

AIR QUALITY SERVICES, INC.

4527 Clairton Boulevard
Pittsburgh, PA 15236
(412) 881-5630



A TEST TO DEMONSTRATE
THE RELEASE OF ASBESTOS FIBERS
FROM H.K. PORTER ASBESTOS ROPE

FOR
RANDALL A. BONO
ATTORNEY AT LAW
65 EAST FERGUSON STREET
WOOD RIVER, ILLINOIS 62095

BY
JOHN O. FROHLIGER, Ph.D.

FEBRUARY 1988

AIR QUALITY SERVICES, INC.

INTRODUCTION

Air Quality Services, Inc. was requested to determine the airborne asbestos fiber release that could occur from the cutting of Asbestos Rope manufactured by H. K. Porter Company.

VIDEO TAPING OF THE PROCEDURE

The test was video taped.

CONSTRUCTION OF TEST CHAMBER

The test procedure had to be designed to protect the environment from contamination with asbestos fibers. A glove bag obtained from the I2R Company was used to prevent asbestos fibers from being released into the environment. The glove bag was placed on a table. A light weight frame was constructed of dowel rods and connectors made of wood to support the glove bag and provide an adequate work area. The necessary cleaning materials, amended water and wiping cloths were placed in the glove bag before the test. A sampling pump and a 25 millimeter filter for collecting asbestos fibers were placed in the bag. The filter was located to approximate the location of the face of the operator.

BACKGROUND ASBESTOS LEVELS

In order to determine the background of the glove bag, a background air sample was collected in one glove bag. A battery operated pump, operating at 5 liters per minute, was operated in the closed glove bag for two hours. The background level in the unused glove bag is less than 0.001 fib/cc (fibers per cubic centimeter).

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TEST PROCEDURE

The operator was equipped with a half mask respirator equipped with filter cartridges approved for asbestos protection.

The battery operated pump used for sampling during the test was calibrated at 3.6 liters per minute. The air sampling pump was turned on, the start time noted and the asbestos rope sample was severed. The severing of the rope required less than five minutes. The glove bag was left sealed and the asbestos sampling continued for a total sampling time of one hour.

The analysis of the asbestos fibers was done according to the OSHA regulations, 1910.1001 Appendix A. procedure. Air Quality Services, Inc. participates in the Asbestos Proficiency Analytical Testing Program (PAT) developed by NIOSH and operated by the AIHA. Air Quality Services laboratory is rated "proficient" in the quantification of asbestos fibers by Phase Contrast Microscopy.

RESULTS

The results of the airborne fiber release during severing an asbestos rope is presented in Table I. The current OSHA Standard of 0.2 fibers per cc was exceeded by 1265 percent.

John O. Frohlinger, Ph.D.
Director

JOF/jk

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TABLE I
ASBESTOS FIBER RELEASE DURING CHAMBER TEST
RANDALL A. BONO ATTORNEY AT LAW
65 EAST FERGUSON
WOOD RIVER, ILLINOIS 62095
SAMPLING CONDUCTED BY AIR QUALITY SERVICES FEBRUARY 13, 1988

	H K PORTER ASBESTOS ROPE
SAMPLING PUMP #	53
FLOW RATE LITERS	4.0
SAMPLING MINUTES	64
TOTAL VOLUME, CC	256000
FILTER CASSETTE	A25-858
# FIBERS COUNTED	218.5
# FIELDS COUNTED	20
FIBERS/CC	2.526

AIR QUALITY SERVICES, INC. CERTIFIES THAT THE FIBER/FILTER COUNT
MEETS THE PRECISION AND ACCURACY REQUIRED BY THE NIOSH PROCEDURE
7400 FOR AIRBORNE ASBESTOS FIBER DETERMINATION.


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