PLAINTIFF'S
EXHIBIT
BIR-51

BIRD & SON

MEMORANDUM

cc: Mr. Kinsey -BRK
Mr. Wood -BBP
Mr. Clark -BBQ
Mr. Jagocki -BBH

To Mr. Jackson -BBH

From Mr. Roelofs -BBH

Date November 2, 1982

Subject APPROXIMATE RAW MATERIAL COST OF REPLACING ASBESTOS WITH HERCULES PULPEX

The attached tables give a best-case raw material cost analysis of asbestos replacement by Pulpex. I have assumed a Pulpex cost of $1.50 per pound to account for freight to FS and increases since the 12/81 price list. I have also assumed a straight 10% Pulpex replacement of asbestos, which is the best we could hope for.

The suggested formulations from Hercules show Pulpex levels of up to 3%. Our assumed replacement formulas show nothing higher than 2.1% Pulpex. Thus, a 10% replacement would probably not be sufficient and cost increases would be higher than shown. Hercules has offered to work with us on reformulation.

Table 8 gives a summary of the total cost of 1982 production to September assuming the 10% replacement. Approximate raw material costs are increased over $16,700 or 21.4% of the asbestos portion of the production raw material cost.

V. Roelofs

VR/ac

Attach.

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TABLE 1

APPROXIMATE RAW MATERIAL COSTS USED FOR CALCULATIONS OF CEMENT AND COATING COSTS

Asphalt	$160.00/ton	=	8.0¢/pound
Kerosene	$1.095/gallon (0.78 Specific Gravity)	=	16.8¢/pound
Naptha	$1.085/gallon (0.75 Specific Gravity)	=	17.3¢/pound
#36 Talc	$93.00/ton	=	4.7¢/pound
Glenwood Filler	$22.00/ton	=	1.1¢/pound
7R Asbestos	$193.27/ton	=	9.7¢/pound
6D Asbestos	$355.20/ton	=	17.8¢/pound
Pulpex =	$1.50/pound		

TABLE 2

PRODUCT - BUCA (Built-Up Cold Application Adhesive)

Raw Material	Unit Cost ¢/pound	Useage/ Batch	Cost/ Batch
Asphalt	8.0	4048	323.84
Naptha	17.3	2992	517.62
7R Asbestos	9.7	960	93.12
Total		8000	934.58
Unit Cost - 11.68¢/pound			
Assume 1:10 Pulpex Replacement			
Asphalt	8.0	4048	323.84
Naptha	17.3	2992	517.62
Pulpex	150.0	96	144.00
Total		7136	985.46
Unit Cost - 13.81¢/pound			
Increase of 2.13¢/pound			

No possible break-even ratio for Pulpex

TABLE 3

PRODUCT - LAP CEMENT

Raw Material	Unit Cost ¢/pound	Useage/ Batch	Cost/ Batch
Asphalt	8.0	5223	417.84
Kerosene	16.8	1768	297.02
Naptha	17.3	603	104.32
7R Asbestos	9.7	442	42.87
Total		8036	862.05

Unit Cost - 10.73¢/pound

Assume 1:10 Pulpex Replacement

Asphalt	8.0	5223	417.84
Kerosene	16.8	1768	297.02
Naptha	17.3	603	104.32
Pulpex	150.0	44.2	66.30
Total		7638.2	885.48

Unit Cost - 11.59¢/pound
Increase of 0.86¢/pound

No possible break-even ratio for Pulpex

TABLE 4

PRODUCT - QUICK SETTING LAP CEMENT

Raw Material	Unit Cost ¢/pound	Useage/ Batch	Cost/ Batch
Asphalt	8.0	3150	252.00
Kerosene	16.8	900	151.20
Naptha	17.3	900	155.70
Glenwood Filler	1.1	2175	23.93
7R Asbestos	9.7	375	36.38
Total		7500	619.21

Unit Cost - 8.26¢/pound

Assume 1:10 Pulpex Replacement

Asphalt	8.0	3150	252.00
Kerosene	16.8	900	151.20
Naptha	17.3	900	155.70
Glenwood Filler	1.1	2175	23.93
Pulpex	150.0	37.5	56.25
Total		7162.5	639.08

Unit Cost - 8.92¢/pound
Increase of 0.66¢/pound

Pulpex break-even ratio of 1:91

TABLE 5

PRODUCT - SPECIAL FLASHING CEMENT

Raw Material	Unit Cost ¢/pound	Useage/ Batch	Cost/ Batch
Asphalt	8.0	3828	306.24
Kerosene	16.8	993	166.82
Naptha	17.3	993	171.79
7R Asbestos	9.7	638	61.89
6D Asbestos	17.8	638	113.56
Total		7090	820.30

Unit Cost - 11.57¢/pound

Assume 1:10 Pulpex Replacement

Asphalt	8.0	3828	306.24
Kerosene	16.8	993	166.82
Naptha	17.3	993	171.79
Pulpex	150.0	127.6	191.40
Total		5941.6	836.25

Unit Cost - 14.07¢/pound
Increase of 2.50¢/pound

Pulpex Break-even ratio of 1:64

TABLE 6

PRODUCT - PLASTIC CEMENT

Raw Material	Unit Cost ¢/pound	Useage/ Batch	Cost/ Batch
Asphalt	8.0	5193	415.44
Kerosene	16.8	306	51.41
Naptha	17.3	1784	308.63
#36 Talc	4.7	1324	62.23
7R Asbestos	9.7	1400	135.80
Total		10007	973.51

Unit Cost - 9.73¢/pound

Assume 1:10 Pulpex Replacement

Asphalt	8.0	5193	415.44
Kerosene	16.8	306	51.41
Naptha	17.3	1784	308.63
#36 Talc	4.7	1324	62.23
Pulpex	150.0	140	210.00
Total		8747	1047.71

Unit Cost - 11.98¢/pound
Increase of 2.25¢/pound

No possible break-even ratio for Pulpex

TABLE 7

PRODUCT - ROOF COATING (FIBERED)

Raw Material	Unit Cost ¢/pound	Useage/ Batch	Cost/ Batch
Asphalt	8.0	3875	310.00
Naptha	17.3	2945	509.49
7R Asbestos	9.7	930	90.21
Total		7750	909.70

Unit cost - 11.74¢/pound

Assume 1:10 Pulpex Replacement

Asphalt	8.0	3875	310.00
Naptha	17.3	2945	509.49
Pulpex	150.0	93	139.50
Total		6913	958.99

Unit Cost - 13.87¢/pound
Increase of 2.13¢/pound

No possible break-even ratio for Pulpex

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TABLE 8

INCREASE RAW MATERIAL COSTS - SUMMARY

Assuming a 10% Pulpex replacement level, the increased costs given earlier are multiplied by the year to date (September) production volumes.

Product	Asbestos Formula ¢/pound	Pulpex Formula ¢/pound	Pounds Produced	Total Cost Asbestos Formula	Total Cost Pulpex Formula	Increased Cost
BUCA	11.68	13.81	53,069	6,198.46	7,328.83	1,130.37
Special Flashing Cement	11.57	14.07	515,293	59,619.40	72,501.73	12,882.33
Plastic Cement	9.73	11.97	92,892	9,038.39	11,128.46	2,090.07
Fibered Roof Coating	11.74	13.87	30,032	3,525.76	4,165.44	639.68
			691,286	78,382.01	95,124.46	16,742.45

Total Cost Increase - 21.4% or 2.4¢/pound

REFLECTO-COAT

Raw Material

Asphalt	8.0	1120	89.60
Naptha	17.3	600	103.80
Naptha	17.3	920	159.16
Asbestos	15.5	560	86.80
DI Paste	126	800	1008.00
		4000	1447.36

36.18 #

Asphalt	8.0	1120	89.60
Naptha	17.3	600	103.80
Naptha	17.3	920	159.16
Pulpex	150.0	56	84.00
DI Paste	126.0	800	1008.00
		3496	1444.56

41.32

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