MVL R & D 1990

R.P. Fowler [illegible]
Pls follow
[initials, circled]

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JUL 30 1964
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1964

PLAINTIFF'S EXHIBIT
TN-474

Research and
Engineering Center
July 29, 1964

H. Engel, Manville

Evaluation of Turner and Newall Fibers
Processed in TRANSITE Pipe Equipment
My letter July 1, 1964

Confirming our conversations of 7/29/64, the attached program summarizes the next phase of the program. This has been discussed with I. V. Hargrave and he will contact you and be responsible for following the program and taking the samples. The tentative date of August 3, 1964 is O.K.

D. Nowlin

attach.

cc: J. B. McCarty, DH
K. J. Whalen, DH
J. H. Swanson
J. F. Kerr
I. V. Hargrave
W. C. Streib
C

July 29, 1964

PROPOSED FIBER EVALUATION PROGRAM
AT THE MANVILLE PLANT - TP 020-680

Willow into No. 2 machine live-bottom bin the following (standard willow rate):

1. Blend M-656

S Blue	100-lb
Advocate A25	200
Munro M-100	200
Jeffrey 4T	600
	1100-lb

2. Advocate A25 1000-lb

3. Jeffrey 4T 1000-lb

4. CAG 3 1000-lb

5. CAG 4 1000-lb

6. Blend M-662A

Special 3 Grade Ampsite 833	100-lb
Advocate A25	200
Munro M-100	200
Jeffrey 4T	600
	1100-lb

All blends and individual fibers are to be processed without sodium silicate treatment or use of any scrap.

Each of the six batches above are to be sampled (1) as they discharge into the willow (fiber as received, but mixed) and (2) as they discharge into the live-bottom bin (willowed condition). Total of 12 samples. Where there is insufficient data, such as on the Advocate A25, Munro M-100 and Jeffrey 4T, these should be sampled in the as received condition prior to mixing.

also any as received material source

Sample size should be about 50-lb each. Point values should be run with the fibers as taken and after following the PV procedure exactly, including ball milling. A curve of point value vs percentage fiber is to be made.

From these curves, blends will be formulated and plant runs made per B. Moulin's letter of July 1, 1964 to W.C. Streib and J. H. Sussman

Excess charges are to be made against TP 020-680.

Division Headquarters
July 1, 1964

W. C. Streib - REC, Finderne ✓
J. H. Swensen - " "

Evaluation of Turner and Newall
Fibers for Use in Transite Pipe

Attached is a proposed program for evaluation of the C & G3 and C & G 4 Fibers which should be delivered to Manville within the next 6 weeks. Your assistance in carrying out the program is requested. If you have any questions, I shall be glad to sit down and discuss the proposal at your convenience.

D. Nowlin

D. Nowlin

cc: J. B. McCarty
K. J. Whalen
H. Engel - Manville

amg

Proposed Program to Evaluate
Turner and Newall Fibers in TRANSITE Pipe

Objective: To determine if T & N Fibers can be used in TRANSITE Pipe without increase in cost.

The program is to be in two phases; first, the laboratory point system work using the fibers as processed in the plant, and second, using the laboratory results to formulate a blend or blends, make plants runs with additional laboratory testing in an attempt to correlate plant vs. Point Value. Since the shipments of 100 tons of C & G3 and 200 tons of C & G4 are to come to Manville Plant, this work should be done there using the standard operating blend M650 as a basis. M650

M 650= M100	8.3 %	= 46 PV	= 3.8	
Advocate	16.7%	= 72 PV	= 12.0	
Jeffrey 4T	75.0 %	= 63 PV	= 47.3	
			63.1 Blend PV	

The latest samples of T&N fiber show the following

		Cost/Ton delivered at Manville Plant
C & G 3	PV = 88	$237.38
C & G 4	PV = 74	$191.60

For comparison Jeffrey 4T delivers to Manville Plant for $148.80 and with a PV of 63 shows the following.

	Cost/Point delivered to Manville
C & G 3	$2.70
C & G 4	2.59
Jeffrey 4T	2.36

After correcting for PV differences, the Pipe Division would still have to use up to 12½% less C & G 3 fiber to realize equal cost. As an example, this would mean going from 20% furnish of straight 63 PV Jeffrey to 14.3% to equal PV, and to 12.5% to equal cost when using C & G3.

It is proposed that PV cakes be made to establish a curve of strength vs percent fiber running from about 13% fiber to about 21% fiber. The fibers to be sampled are Jeffrey 4T30, Blend M 650, straight C & G3 and straight C & G4. Points of sampling should include (1) Fiber as received (2) Discharge from Fiber Mixer to willow and (3) Discharge from cyclone to live-bottom bin . It would appear that one willow batch of each of the 3 fibers and the 1 blend would be sufficient. The mixing and use of these 4 batches in the live bottom bin and subsequent use in pipe could be controled as to what product they go into and "un-economically" used to prevent loss of product.

A standard supply at Manville Plant National Cement and Manville Silica should be obtained and set aside for these tests.

Data on McNett and Drainage Time should also be taken. The second phase of the proposed program would be to select from these basic fiber curves, a blend of certain percentage T & N fibers or blend of T & N fiber plus Jeffrey. This will be selected to equalize strength of the products at no increase in cost over use of the standard M650 blend. Plant runs would be made using M650 blend before and after with "special blend A", at a percentage furnish dictated from Phase 1. Sampling for laboratory PV Testing would be made as in Phase A, plus samples of the dry stock (fiber, cement, and silica) being fed to the machine. Destruction test samples of pipe in Hydro, Flex and Crush should be designated. Running conditions will be noted. Analysis of the data will include a correlation of the Laboratory PV results with the destruction tests in the plant. If necessary, a second or third blend for plant running and Laboratory PV Testing will be made.