Union Carbide trial exhibit UC-1376: Union Carbide Asbestos 5-Year Plan (1978-82) with Calidria Sales Forecasts a...
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UC 442-11 PRINTED IN U.S.A.

10% AGAIN

11/9/77 Revised for 14/Cline Comments

ASBESTOS

		78	79	80	81		82	
SALES	Q	24176	26625	28015	29410		30785	
	$	5464	6613	7761	9091		10761	
PER TON		153.50	168.85	185.73	204.31		224.74	
TOTAL COST		3711	4492	5203	6009	6497	6919	8142
GROSS MARGIN		1953	2121	2558	3082	2594	3842	2619
		31.5	32.1	33.0	33.9		35.7	
OVHD		1069	1132	1200	1270		1340	
DEPREC.		260	276	258	307		328	
LOAN		150	150	150	150		150	
BI TAX		474	563	920	1355	867	2024	801
DEPLETION		300	315	330	350		375	
TAX			102	263	464	230	774	187
NIAT			461	657	891	637	1250	614
÷			.7	1.0	1.4	1.0	2.0	1.0
ROA			9.8	13.7	...	17.9		17.1

Asbestos
UC
1978-82

PLAINTIFF'S EXHIBIT
Deposition
UC-1376

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NET TONS 5 YEAR FORECAST HSPC-5 PRODUCT

	O/R	PRICE NTA	1978 Qty	1978 Value	1979 Qty	1979 Value	1980 Qty	1980 Value	1981 Qty	1981 Value	19XY Qty	19XY Value
DOMESTIC												
SG 103	R	100.00	Y000	Y00	3000	300	3000	300	3000	300	3000	300
104		84.00	6000	504	6500	546	7000	588	7500	630	8000	67Y
130		110.00	Y41	Y9	Y50	33	300	39	300	39	300	39
Y00		100.00	360	39	500	60	500	60	500	60	500	60
Y10		166.00	1Y30	Y0Y	600	100	700	116	800	133	800	133
HPP		154.00	60	10	50	7	50	7	50	7	50	7
HPO		166.00	670	116	1000	166	1000	166	1000	166	1000	166
T135P		550.00	—	—	—	—	—	—	—	—	—	—
CG135P		150.00	175	116	Y00	30	Y00	30	Y00	30	Y00	30
R6100		400.00	400	160	400	160	400	160	500	Y00	500	Y00
R6110		180.00	440	84	500	90	550	99	600	108	650	117
R6144		440.00	600	Y64	650	Y86	700	308	750	330	900	396
R6Y44		Y100.00	600	1Y60	650	1365	700	1470	750	1575	850	1785
MONEL40		118.00	3500	413	4000	47Y	4000	47Y	4000	47Y	4000	47Y
TOTAL DOM				3391		3615		3815		4050		4977
EXPORT												
SG100/10	YR	100.00	Y000	Y00	YY00	YY0	Y300	Y30	Y400	Y40	Y500	Y50
130		1Y0.00	130	16	140	17	150	18	160	19	170	Y0
Y00		110.00	1050	116	1050	116	1150	1Y6	1Y00	13Y	1300	143
HPMEX		1YY.00	Y400	340	Y600	369	Y800	398	3000	4Y6	3Y00	454
HPOEX		166.00	600	100	650	108	700	116	750	1Y4	800	133
T135-0		700.00	60	4Y	60	4Y	65	46	70	49	75	5Y
T135P		570.00	410	Y13	450	Y34	475	Y47	500	Y60	500	Y60
RG110EX		Y500	150	3Y	—	—		—	—	—	—	—
R6144		440.00	Y70	119	Y65	117	300	13Y	330	145	340	150
SX14		315.00	140	44	150	47	165	5Y	180	57	Y00	63
R6Y44		1900.00	Y90	551	310	589	340	646	370	703	400	760
SXY4		1Y5000	400	500	430	538	470	588	500	6Y5	550	688
TOTAL EXPORT				YY73		Y397		Y599		Y780		Y923
TOTAL ASBESTOS				5664		6017		6414		6830		7350

10/Y5/77

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TABLE II

CALIDRIA ASBESTOS COMPETITIVE POSITION

	Floor Tile		Drilling Muds		Tape Joint Compounds		Reinf. Plastics (Thixotrope)		Rubber		Paper		Adhesives & Sealants		Coatings		Ceiling Tile	
	1976	1982	1976	1982	1976	1982	1976	1982	1976	1982	1976	1982	1976	1982	1976	1982	1976	1982
Total Market, T	80000	90000	8000	10000	10000	4000	8000	12000	3000	5000	2000	3000	18000	24000	8100	9400	2500	2800
UCC Share, T	9150	13500	3130	4100	4550	2800	600	1000	620	660	1360	2100	2000	2900	800	1000	2350	2720
UCC Share, %	11	15	39	41	46	70	8	8	21	13	68	70	11	12	10	11	94	97
Competitors, %																		
Carey	40	40	-	-	54	30	-	-	30	30	32	30	30	30	30	30	6	3
Atlas	20	18	5	5	-	-	-	-	-	-	-	-	10	7	-	-	-	-
J-M	29	27	56	54	-	-	-	-	49	48	-	-	44	44	50	49	-	-
Cabot/Degussa	-	-	-	-	-	-	85	85	-	-	-	-	5	7	10	10	-	-

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JLM

SEP 19 1977

To: U.C. Thurber
38th Floor

Table I

CALIDRIA ASBESTOS SALES

Market	Annual Growth Rate, % Historical	Annual Growth Rate, % Thru 1982	Calidria Sales 1976 T	1976 %	Calidria Sales 1982 T	1982 %
Floor Tile	5	3	9150	37	13500	44
Drilling Fluids	7	3	3130	13	4100	14
Tape Joint Compounds	-	-	4550	19	2800	9
Adhesives and Sealants	-	6	2000	8	2900	9
Coatings	-	3	800	3	1000	3
Ceiling Tile	-	-	2350	10	2720	9
Paper	-	6	1360	5	2100	7
Reinforced Plastics	7	10	600	2	1000	3
Rubber	-	-	620	3	660	2
			24560		30780	

Exhibit 5-2

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To: W.C. THURBER
NY-38

CALIDRIA ASBESTOS – 5 YEAR FORECAST

9/7/77

Product	PRICE $/T	1978 Tons	1978 $M	1979 Tons	1979 $M	1980 Tons	1980 $M	1981 Tons	1981 $M	1982 Tons	1982 $M
Domestic											
SG-183	100	2000	200	3000	300	3000	300	3000	300	3000	300
SG-184	84	6000	504	6500	546	7000	588	7500	630	8000	672
SG-130	130	241	29	250	33	300	39	300	39	300	39
SG-200	120	360	39	500	60	500	60	500	60	500	60
SG-240	166	1230	202	600	100	700	116	800	133	800	133
HPP	154	60	10	50	7	50	7	50	7	50	7
APO	166	620	116	1000	166	1000	164	1000	166	1000	166
T-135-0	590	—	—	—	—	—	—	—	—	—	—
CG-135-P	150	175	110	200	30	200	30	200	30	200	30
RG-100	400	400	160	400	160	400	160	500	200	500	200
RG-110	180	440	84	500	90	550	99	600	108	650	117
RG-144	440	600	264	650	286	700	308	750	330	900	396
RG-244	2180	600	1260	650	1365	700	1470	250	1575	850	1785
Mentello	118	3500	413	4000	472	4000	472	4000	472	4000	472
Dom. Total		16276	3391	18300	3615	19100	3815	19950	4050	20750	4377
EXPORT											
SG-100/102	100	2000	200	2200	220	2300	230	2400	240	2500	250
SG-130	120	130	16	140	17	150	18	160	19	170	20
AS-200	110	1050	116	1050	116	1150	126	1200	132	1300	143
HPP-EX	142	2400	340	2600	369	2800	398	3000	426	3200	454
HPO-EX	166	600	100	650	108	700	116	750	124	800	133
T-135-0	700	60	42	60	42	65	46	70	49	75	52
T-135-P	520	410	213	450	234	475	247	500	260	500	260
RG-110-EX	210	150	32	0	0	0	0	0	0	0	0
RG-144	440400	270	119	265	117	300	132	330	145	340	150
SX-141	315	140	44	150	47	165	52	180	57	200	63
RG-244	1900 1820	290	551	310	589	340	646	370	703	400	760
SX-24	1250	400	500	430	538	470	588	500	625	550	688
Export Total		7900	2273	8305	2397	8915	2599	9460	2780	10035	2973
Total Sales		24176	5664	26605	6012	28015	6414	29410	6830	30785	7350
	% Increase	—	—	10.0	6.1	5.3	6.7	5.0	6.5	4.7	7.6

9/7/77 – II

ASBESTOS 5-YEAR PLAN (1978-82)

Union Carbide's Asbestos Business is based upon an enormous short-fiber ore deposit in the Diablo Mountains of Central California, and a mill located some 60 miles away in the Salinas River Valley near King City. The short-fiber character of the ore precludes use of this material in the major markets served by longer fiber asbestos including: asbestos cement building products, textiles, felts, and friction materials. However, Union Carbide's short-fiber asbestos is competitive in some of the so-called Group 7 markets including: vinyl asbestos floor tile, drilling muds, tape joint compounds, ceiling tile, reinforced plastics, adhesive and sealants, coatings and paper. Table I provides information on the volume growth rate of these Group 7 fiber markets and Union Carbide's past and projected sales tonnages.

"Calidria" sales have grown from about $2.4 million in 1971 to an estimated $5.4 million in 1977, with continuing attendant improvements in net income. It is estimated that sales will be marginally higher in 1978 at about $5.7 million and will grow to $7.4 million* by 1982. In the same period, sales volume will increase from about 24,000 tons to 30,800 tons. (Depending on product mix, mill capacity is about 35,000 tons.) The increase in sales revenues is in part attributable to increased volume and in part to improved product mix. Domestic sales of floor tile products should increase by 3,000 tons reaching a level of 11,000 tons in 1982. Continued improvements in all export product lines should occur with export sales increasing from 7,900 tons in 1978 to slightly over 10,000 tons in 1982. Export will contribute 33% of sales volume and 40% of sales revenues in the outpost year. Again, with reference to the outpost year, RG-244 a highly profitable thixotropic agent added to polymeric materials for viscosity control, will account for only about 6% of the sales volume, but will supply 44% of the sales revenues. Table II provides data summarizing Union Carbide's market share and that of major competitors in selected short-fiber markets.

In the ensuing 5 years (1978-82), the major element of uncertainty will continue to be government regulation. At the present time, the OSHA standard for airborne asbestos fibers in the work place is 2.0 fibers per cc time-weighted-average. In October, 1975, OSHA proposed that this standard be lowered to 0.5 fibers per cc and in 1976 NIOSH, who serve in an advisory capacity to OSHA, recommended that the standard be further reduced to 0.1 fiber per cc. Two years have past since the 0.5 fibers per cc level was officially proposed by OSHA in the Federal Register without any action by the

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*/ In 1978 dollars

government. At the present time, our King City mill is in compliance with the 2.0 fibers per cc standard, but it is not obvious that the airborne dust level can be reduced to 0.5 fibers per cc without substantial infusions of new capital, and the technical feasibility of achieving a 0.1 fiber per cc level is remote at best. Even assuming that we could achieve compliance with these stringent proposals, it is unlikely that many of our customers will be willing to undertake the requisite investment to achieve compliance in the event that these more stringent standards are eventually promulgated. In such an event, we should be forced to seriously consider withdrawing from the business.

Since the short-fiber asbestos cannot be used in many conventional markets, historically Union Carbide has devoted substantial resources to developing new applications for short-fiber asbestos. One such development is RG-600, which is produced by treating high purity asbestos with phenolic-based coupling agent. RG-600 is cost competitive with fiberglass for the reinforcement of thermoplastics. During 1977, several market opportunities for RG-600 were uncovered and are being vigorously pursued. The major barrior to acceptance of this product in the market place appears to be the asbestos toxicology question, rather than the technical performance of the material. During 1977, another new product was perfected in the laboratory. This product involves treating asbestos fiber with a siliane coupling agent for use in oil based drilling muds as a viscosity control agent. Both the siliane treated asbestos and the RG-600 can be produced at the King City mill, with minor process changes involving working budget monies. Neither of these products has been factored into the 5-Year Sales Forecast.

WCT
10/13/77

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11/9/77 revised for 14/Chrysotile

ASBESTOS

	78	79	80	81		82	
SALES Q	24176	26625	28015	29410		30785	
$	5664	6613	7761	9091		10761	
PER TON	153.50	168.85	185.73	204.31		224.74	
TOTAL COST	3711	4492	5203	6009	6497	6919	8142
GROSS MARGIN	1953	2121	2558	3082	2594	3842	2619
	34.5	32.1	33.0	33.9		35.7	
OVHD	1069	1132	1200	1270		1340	
DEPREC.	260	276	258	307		328	
LOAN	150	150	150	150		150	
PI TAX	474	563	920	1355	867	2024	801
DEPLETION	300	315	330	350		375	
TAX		102	263	464	230	774	187
NIAT		461	657	891	637	1250	614
¢		.7	1.0	1.4	1.0	2.0	1.0
ROI		9.8	13.7	17.9		17.1	

Asbestos
LRP
1978-82

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NET TONS 5 YEAR FORECAST HSPECIALTY CT

	O/R	PRICE NTA	1978		1979		1980		1981		1982	
			2nd Half		2nd Half		2nd Half		2nd Half		2nd Half	
DOMESTIC												
SG 103	R	100.00	1000	100	3000	300	3000	300	3000	300	3000	300
104		84.00	6000	504	6500	546	7000	588	7500	630	8000	672
130		110.00	341	37	350	33	300	33	300	33	300	33
200		120.00	360	39	500	60	500	60	500	60	500	60
210		166.00	1130	107	600	100	700	116	800	133	800	133
HPP		154.00	60	10	50	7	50	7	50	7	50	7
HPO		165.00	670	116	1000	166	1000	166	1000	166	1000	166
T135P		550.00	-	-	-	-	-	-	-	-	-	-
C6135P		150.00	175	116	200	30	200	30	200	30	200	30
R6100		120.00	400	160	400	160	400	160	500	200	500	200
R6110		180.00	440	84	500	93	550	99	600	108	650	117
R6144		140.00	600	264	650	286	700	308	750	330	900	396
R6244		200.00	600	1260	650	1365	700	1470	750	1575	850	1785
MONTE40	V	118.00	3100	413	4000	472	4000	472	4000	472	4000	472
TOTAL DOM				3391		3615		3815		4050		4377
EXPORT												
SG 100/102	R	100.00	1000	100	1100	110	1300	130	1400	140	1500	150
130		120.00	130	16	140	17	150	18	160	19	170	20
200		110.00	1050	116	1050	116	1150	126	1200	132	1300	143
HPMEX		140.00	2400	340	2600	369	2800	398	3000	426	3200	454
HPOEX		166.00	600	100	650	108	700	116	750	124	800	133
T135-0		100.00	60	42	60	42	65	46	70	49	75	52
T135P		570.00	410	213	450	234	475	247	500	260	500	260
R6110EX		150.00	150	37	-	-		-	-	-	-	-
R6144		440.00	270	119	265	117	300	132	330	145	340	150
SX 44		315.00	140	44	150	47	165	52	180	57	200	63
R6244		1900.00	290	551	310	589	340	646	370	703	400	760
SX 54	V	1450.00	400	500	430	538	470	588	500	625	550	688
TOTAL EXPORT				2473		2797		2999		3180		3423
TOTAL ASBESTOS				5864		6017		6414		6330		7350

Union Carbide trial exhibit UC-1376: Union Carbide Asbestos 5-Year Plan (1978-82) with Calidria Sales Forecasts a...
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Union Carbide trial exhibit UC-1376: Union Carbide Asbestos 5-Year Plan (1978-82) with Calidria Sales Forecasts...
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TABLE II

CALIDRIA ASBESTOS COMPETITIVE POSITION

	Floor Tile		Drilling Muds		Tape Joint Compounds		Reinf. Plastics (Thixotrope)		Rubber		Paper		Adhesives & Sealants		Coatings		Ceiling Tile	
	1976	1982	1976	1982	1976	1982	1976	1982	1976	1982	1976	1982	1976	1982	1976	1982	1976	1982
Total Market, T	80000	90000	8000	10000	10000	4000	8000	12000	3000	5000	2000	3000	18000	24000	8100	9400	2500	2800
UCC Share, T	9150	13500	3130	4100	4550	2800	600	1000	620	660	1360	2100	2000	2900	800	1000	2350	2720
UCC Share, %	11	15	39	41	46	70	8	8	21	13	68	70	11	12	10	11	94	97
Competitors, %																		
Carey	40	40	-	-	54	30	-	-	30	30	32	30	30	30	30	30	6	3
Atlas	20	18	5	5	-	-	-	-	-	-	-	-	10	7	-	-	-	-
J-M	29	27	56	54	-	-	-	-	49	48	-	-	44	44	50	49	-	-
Cabot/Degussa	-	-	-	-	-	-	85	85	-	-	-	-	5	7	10	10	-	-

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SEP 19 1977

To: U.C. Thurber
38th Floor

Table I

CALIDRIA ASBESTOS SALES

Market	Annual Growth Rate, % Historical	Annual Growth Rate, % Thru 1982	Calidria Sales 1976 T	1976 %	Calidria Sales 1982 T	1982 %
Floor Tile	5	3	9150	37	13500	44
Drilling Fluids	7	3	3130	13	4100	14
Tape Joint Compounds	-	-	4550	19	2800	9
Adhesives and Sealants	-	6	2000	8	2900	9
Coatings	-	3	800	3	1000	3
Ceiling Tile	-	-	2350	10	2720	9
Paper	-	6	1360	5	2100	7
Reinforced Plastics	7	10	600	2	1000	3
Rubber	-	-	620	3	660	2
			24560		30780	

Table I-2

E-2

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TO: W.C. THURBER
NY-38

CALIDRIA ASBESTOS – 5 YEAR FORECAST

9/7/77

Product	PRICE $/T	1978 Tons	1978 $M	1979 Tons	1979 $M	1980 Tons	1980 $M	1981 Tons	1981 $M	1982 Tons	1982 $M
Domestic											
SG-103	100	2000	200	3000	300	3000	300	3000	300	3000	300
SG-124	84	6000	504	6500	546	7000	588	7500	630	8000	672
SG-130	130	241	29	250	33	300	39	300	39	300	39
SG-200	120	360	39	500	60	500	60	500	60	500	60
SG-210	166	1230	202	600	100	700	116	800	133	800	133
HPP	154	60	10	50	7	50	7	50	7	50	7
APO	166	670	116	1000	166	1000	166	1000	166	1000	166
T-135-O	590	—	—	—	—	—	—	—	—	—	—
CG-135-P	150	175	110	200	30	200	30	200	30	200	30
RG-200	400	400	160	400	160	400	160	500	200	500	200
RG-110	180	440	84	500	90	550	99	600	108	650	117
RG-144	440	600	264	650	286	700	308	750	330	900	396
RG-244	2100	600	1260	650	1365	700	1470	750	1575	850	1785
Mentello	118	3500	413	4000	472	4000	472	4000	472	4000	472
Dom. Total		16276	3391	18300	3615	19100	3815	19950	4050	20750	4327
EXPORT											
SG-100/102	100	2000	200	2200	220	2300	230	2400	240	2500	250
SG-130	120	130	16	140	17	150	18	160	19	170	20
HS-200	110	1050	116	1050	116	1150	126	1200	132	1300	143
HPP-EX	142	2400	340	2600	369	2800	398	3000	426	3200	454
HPO-EX	166	600	100	650	108	700	116	750	124	800	133
T-135-O	700	60	42	60	42	65	46	70	49	75	52
T-135-P	520	410	213	450	234	475	247	520	260	500	260
RG-110-EX	210	150	32	0	0	0	0	0	0	0	0
RG-144	440/400	270	119	265	117	300	132	330	145	340	150
SX-141	315	140	44	150	47	165	52	180	57	200	63
RG-244	1900/820	290	551	310	589	340	646	370	703	400	760
SX-24	1250	400	500	430	538	470	588	500	625	550	688
Export Total		7900	2273	8305	3397	8915	2599	9460	2780	10035	2973
Total Sales		24176	5664	26605	6012	28015	6414	29410	6830	28785	7350
	% Increase	—	—	10.0	6.1	5.3	6.7	5.0	6.5	4.7	7.6

9/7/77 – II

ASBESTOS 5-YEAR PLAN (1978-82)

Union Carbide's Asbestos Business is based upon an enormous short-fiber ore deposit in the Diablo Mountains of Central California, and a mill located some 60 miles away in the Salinas River Valley near King City. The short-fiber character of the ore precludes use of this material in the major markets served by longer fiber asbestos including: asbestos cement building products, textiles, felts, and friction materials. However, Union Carbide's short-fiber asbestos is competitive in some of the so-called Group 7 markets including: vinyl asbestos floor tile, drilling muds, tape joint compounds, ceiling tile, reinforced plastics, adhesive and sealants, coatings and paper. Table I provides information on the volume growth rate of these Group 7 fiber markets and Union Carbide's past and projected sales tonnages.

"Calidria" sales have grown from about $2.4 million in 1971 to an estimated $5.4 million in 1977, with continuing attendant improvements in net income. It is estimated that sales will be marginally higher in 1978 at about $5.7 million and will grow to $7.4 million*/ by 1982. In the same period, sales volume will increase from about 24,000 tons to 30,800 tons. (Depending on product mix, mill capacity is about 35,000 tons.) The increase in sales revenues is in part attributable to increased volume and in part to improved product mix. Domestic sales of floor tile products should increase by 3,000 tons reaching a level of 11,000 tons in 1982. Continued improvements in all export product lines should occur with export sales increasing from 7,900 tons in 1978 to slightly over 10,000 tons in 1982. Export will contribute 33% of sales volume and 40% of sales revenues in the outpost year. Again, with reference to the outpost year, RG-244 a highly profitable thixotropic agent added to polymeric materials for viscosity control, will account for only about 6% of the sales volume, but will supply 44% of the sales revenues. Table II provides data summarizing Union Carbide's market share and that of major competitors in selected short-fiber markets.

In the ensuing 5 years (1978-82), the major element of uncertainty will continue to be government regulation. At the present time, the OSHA standard for airborne asbestos fibers in the work place is 2.0 fibers per cc time-weighted-average. In October, 1975, OSHA proposed that this standard be lowered to 0.5 fibers per cc and in 1976 NIOSH, who serve in an advisory capacity to OSHA, recommended that the standard be further reduced to 0.1 fiber per cc. Two years have past since the 0.5 fibers per cc level was officially proposed by OSHA in the Federal Register without any action by the

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*/ In 1978 dollars

government. At the present time, our King City mill is in compliance with the 2.0 fibers per cc standard, but it is not obvious that the airborne dust level can be reduced to 0.5 fibers per cc without substantial infusions of new capital, and the technical feasibility of achieving a 0.1 fiber per cc level is remote at best. Even assuming that we could achieve compliance with these stringent proposals, it is unlikely that many of our customers will be willing to undertake the requisite investment to achieve compliance in the event that these more stringent standards are eventually promulgated. In such an event, we should be forced to seriously consider withdrawing from the business.

Since the short-fiber asbestos cannot be used in many conventional markets, historically Union Carbide has devoted substantial resources to developing new applications for short-fiber asbestos. One such development is RG-600, which is produced by treating high purity asbestos with phenolic-based coupling agent. RG-600 is cost competitive with fiberglass for the reinforcement of thermoplastics. During 1977, several market opportunities for RG-600 were uncovered and are being vigorously pursued. The major barrior to acceptance of this product in the market place appears to be the asbestos toxicology question, rather than the technical performance of the material. During 1977, another new product was perfected in the laboratory. This product involves treating asbestos fiber with a siliane coupling agent for use in oil based drilling muds as a viscosity control agent. Both the siliane treated asbestos and the RG-600 can be produced at the King City mill, with minor process changes involving working budget monies. Neither of these products has been factored into the 5-Year Sales Forecast.

WCT
10/13/77

Union Carbide trial exhibit UC-1376: Union Carbide Asbestos 5-Year Plan (1978-82) with Calidria Sales Forecasts...
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77/81/LRP ASBESTOS PLANT COST ASSUMPTIONS

UC 442-11 PRINTED IN U.S.A.

		77					1.056 78			1.053 79			1.004 80			1.048 81		
			#M	COST			COST			COST			COST			COST		
		Qty	PRIT	VALUE	UNIT	VALUE	Qty	UNIT	VALUE	Qty	UNIT	VALUE	Qty	UNIT	VALUE	Qty	UNIT	VALUE
SG-	105	2000	100	200	73.52	147	2000	27.64	155	2000	81.75	164	2000	85.76	172	2000	89.87	180
SG-	104	10000	74	740	45.60	456	11000	48.15	530	12000	50.71	609	12000	53.19	638	12000	55.74	669
SG-	130	200	120	24	89.75	18	-0-	—	—	-0-	—	—	-0-	—	—	-0-	—	—
SG-	200	1000	110	110	75.71	76	1000	79.95	80	-0-	—	—	-0-	—	—	-0-	—	—
SG-	210	2000	150	300	113.08	226	1500	119.41	179	-0-	—	—	-0-	—	—	-0-	—	—
HPD		300	140	42	97.17	29	200	102.61	21	100	108.05	11	-0-	—	—	-0-	—	—
HPD		2000	150	300	123.04	246	2000	129.93	260	2000	136.82	274	2000	143.52	287	2000	150.41	301
RG	110	1000	160	160	114.86	115	1500	121.29	182	1500	127.72	192	1200	133.98	161	500	140.41	70
RG	144	600	360	216	127.56	77	1000	134.70	135	1500	141.84	213	1500	148.79	223	1500	155.93	234
RG	244	700	1520	1064	727.61	506	800	763.08	610	1000	803.52	804	1100	842.89	927	1100	883.35	972
MXN	YELLO	5500	108	594	76.93	423	6000	81.24	487	6000	85.54	513	6000	89.74	538	6000	94.04	564
T.T. DOMESTIC		25300		3750		2319	27000		2639	26100		2780	25800		2946	25100		2990
SG	210/103	2000	95	190	67.88	136	2500	71.68	179	3000	75.48	226	3500	79.18	277	4000	83.98	332
AS-	200	1000	100	100	73.94	74	1050	78.08	82	1100	82.22	90	1150	86.25	99	1200	90.39	108
HPD	EX	2000	130	260	93.53	187	2200	98.77	217	2400	104.00	250	2600	109.10	284	2800	114.34	320
HPD	EX	500	150	75	122.23	61	550	129.07	71	600	135.92	82	650	142.58	93	700	149.42	105
T-	135-P	385	490	189	379.68	146	415	400.94	166	445	422.19	188	475	442.88	210	500	464.14	232
RG-	110-EX	450	184	83	117.91	53	480	124.51	60	520	131.11	68	550	137.54	76	590	144.14	85
RG	144	145	360	52	127.56	18	160	134.70	22	175	141.84	25	190	148.79	28	200	155.93	31
SX-	14	120	300	36	127.71	15	130	134.86	18	150	142.01	21	170	148.97	25	200	156.12	31
RG-	244	210	1520	319	727.61	152	240	763.08	183	270	804.52	217	300	842.89	253	330	883.35	292
SX-	24	550	1250	688	702.23	386	600	744.55	445	650	780.86	508	700	819.12	573	750	854.44	644
TOT- EXPORT		7360		1492		1228	8325		1443	9310		1675	10285		1918	11270		2180
GRAND	TOTAL	32660		5742		3547	35325		4082	35410		4455	36085		4864	36370		5170
NIFS	AT 77	(REQ)		-			63			6792			7108			7273		
MARGIN-		DIRECT				2195			2274			2337			2244			2053
%	MARGIN					38.2			35.8			34.4			31.6			28.4
76 Bud. 12.4																		
76 Fcst 12.1																		
					INFLATED	COST			4082			4006						
					÷ INFLATION FACTOR = 77 COST				3166									
					% MARGIN - (77 NIFS - 77 COSTS) =				34									
					ADD NIFS TO ACHIEVE ABOVE				6700									
					X- 4082 = .39 X			Δ =	+344									

TABLE G
LONG RANGE PLAN
STRATEGIC PLANNING UNIT DATA SHEET(1)

STRATEGIC PLANNING UNIT: ASBESTOS

CATEGORY: 3

MAJOR MARKETS SERVED

NAME	MARKET GROWTH RATE	% SPU SALES CURRENT YEAR	% SPU SALES 5th YEAR OF PLAN
1. Vinyl Asbestos Floor Tile	3%	~~24%~~	0
2. ~~Thermoplastic Reinforcement~~	~~75%~~	1%	~~24%~~
3. Polyster Thixotropes	5%	25%	40%

MARKET, TECHNOLOGICAL & COSTS

STRENGTHS

1. Large ore reserves.
2. Proprietary products

WEAKNESSES

1. Toxicity regulations and emotional reactions thereto.

2. markets limited by nature of ore (i.e. short fiber

MARKET SHARE BY MAJOR MARKETS

	MARKETS 1.	2.	3.
UCC UNIT	Metals 10%	~~5%~~	10%
PRIMARY COMPETITORS			
Carey Canadian	30%		
Johns-Manville	40%	10%	
Atlas (California)	20%		
Cabot Corp.			60%
Degussa			30%
~~PPG/OCF~~		~~25%~~	

CRITICAL ISSUES (Including Feedstock & Raw Materials)

1. Ability to meet current and future regulatory and ~~safety~~ requirements.
2. Selective development of new proprietary products and continued growth in existing proprietary products.
3. ~~Explore alternate plans to better utilize enormous reserves.~~

BUSINESS OBJECTIVES

PURPOSE – To contribute to Division objectives with full regard for health and safety of employees, customers and the public.

FINANCIAL – ROA over ~~15%~~

– Earnings growth over ~~50%~~ 25%

DIRECTION – Carefully planned modest growth via expansion of proprietary product sales.

STRATEGIES

1. Closely monitor & assist in development of safety & health regulations & practice.
2. Expand sales of proprietary products phase out of commodity products.
3. ~~Develop a plan to better utilize reserve position.~~

HISTORICAL 19 71	19 72	19 73	19 74	CURRENT 19 75	$ MILLION	PROJECTED 19 76	19 77	19 78	19 79	19 80
2.4	2.6	3.8	3.8	4.4	Customer Sales	5.8	6.7	8.7	8.7	10.2
				16.4%	Total Net Sales Growth Rate(2)					19.0%
29.2	33.2	36.3	30.8	27.3	Gross Margin %	36.2	35.8	40.2	40.2	42.2
21.5	21.1	22.2	23.2	19.3	Overhead % of Sales	13.8	12.0	9.2	10.4	8.8
–	.1	.3	.1	–	Net Income After Tax	.6	.8	1.6	1.4	2.0
				–	Growth Rate(2)					65%
.2	.2	.5	1.1	.6	Construction	.3	.5	.4	.4	.7
2.0	2.0	3.0	3.4	4.5	Net Assets Employed	4.4	5.4	5.8	6.1	5.8
–	4.0	11.5	2.6	1.0	ROA %	13.6	14.8	27.6	23.0	34.5
1.19	1.33	1.27	1.12	1.0	Sales ÷ Net Assets Employed	1.3	1.2	1.5	1.4	1.8

(1) All numbers except percentages should be shown in millions of dollars to the first decimal place.

(2) See Notes to Financial Projections.

DIVISION/AREA
Metals/Asbestos

UC 149-2

Gill

UNION CARBIDE

INTERNAL CORRESPONDENCE

METALS DIVISION

270 PARK AVENUE, NEW YORK, NEW YORK 10017

To (Name) Messrs. R. E. Byrne
Division F. H. Larrison
Location J. L. Myers
Floor Number Mrs. T. Nielsen
J. W. Rawlings
H. B. Rhodes
Copy to R. L. Schult
J. D. Thacker

Date June 8, 1976

Originating Dept.

Floor Number

Answering letter date

Subject REVISION - 5 Year Forecast
1977 - 1981

Attached is Revision I to the 5 Year Forecast (1977 - 81). The base plan shows no RG-600 sales. An alternate sales plan involving RG-600 sales is also included based upon the following:

1977 -	1000 Tons	- Produced at	Niagara Falls	- 0% G.M.
1978 -	2000 "	- "	at King City	- 50% G.M.
1979 -	2500 "	- "	" " "	- 50% G.M.
1980 -	3000 "	- "	" " "	- 50% G.M.
1981 -	3500 "	- "	" " "	- 50% G.M.

RG-600 is assumed to replace Standard Grade and Hi-Purity production at ratios of 1 to 3 and 4 to 7 respectively.

W. C. THURBER

WCT:jl
Att.

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asbestosclaims.law/library/16514/17

ALTERNATE

1977-81 LONG RANGE SALES FORECAST
ASBESTOS SPU
WITH RG-600 SALES

	Initials	Date
Prepared By	UCT	6/21/77
Approved By		

BURROUGHS CORPORATION — TODD COMPANY DIV. — L
Form H558 Buff
Form G556 Green

	(1) PRODUCT	(2)	(3) PRICE $/T	(4) 1977 TONS	(4) 1977 $M	(5) 1978 TONS	(5) 1978 $M	(6) 1979 TONS	(6) 1979 $M	(7) 1980 TONS	(7) 1980 $M	(8) 1981 TONS	(8) 1981 $M
1	DOMESTIC												
2	SG-103		100	2000	200	2000	200	2000	200	2000	200	2000	200
3	SG-104		74	10000	740	11000	814	12000	888	12000	888	12000	888
4	SG-130		120	200	24	—	—	—	—	—	—	—	—
5	SG-200		110	1000	110	1000	110	—	—	—	—	—	—
6	SG-210		150	2000	300	1500	225	—	—	—	—	—	—
7	HPP		140	300	42	~~200~~	~~28~~	~~100~~	~~14~~	—	—	—	—
8	HPO		150	2000	300	~~2000~~	~~300~~	2000	300	2000	300	~~2000~~	~~300~~
9	RG-110		160	1000	160	200 / 1500	32 / ~~240~~	1500	~~240~~	1200	~~192~~	~~600~~	~~80~~
10	RG-144		360	600	216	1080	360	1500	540	1500	540	1500	540
11	RG-244		1520	700	1064	800	1216	1000	1520	1100	1672	1100	1672
12	Monel 16		108	5500	594	6000	648	6000	648	6000	648	6000	648
13	RG-600		600	1000	600	2000	1200	2500	1500	3000	1800	3500	2100
14													
15	Total Domestic			~~25300~~	~~3750~~	~~27000~~	~~4144~~	~~26150~~	~~4350~~	~~25800~~	~~4440~~	~~25100~~	~~4528~~
16				26300	4330	25500	4805	25000	5296	25600	5748	26100	6048
17													
18	EXPORT												
19	SG-100 / 103		95	2000	190	2500	238	3000	285	3500	333	4000	380
20	AS-200		100	1000	100	1050	105	1100	110	1150	115	1200	120
21	HPP-EX		130	2000	260	2200	286	2225 / ~~2400~~	289 / ~~312~~	1200 / ~~2600~~	156 / ~~338~~	~~2300~~	~~364~~
22	HPO-EX		150	500	75	550	83	~~600~~	~~90~~	~~650~~	~~98~~	~~700~~	~~105~~
23	T-135-P		490	325	159	415	203	445	218	475	233	500	245
24	RG-110-EX		184	450	83	480	88	520	96	550	101	465 / ~~590~~	86 / ~~109~~
25	RG-144		360	145	52	160	58	175	63	190	68	200	72
26	SX-14		300	120	36	130	39	150	45	170	51	200	60
27	RG-244		1520	210	319	240	365	270	410	300	456	330	502
28	SX-24		1250	556	688	600	750	650	813	700	875	750	938
29													
30	Total Export			7360	1957	8325	2215	~~9220~~	~~2442~~	10285	2688	~~11350~~	~~2965~~
31								9135	2329	8235	2388	7745	2403
32					#		#		#		#		#
33	TOTAL			~~33660~~	~~5712~~	~~35825~~	~~6360~~	~~35870~~	~~6792~~	~~36085~~	~~7128~~	~~36850~~	~~7223~~
34													
35													
36					#		#		#		#		#
37	TOTAL			33660	6342	37825	7020	34135	7625	33835	8136	33745	8451
38													
39													