DAWNWIND + TNDMK

MEMORANDUM

To: Mr. Fred Williams
791 - 25

September 18, 1972

From: Industrial Hygiene

Subject: Air Sampling During "Cutting and Fitting of "Kaylo 20"

SUMMARY Six "personal" air samples were collected during the application of insulating material containing a percentage of asbestos. Three samples show results in excess of the Threshold Limit Value of 5 fibers per milliliter greater than 5 u in length. The operation was performed at Building 770 by two Construction Department employees.

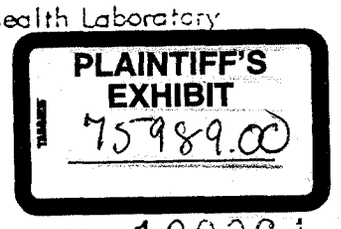
DISCUSSION On August 23, 1972, the Industrial Hygiene group monitored asbestos fiber that became airborne during the application of insulating material containing approximately 15% asbestos at Building 777.

The material being used was "Kaylo 20," a ~~Johns-Manville~~ Owens-Corning product. The operation included sawing, shaping, and fitting material 2 inches in thickness. Each phase of the insulating procedure was carried out during each of the sampling periods, therefore, each result is a composite of the airborne fibers incident to individual phases. A portion of the operation was monitored between approximately 9:45 a.m. and 11:00 a.m. During this time period a considerable amount of waste "Kaylo 20" accumulated in the work area. In an area "downwind" of the operation small airborne particles were visible in the sunlight for a period of time. During the time of monitoring, insulation was "cut and fitted" to 2 sides of a "pre-heater," project item No. 111. The "pre-heater" was insulated while outside of the building and subsequently moved to a permanent position in Cell No. 1. The operation was performed by [redacted] and [redacted].

The samples were collected by the use of "personal" air sampling equipment. The sample collecting device was suspended around the neck of the insulator as close to the breathing zone as was practical. The airborne fibers were collected using membrane filter media, Type AA, 0.8 u pore diameter, white, 37 mm in size, at 2 lpm flow rate.

The samples were delivered to the R&D Environmental Health Laboratory for analysis.





UCC100061

RESULTS AND CONCLUSIONS The attached data sheet shows asbestos fibers to be airborne in concentrations and size greater than the Threshold Limit Value of 5 fibers per milliliter of air greater than 5u in length as a result of the use of "Kaylo 20."

A review of the application techniques involved in this type operation may be advisable and a clean-up procedure should be initiated.

R. O. Midkiff

R. O. Midkiff

R.O.M./ebc
Att.

APPLICATION OF "KAYLO 20"

BUILDING 777

Date: August 23, 1972 Sampled by: R. O. Midkiff

Sample No.	Sampling Time - Min.	Flow Rate LPM	Fibers/ml >5u in length	Insulator
1	15	2	7.0	[redacted]
2	15	2	3.8	[redacted]
3	15	2	4.1	[redacted]
4	15	2	5.9	[redacted]
5	15	2	3.8	[redacted]
6	15	2	5.6	[redacted]

Each sample covered periods of sawing, shaping and fitting pieces of "Kaylo 20" insulation.