

UNION CARBIDE NUCLEAR COMPANY

30 EAST 42nd STREET, NEW YORK 17, NEW YORK

To (person)	Mr. L. A. Bliss	Date	December 22, 1959
Company	Union Carbide Nuclear Co.	Originating Dept.	Sales Development
Location	30 East 42nd Street Room 1722	Assembling letter date	
Copy to	Mr. A. Q. Lundquist Dr. C. O. Strother Mr. W. M. Smart Mr. S. J. Cronner Mr. W. N. Johnson Mr. H. L. McKinley Mr. J. L. Lake ✓ Mr. T. S. Aky Mr. H. E. Vitz Mr. L. P. Twichell Mr. J. A. Connors	Subject	Asbestos Markets <u>Status Report.</u>

Dear Mr. Bliss:

Messrs. Hall, Reichard and Austin have in recent weeks established a large number of contacts with asbestos users -- over 200 of an estimated 450 multiple carload buyers. This is to summarize in brief form their findings to date.

We believe the salient points are these:

1. The present West Coast market is almost entirely for short fiber material (6 and 7 grades and floats), amounts to at least 100,000 tons per annum now, will be about 125,000 tons in 1960; adding Chicago and Southwestern areas (where freight from Coalinga vs. Quebec is roughly a toss-up) would about double this accessible short fiber market.

About 50% of this volume is for use in vinyl and asphalt tiles, the remainder being divided between roofing and undercoating, insulation, joint cements, brake linings, plastic cements and stucco, and phenolic resins.

2. Essentially all the above market areas can use the fiber length we have at Coalinga --- questions are the degree of opening, dust content, etc., which can be resolved by adjustment of the final grinding equipment.

For vinyl tile uses there are additional and interrelated questions concerning color and oil absorbency. Likely high iron oxide content (as much as 3% in the fiber) accounts for Bakelite discoloration experience during tile calendaring, can be eliminated by magnetic separation. Discoloration due to high absorption of plasticizer might be corrected by surface treatment with a humectant.

3. Our greatest laboratory emphasis should be put on vinyl tile uses --- opening an initial sales area of upwards of 50,000 tons per annum. This would automatically provide useful material for the other areas. The laboratory effort would consist of two parts: (a) preparation of suitable treated asbestos samples to be carried out at Sterling Forest; and (b) sample performance tests in experimental tile preparation (including adjustment of formulation).

We believe the latter can best be carried out at the Bakelite development laboratories who have done initial test work gratis. We have requested a cost estimate from this group for a 1-3 month accelerated study program.

4. Numerous small samples have been distributed, to the limits of applicable material available from the first 2,500 pounds prepared at the Danville pilot plant -- and additional samples from the second run just completed. Good response to initial examination gives rise to the following anticipated evaluation timetable:

a. Small Test Lots, 5-100 Pounds. (S. F. Pilot Plant)

By mid-January, 1960, performance reports will be in for about 10 potential customers (accounting for over 50,000 tons consumption per year) who have samples of 5 to 100 pounds each.

We can expect about two more rounds of sampling (similar test size) to these and others (at least 30), with adjustments aiming for more suitable material.

Including customer evaluation time, this phase should be completed in early April and maximum test quantities required would amount to 6,000 pounds of fiber.

b. Ton Lots. (S. F. Pilot Plant)

We anticipate two test rounds on quantities of this size -- and aim for completion of customer evaluations by July 1st. Not all customers (est. 20) will require two; total test quantities required would amount to about 40,000 pounds of fiber.

c. Carload Test Lots. (On-site Unit)

With all customers, final approval calls for plant evaluation of carload lots. Vinyl tile producers will require at least one carload test lot -- others may approve on the basis of 2,000 pound tests.

For this phase a total of 20 carloads (800 tons) are expected to be required, and we would hope to be well into this evaluation stage by September 1st.

Entry into the carload evaluation stage implies decision by the customer that the material is generally satisfactory, and product changes, if any, may be minor. Hence by July 1st hopefully we may be in a position to justify engineering design for the final plant.

It appears from the above a market development program to acquire asbestos business as rapidly as possible would call for an on-site pilot plant of relatively short life. This may not be consistent with plans for thorough evaluation of the uniformity of the deposit, engineering factors, etc., through operation of an on-site unit for a period of time. This may suggest the engineering group consider alternatives such as "incremental plant" installation to serve the pilot plant stage.

5. In summary, initial market response has been favorable, the problems defined, and we can see reasonable and direct paths to their resolution at a relatively early date. Bringing about the above timetable should gain access to at least 50,000 tons per annum of business, and more likely 75,000-100,000 tons by the time of final plant start-up.

The 50,000 ton core of this business can be with larger customers on a regular carload basis -- with minimized distribution problems. At least in the early days of final plant operation we may wish to rely on distributor arrangements to acquire and service smaller accounts.

We see no real barriers to the marketing timetable set forth. It will, however, call for considerable work by various groups. The laboratory phases are under way, but will require acceleration shortly. As is known, a "rough appraisal" estimate by the engineering group is in final stages of preparation -- and we believe it will prove to be sufficiently encouraging to call for an early start on more concise "preliminary engineering" dealing with a final 150,000 ton plant and its relation to a pilot unit on site.

Very truly yours,

A. E. Pufahl

AEPufahl/dh

Attachments

ASBESTOS - STATUS REPORT

I. General Markets.

U. S. asbestos markets will total over 850,000 tons of fiber, all grades, in 1959 -- will go to somewhat over one million tons in 1960. About 70% of this is short fiber requirement (5-7 grades and floats) and the trend is increasingly in this direction.

There are at least 450 asbestos consumers in the United States who use multiple carload quantities of fiber, and many of these are accessible for direct sales. Not accounted for in this number are smaller consumers served through distributors, resellers, etc.

Although the over-all asbestos market is in an oversupply condition, an anomaly exists in that there is a definite shortage of short fibers. This comes about because of the general industry shift from use of long fibers to short fibers over the past few years; a case in point is brake linings, originally employing woven and braided long fibers, now shifted entirely to short fibers, matted and bonded. Quebec production by the nature of the ore yields both, and long fibers are accumulating in inventory causing over-all cutback in production. (Note: California cross-fiber deposits face same problems.)

There is good evidence that various building material industries employ sizable tonnages of fibrous materials other than asbestos -- could swing to asbestos under reasonable competitive conditions. This is especially true on the West Coast where manufacturers of products such as plaster board, paints, etc., use jute, sisal, fibrous talc, asbestine, etc. -- and where delivered costs might be met with asbestos shorts originating from a West Coast plant.

II. West Coast Markets.

The West Coast market now runs about 15% of the U. S. total, is expected to go to about 20% in the next few years. New home construction starts run higher than the U. S. average, and the building materials industry accounts for better than 90% of asbestos consumption in the form of short fibers (grades 6, 7 and floats).

About 25 customers constitute the core of the sizable users on the West Coast -- whom we have contacted and either sampled in 5 to 10 pound quantities, or are scheduled to sample from the latest Danville pilot run.

Following is a rough tabular breakdown of end uses among these customers:

	<u>Total U. S.</u>	<u>Western</u>
A. Vinyl and asbestos tile	75,000 tons/yr.	44,000 tons/yr.
B. Roofing and undercoating	9,000 "	2,600 "
C. Insulation	3,000 "	1,000 "
D. Wallboard joint cement	9,000 "	3,000 "
E. Brake linings	13,000 "	1,000 "
F. Plastic cements and stucco	3,500 "	3,500 "
G. Phenolic resins	8,000 "	<u>500</u> "
		55,600 "

(This does not include Johns Manville, whose requirement amounts to 25,000 tons per annum on the West Coast.)

Presently there is no asbestos production of consequence on the West Coast. Hence there is no firm freight classification for shipments based on production in the area, and the rail rates quoted to date cover all types of asbestos classified as Chemicals NIOBN. Thus traffic indications of shipping charges of \$7.90 per short ton from Fresno to San Francisco and \$9.50 per short ton from Fresno to Los Angeles are likely high and could be improved upon.

Nevertheless, these compare with Quebec freight rates on comparable grades of \$31.10 to each area. (Freight rates attached.)

III. Chicago and Southwestern Areas.

Counting Texas, New Orleans area, and Chicago and vicinity, larger consumers in this area account for annual short fiber asbestos consumption of over 100,000 tons. Contact has been made with 12 large consumers (who account for 40,000 tons per annum) and will be expanded to others.

In this zone the freight rate advantage for a California plant drops to zero, or becomes a disadvantage (depending on delivery point). Using present traffic information, the maximum disadvantage in shipments to this area would amount to \$15.00 per ton. However, the figures provided on shipments from Fresno are again the general NIOBN classification and likely could be improved upon. This might shift the maximum disadvantage versus Quebec to no more than \$5.00 at the extremities of the market reached in this area.

IV. Coatings Product Evaluation.

For the uses B through G in the above tabulation of West Coast customers, Coatings material can be employed with proper "opening". This is a function of the machine employed (i.e., micropulverizer) and the machine setting and should give no real difficulty. Some blending may be required.

Use area A, vinyl and asphalt tiles, requires size adjustment as above, but also corrections for color and oil absorbency. A typical vinyl tile formulation is as follows:

	<u>% by Wt.</u>
VYHH resin	14.75
Plasticizers	5.75
Plasticizer Extenders	1.20
Pigment (TiO ₂)	3.00
Stabilizer Lubricant	1.50
Limestone	50.20
Asbestos (shorts)	23.60
	<u>100.00 %</u>

In a standard formula, Coalinga short fiber asbestos absorbs plasticizer to the extent of double that of Quebec material. The mix has low hot strength, tears during calendaring, and the final sheet is stiff and brittle. During the heat experience (140° - 150°C.) in calendaring the mix darkens in color, indicating some catalytic degeneration of resin -- likely by metallic contaminant in the asbestos. Advantage: The finished tile has much higher strength, possibly due to more uniform fiber length.

Various corrections to these problems are possible, some being examined by consumers. Coalinga fiber has about the same iron oxide content as Quebec material (3-4%), but may differ in ratio of oxides (Fe₂O₃ vs. Fe₃O₄). Dry magnetic separation may remove appreciable portion.

Some indications have already been obtained by our people that oil absorbency (and hence plasticizer) may be reduced by maintaining optimum moisture content on the surfaces, "blocking" the plasticizer. Use of humectant treatment should be studied.

The basic tile formulations can be adjusted to compensate for other shortcomings, (such as shift of limestone/asbestos ratio); here economy governs. Although consumers will do this type of work, a collaborative program with Bakelite to set the significant factors is called for.

We feel the problems are not serious, and there are promising avenues to their resolution; a direct arrangement with the Bakelite Development group, who have the test equipment and vinyl tile background, should resolve these in a matter of months (1-3) and hopefully reveal advantages of Coalinga fiber which can be turned to our benefit.

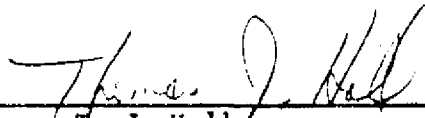
V. Competitive Situation.

As is known, 95% of the asbestos used in the United States comes from Quebec. The West Coast freight differentials between Quebec and Coalinga sources are also clear, and will be increased with California freight rate improvement.

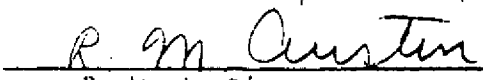
Exploration for large asbestos deposits in the California area is increasing; while publicity deals with smaller concerns and smaller deposits (i.e., Jefferson Lake and Clute), the larger Quebec people -- Johns Manville, Nicolet, American Smelting & Refining Co. -- are stepping up their search activities.

Our Exploration people feel the general area is geologically favorable toward eventual discovery of a large cross-fiber deposit of the Quebec type -- and possibly additional large deposits of slip fiber. As of today the deposit of consequence is Coalinga, and if we capitalize on this starting position, the ore grade, open pit mining factors (without blasting), predominance of desirable short fiber all can be genuine advantages.

Timing is all-important. The aim of the marketing group is to be in a position to present a favorable justification for management decision on investment no later than mid-1960. This will call for complete cooperation from laboratory, engineering and production groups.


T. J. Hall


H. F. Reichard


R. M. Austin

dh

ASBESTOS FREIGHT RATES

I. Freight rates to San Francisco

- A. From Danville or Warwick, Quebec
 - Fiber, 80 M lb. min. carload \$ 35.10/short ton
 - Refuse, shorts, or waste, 80 M lb. Min. 31.10/short ton
- B. From Fresno, Calif., rail
 - Asbestos, all types, 40 M lb. min. cl. 7.90/short ton
- C. From Globe, Ariz., rail
 - Asbestos, all types, 36 M lb. min. cl. 22.70/short ton

Conclusions: In the San Francisco area we have a freight advantage of \$27.20/short ton on fibers from Quebec; an advantage of \$23.20/short ton on shorts and waste from Quebec, and an advantage of \$14.80/short ton on all types of asbestos from Globe, Ariz.

II. Rail freight rates to Los Angeles

- A. From Danville or Warwick, Quebec
 - Fiber, 80 M lb. min. carload \$ 35.10/short ton
 - Refuse, shorts and waste, 80 M lb. min. cl. 31.10/short ton
- B. From Fresno, Calif.
 - Asbestos, all types, 40 M lb. min. cl. 9.50/short ton
- C. From Globe, Ariz.
 - Asbestos, all types, 36 M lb. min. cl. 13.10/short ton

Conclusions: In the Los Angeles area we have a freight advantage of \$25.60/short ton on fibers from Quebec; an advantage of \$21.60/short ton on refuse, etc., from Quebec, and an advantage of \$3.60/short ton on all types of asbestos from Globe, Arizona.

III. Rail freight rates to Chicago

- A. From Danville and Warwick, Quebec
 - Fiber, 80 M lb. min. cl. \$ 21.50/short ton
 - Refuse and shorts, 80 M lb. min. cl. 13.30/short ton
- B. From Fresno, Calif.
 - Asbestos, all types, 60 M lb. min. cl. 27.70/short ton

Conclusions: Chicago is an important asbestos consuming area. We suffer a freight disadvantage there of \$6.20/short ton on fiber and a disadvantage of \$14.40/short ton on refuse and shorts. I think, however, that the disadvantage on fibers is not serious and could be absorbed.

IV. Freight rates to New York City

A. From Danville and Warwick, Quebec	
Fiber, 80 M lb. min. cl.	\$ 16.90/short ton
Refuse, shorts, 80 M lb. min. cl.	12.90/short ton
B. (a) Fresno to San Francisco	
Asbestos, all types, 40 M lb. min. cl.	7.90/short ton
(b) San Francisco to N.Y.C. via boat	
Asbestos, all types, 40 M lb. min.	<u>25.40/short ton</u>
Total, San Francisco to N.Y.C., rail and ship	\$ 33.30/short ton

Conclusions: Our freight disadvantage in the New York City area on fiber is \$16.40/short ton, and the disadvantage on refuse and shorts is \$20.40/short ton. The fiber disadvantage could be absorbed by us, but the disadvantage on refuse and shorts is probably too high to absorb.

<u>Company</u>	<u>Zone</u>	<u>Size (tons/yr.)</u>	<u>Status</u>
Flintkote Company	A, B, C	18,000	Will evaluate
Armstrong Cork Company	A, B, C	25,000	" "
Bestwall Gypsum Company	B, C	500	" "
Hooker Chemical Corporation	C	2,000	" "
Lahabralite Company	A	600	" "
Permanente Cement Company	A	500	Are evaluating
Raybestos-Manhattan, Inc.	B, C	12,000	Will evaluate
U. S. Gypsum Company	A, B, C	8,000	" "
Uvalde	B	2,000	" "
Riverside Cement Company	A	400	" "
California Portland Cement Co.	A	1,000	" "
Monolith Portland Cement Co.	A	500	" "
Southwest Portland Cement Co.	A	500	" "
Standard Oil of California	A	120	" "
B & B Engineering Co.	B	250	" "
Gulf States Asphalt Co.	B	320	" "
Railton Mfg Co.	B	CL/yr.	" "
Bird & Son, Inc.	B	200	Are evaluating
Coopers Creek Chemical Co.	C	200	" "
Daubert Chemical Company	A, B	1,800	" "
Eagle-Picher Company	B	2,000	" "
Fibreboard Paper Products Corp.	A	1,700	" "
48 Insulations, Inc.	B	50	" "
W. W. Henry Company	A	500	" "
Kaiser Gypsum Company	A	500	" "
Kentile, Inc.	A, B, C	20,000	Will evaluate
Lewis Tar Products Company	B	not now	-
Lewis Asphalt Engineering Co.	C	4,000	Are evaluating
Mastic Tile Corp. of America	A, B, C	9,000	" "
Monsey Manufacturing Co.	C	1,600	" "
Reilly Tar & Chemicals Corp.	B	none now	-
Trumbull Asphalt Company	A, B	3,000	Are evaluating
Union Asbestos & Rubber Co.	B	none now	-
Weatherguard Products Company	C	720	" "
Asco Products	C	500	" "
Union Carbide Plastics Co.	C	500	" "
Japanese	A	35-40,000	Import longer fiber, tariff
Lasco Brake Products Corp.	A	600	Will evaluate
Western Chemical & Mfg Co.	A	1,200	" " ore
Diamond Springs Lime Co.	A	LCL	" " fiber sometime
Hunt Process Co.	A	120	Will evaluate
Lunday-Thagard Oil Co.	A		
Plastics & Coal Chemical Div.- Allied Chemical Corp.	B		Use only long fiber
Owens Corning Fiberglass Co.	B		Mostly long fiber

"A" - West Coast
 "B" - Midwest and Southwest
 "C" - East

<u>Company</u>	<u>Zone</u>	<u>Size (tons/yr.)</u>	<u>Status</u>
Natasco-Southwest	B		Buy roofing mixes
Lloyd A. Fry Roofing Co.	B		Buy from Trumbull Asphalt
Coast Paint & Lacquer Co.	B		Use short fiber, cost problem
Atlas Roofing Co.	B		Buy formed product, no fiber
Scientific Roofing Co.	B		Buy formed product, no fiber
Straus-Frank Co.	B		Buy formed product, no fiber
Texas Waterproofing Materials Co.	B		Buy formed product, no fiber
Universal Roofing Co.	B		Buy formed product, no fiber
Geo. L. Vaughn	B		Buy formed product, no fiber
Thermo Roofing, Inc.	B		No asbestos fiber use
Bellaire Roofing Co.	B		Buy from Thermo
Blue Diamond	A		No asbestos usage
Raytheon Manufacturing Co. (Mr. Rosato)	C	10	Consultant
Metropolitan Roof Supply	C	2,000	Will evaluate
Keasbey & Mattison	B, C	-	Producer
Ruberoid Company	C	-	Producer
Garlock Packing	C	-	Only long fiber
Asbesto-Fab	B	-	J-M reseller
Plymouth Industrial Products	B	CL (anthophyllite)	No interest
Abetter Gasket Mfg Co.	C	-	Buy fabricated product
Ace Asbestos Mfg Co.	C	-	Distributor
Atlantic Asbestos Co.	C	350	Would evaluate
Blue Seal Asbestos Co.	C	-	K & M distributor
Janos Asbestos Co.	C	-	Buy fabricated products
Richard Klinger, Inc.	C	-	No use now
Meek & Co.	C	LCL	Only long fiber
Modern Washer & Gasket Co.	C	-	Buy fabricated products
Nat'l Gasket & Washer Co.	C	-	Buy fabricated products
Durable Mfg Co.	C	-	Long fiber only
Nelson Asbestos Co.	C	-	No use
Standard Asbestos Co.	C	LCL	No interest
Acadia Asbestos Co.	C	-	Buy fabricated products.

"A" - West Coast
 "B" - Midwest and Southwest
 "C" - East

<u>Company</u>	<u>Zone</u>	<u>Size (tons/yr.)</u>	<u>Status</u>
Asbestos Constr. Co.	C	480	J-M reseller
King Insulation Company	C	-	K & M reseller
Liberty Pipe & Boiler Covering Co.	C	LCL	No interest
Triboro Asbestos Co.	C	-	Buy fabricated products
N. Y. Artcrafts, Inc.	C	-	Only long fiber
Bromeley Engineering Corp.	C	-	No use
ABC Supply Co.	C	-	Reseller
J. S. Abramowitz	C	-	"
All Bros. Bldg. Material Corp.	C	-	"
American Asphalt Co.	C	-	Only long fiber
Atlas Supply Co.	C	-	No use
M. H. Detrick	B	CL	Would evaluate
Asbestos Textile Co.	B	CL	Use long fibers
Acme Asbestos Covering	B	CL	From Grant Wilson
Becker Roofing	B	-	No use
Chambers Gasket	B	-	Buy fabricated products
W. J. Donahue	B	-	Buy fabricated products
F. D. Farnam	B	LCL	Long fiber and fabricated products
Asbestos Insulated Pad Mfg.	B	-	No use
Asbestos & Magnesia Materials	B	-	J-M distributor
Asbestos Wood Mfg Co.	B	-	Buy fabricated products
National Gypsum Co.	B, C	-	Producer
Johns-Manville Co.	A, B, C	-	Producer
National Mfg Co.	B	250	No interest now
E. J. Eddy Co.	B	-	Buy fabricated products
Certain-Teed	A, B, C	850	Would evaluate
Benj. Foster, Div. of Anchem	A, C	200	" "
Atlas Asbestos	C	50	" "
Aljay Mfg Co.	C	-	Buy fabricated products
Anchor Packing Co.	C	-	Buy fabricated products
Phila. Asbestos Corp.	C	LCL	Only long fiber
Greene Tweed & Co.	C	CL	" " "
Delaware Asbestos	C	-	Reseller
Minnesota Mining & Mfg Co.	A, B, C	500	No interest now
Asphalt Products of Pittsburgh	C	250	Would evaluate
Pittsburgh Coke & Chemical	C	LCL	No interest
Sacomo Mfg	A	-	Buy fabricated products

"A" - West Coast
 "B" - Midwest and Southwest
 "C" - East

<u>Company</u>	<u>Zone</u>	<u>Size (tons/yr.)</u>	<u>Status</u>
Singa Chemical Co.	A	-	Experimenting now
Plant Asbestos	A	-	Philip Carey reseller
Western Asbestos	A	-	J-M reseller
Barret Div.-Allied Chem.	B, C	1,000	Must have 7M
Norton & Sons	C	50	Would evaluate
Seaboard Supply	C	480	" "
Belknap-Moran-Allen	C	180	" "
Benson-Hanson	C	200	" "
Empire Asbestos	C	CL	" "
Miniwax Co.	C	CL	" "
L. Sonneborn & Sons	C	500	" "
Westchester Roofing	C	1,000	" "
Adhesive Products, Inc.	A	LCL	No interest
Hiller Aircraft Adhesive Engineering	A	LCL	No interest
Hill Bros. Chemical Co.	A	720	Will evaluate
Warren & Bailey	A	-	Buy fabricated products
Gladding, McBean & Co.	A	LCL	Buy from distri- butor
Frank V. Enderle	A	LCL	Buy from distri- butor
Coast Insulation	A	LCL	Buy from distri- butor
Thorpe Insulation	A		J-M distributor
Mefford Chemical	A		Jobber
Carboline Co.	B	LCL	No interest
Paul W. Wood Co.	A		J-M distributor
Lynch Asbestos	A	LCL	Buy from distri- butor
Western Gasket	A	-	Buy fabricated products
J. H. Bryant	A	-	Buy fabricated products
Acorn Mfg Co.	A	-	Buy fabricated products
Aerojet General	A	-	Buy fabricated shapes
Gaskets Mfg Co.	A	-	Buy fabricated shapes
W. F. Webster Cement	A	CL	Would evaluate
California Stucco	A	LCL	" "
Los Angeles Chemical Co.	A	LCL	" "
Muralo Co.	A	LCL	" "
Devoe & Reynolds (Bishop-Conklin Div.)	A	LCL	Not interested

"A" - West Coast
 "B" - Midwest and Southwest
 "C" - East

<u>Company</u>	<u>Zone</u>	<u>Size (tons/yr.)</u>	<u>Status</u>
Arco Co.	A	-	No use
H. R. Huntz Putty	A	LCL	Not interested
Kelite Products Cq.	A	-	Buy fabricated products
U & E Mfg Co.	A	LCL	Not interested
Bechtel Corp.	A	-	Use fabricated products
Proctor & Gamble	A	-	No use
Pipe Linings, Inc.	A	LCL (long fiber)	Would evaluate
United Packing & Gasket	B	-	Buy fabricated products
Felt Products	B	LCL	Not interested
Filpaco	B	-	Buy fabricated products
Geraghty Gasket & Mfg.	B	-	Buy fabricated products
Insulation Mfgr. Corp.	B	-	Buy fabricated products
Standard Asbestos Mfg Corp.	B	CL	Would evaluate longer fiber
Logan Long Co.	B	-	No use now
Luse Stevenson Co.	B	-	Buy fabricated products
Victor Mfg & Gasket Co.	B	CL	Would evaluate
Zonolite Co.	B	CL	" "
Union Asbestos & Rubber Co.	B	CL	" "
R. Hopac, Inc.	B	-	Buy fabricated products
Lehom	B	-	Philip Carey subsidiary
Globe Roofing Co.	B	-	No fiber use
Bellico Products Corp.	B	-	Producer (?)
J. W. Mortell	B, C	4,000	Asbestos Corp. interest
Grant Wilson	B	CL	Would evaluate
Armstrong Paint & Varnish Co.	B	CL	" "
Celotex	A, B	CL	" "
Paint Point Products	C	LCL	No interest
Sun Chemical	C	50	No interest
Bonafide Mills	C	1,000	Would evaluate
B. F. Goodrich	C	3,000	" "
Empire Asbestos Products	B	250	" "
Stovey Co.	B	-	Reseller
Bitucate Products Co.	B	CL	Would evaluate
Frank L. Cushing	B	-	No use

"A" - West Coast
 "B" - Midwest and Southwest
 "C" - East

<u>Company</u>	<u>Zone</u>	<u>Size (tons/yr.)</u>	<u>Status</u>
Ford Roofing Products	B	-	Reseller
Mar-Kay Mfg Co.	B	LCL	No interest
Missouri Paint & Varnish	B	150	Would evaluate
American Asbestos Mfg Co.	C	CL	" "
Rogers Corp.	C	200	" "
Joseph Loew & Son	C	1,000	" "
A. P. Green Fire Brick Co.	B	100	" "
Malarkey Paper Co.	A	-	No use now
Weyerhaeuser Timber Co.	A	-	No use now
H. H. Robertson Co.	C	-	Buy fabricated products
Goodyear Tire & Rubber Co.	B	CL	
		1,000	Will evaluate
Supreme Perlite Co.	A	200	Would evaluate
Trilite Corp.	B	200	" "
Trexco Mfg Co.	B	CL	" "
Tile-Tite	B	CL	Have to determine status
Gibbs Mfg Co.	B	CL	Would evaluate
Paramount Ind. Products	B	CL	" "
Tropical Paint	B	400	" "
Labco	B	CL	Philip Carey reseller
Republic Paint	B	-	Buy fabricated products
Monroe Co.	B	-	Buy fabricated products
Overall Paint & Lead	B	CL (many)	Would evaluate
United Labs	B	-	Buy fabricated products
U. S. Refining	B	LCL	No interest
Byerlyte	B	600	Would evaluate
Glidden	A, B, C	LCL - fibers	No interest now
		1,000/ fibrous talc	
Sherwin-Williams	A, B, C	LCL - fibers	Would evaluate
		1,000/ fibrous talc	
Ideal Cement	A	-	No use now
Monsanto Chemical Co.	C	-	No use now
Pacific Cement & Aggregates	C	-	No use now
MacArthur Co.	B	600	Would evaluate
B. F. Neilson Mfg Co.	B	100	" "
U. S. Rubber Co.	C	-	Only long fiber
Pacific Lumber Co.	A	-	No use now
General Motors, Inland Div.	B	1,000	Would evaluate
Bendix Aviation	C	4,000	" "

"A" - West Coast
 "B" - Midwest and Southwest
 "C" - East

CANADIAN Johns-Manville CO. LIMITED

ASBESTOS FIBRE DIVISION



U.S. PRICE LIST NO. 8

Date: August 28, 1957

CANCELLING U.S. PRICE LIST

No. 7 of November 28, 1955

CARLOAD PRICES PER SHORT TON F.O.D. MINE ASBESTOS, QUEBEC, CANADA IN CANADIAN FUNDS

STANDARD GRADE DESIGNATION	GUARANTEED MINIMUM TEST	PRICES PER TON EFFECTIVE OCTOBER 1, 1957	MINIMUM CARLOAD QUANTITY	Category
No. 1 Crude		\$1,470.00	20 Tons	Crude
No. 2 Crude		788.00	"	"
3K Fibre	4-7-4-1	504.00	"	Fibre
3R "	2-8-4-2	428.00	"	"
3T "	1-9-4-2	402.00	"	"
3Z "	0-8-6-2	370.00	"	"
4K "	0-4-9-3	200.00	"	"
4M "	0-4-8-4	200.00	"	"
4T "	0-2-10-4	181.00	"	"
4Z "	0-1 1/2-9 1/2-5	181.00	"	"
5D "	0-1/2-10 1/2-5	142.00	"	"
5K "	0-0-12-4	142.00	"	"
5R "	0-0-10-6	120.00	"	"
6D "	0-0-7-9	86.00	30 Tons	Waste
7D "	0-0-5-11	75.00	"	Shorts
7F "	0-0-4-12	71.00	"	"
7H "	0-0-3-13	61.00	"	"
7K "	0-0-2-14	50.00	"	"
7M "	0-0-1-15	44.00	"	"
7R "	0-0-0-16	43.00	"	"
7T "	No Test	41.00	"	"
7RF Floats	No Test	44.00	"	"
7TF Floats	No Test	44.00	"	"
8S "	No Test	29.00	"	"

Add \$4.00 to the above prices for less than carload loss.

Standard package, 100 lbs. bag.

Where packages other than standard are required, quotations will be furnished on request.

All prices are net and subject to change without notice.

All offers are made subject to prior sale and orders are accepted subject to our ability to deliver.

Should any new Government taxes be imposed they will be added to the Customer's invoices.

Terms: 1% Discount for payment 10 days after shipment or net 30 days.

Funds: Payment acceptable in U.S. dollar equivalent as invoiced.