MR. DEGEN

Bell Laboratories

subject: Environmental Measurements of Potential Asbestos Exposure to New York Telephone Employees Working at Yankee Stadium, Bronx, New York
Case 48106-3
48087-1

date: May 12, 1978

from: V. R. Cohen
R. Deitchman

PLAINTIFF'S EXHIBIT

SWB-189

MEMORANDUM FOR RECORD

Potential asbestos exposure from flaking ceiling insulation is a concern of New York Telephone employees working at Yankee Stadium, Bronx, New York. The entire clubhouse ceiling of the stadium was sprayed with insulating material where New York Telephone employees have a storeroom, monitor the television - telephone interface, install and service telephones, and occasionally run cable for additional telephone capacity. The Bell System Services Group at Bell Laboratories had performed an industrial hygiene evaluation on October 17, 1977.* Mr. V. B. McGuire, Supervisor-Safety of New York Telephone, requested two additional evaluation be made using more sensitive analytical techniques and during actual ball game conditions.

Summary

General environmental sampling and bulk sample collection was performed at Yankee Stadium, Bronx, New York on April 14, and 18, 1978 to evaluate New York Telephone employee exposure to asbestos. Analysis of the bulk spray insulation material indicates no asbestos fibers were present. Asbestos, in the platelet form, is present in the bulk material (10 percent from October 1977 analysis) but, it is asbestos fibers that represent the health hazard. Air sampling with analysis by light and scanning electron microscopy indicate low levels of any fibers present with no detectable asbestos fibers.

---

* Memorandum for Record: Environmental Measurements of Asbestos Exposure to New York Telephone Employees Working at Yankee Stadium, Bronx, New York, November 10, 1977.

CONFIDENTIAL

003819

Recommendations

The recommendations are:

1. New York Telephone Employees working in Yankee Stadium should be informed of the results of this investigation.

2. The management of Yankee Stadium should be informed of the analytical results of the flaking ceiling insulation in the clubhouse area.

Procedures

Asbestos samples were collected using the procedures outlined by the National Institute for Occupational Safety and Health (NIOSH) and the Occupational Safety and Health Administration (OSHA). The procedure involves collection of the fibers on a small filter cassette with later analysis using phase contrast microscopy. Additional parallel samples were collected in the same manner for further analysis by scanning electron microscopy. These filters were sealed and shipped to EMV Associate, Rockville, Maryland where the analysis was performed. The light microscopy simply identifies all fibers greater than 5 microns (μm) with an aspect ratio of 3:1. Using scanning electron microscopy with energy dispersive X-ray analysis, only asbestos fibers are counted.

Air was pulled through the filters using battery powdered sampling pumps manufactured by MSA and Bendix at 2.0 ℓ/min. The pumps were calibrated using the soap bubble flowmeter technique.

Bulk samples were taken by removing a small section of the spray insulation and placing it into a envelope. This procedure was completed after environmental sampling so the disturbance of the ceiling insulation would not contaminate the general air sampling. The material was sealed and shipped to EMV Associates, Rockville, Maryland for analysis. The bulk material was analyzed by scanning electron microscopy (SEM) with energy dispersive x-ray analysis (EDXA). This analytical technique involves fiber identification by the scanning electron microscope then using the energy dispersive x-ray analyzer to determine composition for positive identification of fiber type.

Results

Table I presents the analysis of the bulk spray insulation performed by EMV Associates. Their results indicate no asbestos fibers were found in the bulk material.

The results of bulk sample analysis performed last fall by ES Laboratories in Marlton, New Jersey showed some of the spray insulation to contain ten percent asbestos in the mineral phase. The SEM analysis by EMV Associates is designed to look more critically at fibers. Thus, the most probable cause of this difference in results (ten percent versus not detectable) is that the asbestos is in the platelet form and thus, non-fibrous. It is the asbestos fibers that present the significant health hazard. Another possible explanation of this difference is the composition of the spray insulation is variable, but this possibility is unlikely since several samples from different locations were analyzed.

Airborne asbestos levels measured on April 14, 1978 are shown in Table II. These measurements were made during a set-up day for the telephone-television interface. The light microscopy result shows a small number of fibers are present but, using SEM asbestos fibers were detectable at the 0.005 fiber per cubic centimeter level.

Table III presents the airborne asbestos levels on April 18, 1978 during a ball game at Yankee Stadium. The results represent a similar situation as on April 14, 1978.

V. R. Cohen/cls
V. R. Cohen
Industrial Hygienist

R. Deitchman/cls
R. Deitchman
Industrial Hygienist

Copy to
R. L. Beach - AT&T ← THIS COPY FOR
N. J. DeCapua - AT&T
V. B. McGuire - NY Tel
W. J. Schreibeis - BTL
C. H. Steinmetz, M. D., - NY Tel
R. W. Stone, M. D., - AT&T
G. M. Wilkening - BTL
H. Wood - NY Tel

Table I. Analysis of Bulk Spray Insulation Material Taken at Yankee Stadium, Bronx, New York.*

April 18, 1978

Location of Sample	Results of SEM[1] and EDXA[2] Analysis of Sample
Room B173 ceiling	99.9% fibrous glass and gypsum (no asbestos fibers detected)
Room 524 ceiling	99.9% fibrous glass (no asbestos fibers detected)
Hallway outside Room B173 ceiling	99.9% fibrous glass (no asbestos fibers detected)
Floor outside Room B173	99.9% fibrous glass (no asbestos fibers detected)

* Analysis performed by EMV Associates, Rockville, Maryland

1 Scanning electron microscopy

2 Energy dispersive x-ray analysis

Table II. Airborne Asbestos Levels Measured at Yankee Stadium, Bronx, New York, April 14, 1978

Location	Duration (minutes)	Concentration (fibers/cc)	Method of Analysis
Area Sample - Room B174 (NY Tel A2AT Transmission Equipment Room)	129	0.08	LM*[1]
Area Sample - Room B174	129	BDL[2] (0.005)	SEM[3]
Area Sample - Room B173 (NY Tel Supply Room)	115	BDL (0.005)	SEM
OSHA Standard	480	2.00	LM

1 LM = Light Microscopy

2 BDL = Below Detectable Limit

3 SEM = Scanning Electron Microscopy

Table III Airborne Asbestos Levels Measured at Yankee Stadium, Bronx, New York
April 18, 1978

Location	Duration (minutes)	Concentration (fibers/cc)	Method of Analysis
Area Sample - Room B173 (NY Tel Supply Room)	255	0.07	LM[1]
Area Sample 0 Room B173	250	BDL(0.005)[2]	SEM[3]
Area Sample - Room B174 (NY Tel A2AT Transmission Equipment Room)	127	0.07	LM
Area Sample - Room B174	124	BDL(0.005)	SEM
Area Sample - Room B174	140	BDL(0.005)	SEM
Area Sample - Hallway outside B173 on cable rack	187	0.05	LM
OSHA Standard	480	2.00	LM

1 LM = Light Microscopy

2 BDL = Below Detectable Limit

3 SEM = Scanning Electron Microscopy

CONFIDENTIAL

Bell Laboratories

600 Mountain Avenue
Murray Hill, New Jersey 07974
Phone (201) 582-3000

January 17, 1978

Mr. V. B. McGuire
New York Telephone
1095 Avenue of the Americas
New York, N.Y. 10036

Dear Mr. McGuire:

The two samples from the IBM plant in Endicott, New York you sent to Mr. J. M. Degen at AT&T Safety with your letter of December 12, 1977, have been analyzed for asbestos.

Environmental Science Laboratories of Marlton, New Jersey found chrysotile asbestos in both samples using x-ray diffraction for the sample analysis. The results were as follows:

Sample Description	% Chrysotile Asbestos
Suspended Ceiling, Bldg. 14-3	25
Sprayed insulation above suspended ceiling, Buildg. 14-3	20

Any release of particles from these materials could cause an asbestos exposure.

If you have any further questions about the analysis please give me a call.

Sincerely,

Charles P. Lichtenwalner

Copy to
R. L. Beach - (AT&T)
J. M. Degen - (AT&T) ← THIS COPY FOR
W. J. Schreibeis
R. W. Stone, M.D. - (AT&T
G. M. Wilkening

003825

CONFIDENTIAL

Bell Laboratories

600 Mountain Avenue
Murray Hill, New Jersey 07974
Phone (201) 582-3000

January 6, 1978

Mr. N. Wood
New York Telephone
1095 Avenue of the Americas - Rm. 2621
New York, N.Y. 10036

Dear Norm:

The two air filter samples and one bulk sample from 24 Railroad Avenue, Greenwich, Connecticut have been analyzed for asbestos. The bulk sample was analyzed by x-ray diffraction which showed the sample was composed almost entirely of chrysotile asbestos. The two air filters were analyzed using the NIOSH specified method of counting all fibers greater than 5μm in length using phase contrast microscopy. The results were as follows:

Sample	Air Volume	Fibers/100 Fields	Fibers/ml
#1 (Basement)	135ℓ	2	.02
#2 (Commercial Office)	120ℓ	2	.02

If you have any questions about the analysis, please do not hesitate to call.

Sincerely,

Charles P Lichtenwalner

MH-7885-CPL-cj

C. P. Lichtenwalner

Copy to
R. L. Beach - AT&T
N. DeCapua - AT&T
W. J. Schreibeis
R. W. Stone - AT&T
G. M. Wilkening

THIS COPY FOR

003826

CONFIDENTIAL