluents for bisphenol-A epoxies, while time permitted a complete analysis.

OBJECTIVE: The purpose of this study was to find one or more replacement resins for BGE diluted resins, which could be utilized in both FRP and syntactic foam products, and which would result in material properties equal to or better than properties obtained with BGE resins.

DISCUSSION: At Warco, both diluted and non-diluted epoxy resins of the diglycidyl ether of bisphenol - A (DGEBA) type are used in the majority of epoxy based products. Examples of non-diluted resins are Epotuf 37-140, and Epon 828, with the 37-140 used primarily. Diluted resins include ERL-2795, Epon 815, and Epotuf 37-130. All these are diluted with butyl glycidyl ether (BGE); these, primarily 37-130, are the ones it was desired to replace.

The same study that showed BGE to be a mutagenic agent also studied other commonly used epoxy diluents. Of all the diluents investigated, Proctor & Gambel's Epoxide 8 posed the lowest health hazard. Thus DGEBA resins using this diluent were chosen as the most desirable replacement resins.