PLAINTIFF'S EXHIBIT

CONSTRUCTION
PRODUCTS
DIVISION

NUMBER: ~~69576~~
GROUP: BPD Marketing Group
DATE: November 26, 1979
CHARGE NO.: ~~1-6-249~~ 584
REQUESTOR: R. A. Merther
MARKETING or MANUFACTURING APPROVAL:
NAME: B. A. Blessington
APPROVED:

REQUEST FOR TECHNICAL SERVICE

PROBLEM TITLE: Analysis of Monokote for asbestos - Prudential Office Building - Morristown, NJ.

SIGNIFICANCE: Job is currently in progress - independent lab analysis claims to have found 3-5% asbestos. We need to check sample.

SPECIFIC OBJECTIVE: Material is supposedly MK-5. We need to verify type and determine that, in fact, no asbestos is in the material.

SUGGESTED APPROACH:

DEADLINE (Last day information will be of value): December 10, 1979

DETAILS OF PROBLEM: Lab reports 3-5% in MK-5 on job currently in progress; customer deeply concerned over this report. We need to verify that material is asbestos; ~~fire~~-testing lab should also be contacted.

ACCEPTED BY RESEARCH DEPT.: H C Duecker DATE: Nov. 26, 79

ASSIGNED TO: J. Carroll

ADDITIONAL COPIES: Original to Library, H.C.Duecker, L.S.Shu , R.A.Merther, B.A.Blessington, J.C.Yang, J.Cintani/N.Brunswick, N.J.

CONFIDENTIAL

15172000

REQUEST FOR TECHNICAL SERVICE

NUMBER:
GROUP: BPD Marketing Group
ACTUAL COST: $300.00
REPORTING DATE: Dec. 12, 1979

SUMMARY:

MONOKOTE samples, taken from the Prudential Office Building in Morristown, New Jersey, were analyzed for asbestos content.

Samples were obtained from Grace field representative on site, and material was given to us by Shimel and Sor Testing Laboratory, in which they claimed to have found 3-5% asbestos.

Neither sample showed any detectable asbestos fiber when analyzed in the Grace/Cambridge Research Laboratory, but we had found an appreciable amount of glass fiber and organic cellulosic fibers.

We have contacted Dr. Carl Sor of the Shimel & Sor Laboratory, and have requested data they used for their evaluation. They have sent the micrographs of fibers at 400X magnification; one labelled "glass", and the other "asbestos" (pictures attached). From our experience in light microscopy and morphology of the fiber, it is suspected that the "asbestos" is really an organic cellulosic fiber. High temperature calcination of a -20 mesh sample (16 hours at 500°C) should clear this point.

It is concluded that the MONOKOTE used in this job is MK-5; no asbestos in any form was detected. Analysis of split samples is recommended if in dispute.

MATERIAL INVESTIGATED:

1) MONOKOTE from Grace field representative, Jim Cintani, North Brunswick, New Jersey,
2) MONOKOTE sample given to us by Shimel & Sor Testing Laboratory in which they claimed to have found 3-5% asbestos.

EXPERIMENTAL:

1) Preliminary Examination

Several small broken pieces were examined with a Stereo Zoom Microscope at 100X and found to have some fiber present. Some were long, straight and uniform (glass), and some were shiney and flexible which burned with a lit match readily (organic paper fiber).

2) X-Ray Diffraction Analysis

Samples were crushed to -100 mesh size and subjected to x-ray diffraction analysis.

	Major:	vermiculite, plaster of Paris
Intermediate	Minor:	biotite
	Minor:	quartz

REQUEST FOR TECHNICAL SERVICE

NUMBER:	69572
GROUP:	BPD Marketing Group
ACTUAL COST:	$300.00
REPORTING DATE:	Dec. 12, 1979

SUMMARY:

MONOKOTE samples, taken from the Prudential Office Building in Morristown, New Jersey, were analyzed for asbestos content.

Samples were obtained from Grace field representative on site, and material was given to us by Shimel and Sor Testing Laboratory, in which they claimed to have found 3-5% asbestos.

Neither sample showed any detectable asbestos fiber when analyzed in the Grace/Cambridge Research Laboratory, but we had found an appreciable amount of glass fiber and organic cellulosic fibers.

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It is concluded that the MONOKOTE used in this job is MK-5; no asbestos in any form was detected. Analysis of split samples is recommended if in dispute.

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2) X-Ray Diffraction Analysis

Samples were crushed to -100 mesh size and subjected to x-ray diffraction analysis.

Major:	vermiculite, plaster of Paris
Intermediate-Minor:	biotite
Minor:	quartz

REQUEST FOR TECHNICAL SERVICE

NUMBER: 69572
GROUP: BPD Marketing Groun
ACTUAL COST: $300.00
REPORTING DATE: Dec. 12, 1979

They also claimed that the fibers were sent to Seton Hall Medical School, and were identified by polarized microscope as anthophyllite. In fact, anthophyllite has high refractive index (1.59-1.68), whereas glass (E-glass 1.547 isotropic) and organic cellulosic fiber (different morphology). It should not be difficult to differentiate one from the other. We could not find any anthophyllite asbestos either.

It was recommended to have a split sample analyzed by both parties and to compare the results.

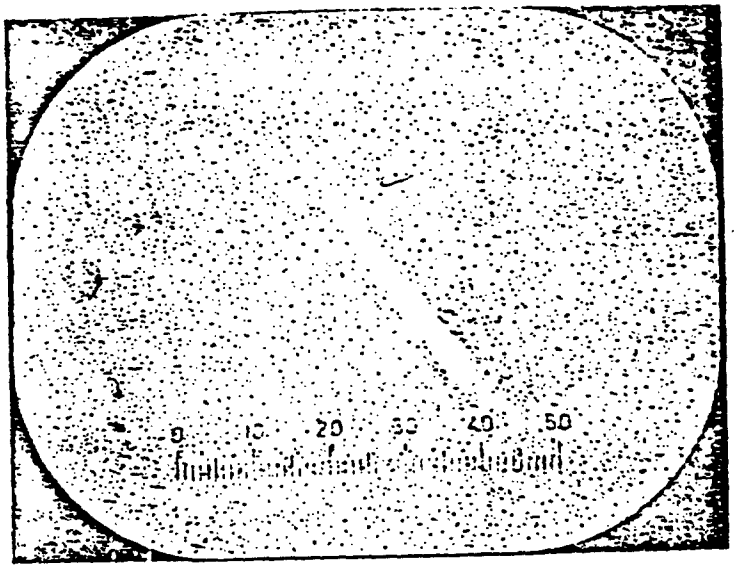
Julie C. Yang

JCY:mlr

Reference:

1) X-Ray Patterns MISC - 319.
2) Cambridge Research Laboratory Analytical Procedure for MONOKOTE.
3) W.C.McCrone "Idnetification of Asbestos by Polarized Light Microscopy", Microscopy 28, 251-264 (1977).
4) Notebook: 614-94.





Cla...

400 X



Asbesto-

400 X

Photomicrographs submitted by Dr. Carl Sor.
of Shimel + Sor Testing Lab.

15172004