Engineering & Testing Consultants
1999 Rt. 70 • Cherry Hill, N.J. 08003

[illegible] ARIZONA AVE., N.
ATLANTA, GA. 30307
(404) 377-4248

37262

TEST REPORT # 3265

ASBESTOS ANALYSES

Date: April 11, 1978

CUSTOMER: Solid Waste Administration Address: 32 E. Hanover, Trenton NJ

SAMPLES MAILED ☐ DELIVERED ☒ CUSTOMER CONTACT: Mr. Ron Buchanan P.O.#

REPORTED AS: Mineral Phases Present (Crystalline phases)

TYPES OF ASBESTOS	Sample No. Key for Graphs	Great Swamp		
Chrysotile (Asbestos)	○	15%		
Anthophyllite (Asbestos)	□			
BRUCITE		10%		
RUTILE		5%		
Calcite	═	40%		
α Quartz	( )	25%		
Un-named Mineral (Non-Asbestos Form)				

Legend: N.D.=Not Detected △= Balance is remainder of crystalline f

Asbestos is a commercial term used to classify a group of fibrous minerals. Five types commonly used are as follows:

Amphibole Group Minerals	Formulae	Structure
Anthophyllite	$(Mg,Fe)_7Si_8O_{22}(OH,F)_2$	Fibrous
Crocidolite	$Na_2Fe_3Fe_2Si_8O_{22}(OH,F)_2$	Fibrous
Amosite		Fibrous
Tremolite**	$Ca_2Mg_5Si_8O_{22}(OH)_2$	Fibrous
Actinolite		-

Serpentine Group Minerals	$Mg_3Si_2O_5(OH)_4$	
Chrysotile**(Canadian or Rhodesian)		Fibrous & Flaty
Antigorite		Flaty
Lizardite		Flaty

**most common, but all types of fibrous asbestos are of concern as a carcinogenic when in the >5-100 micron fiber size

REMARKS: The results show Chrysotile Asbestos fibers in the >5-micron size which are of concern.

Analyst: [illegible]

Form #RA-212F

Approved: [illegible]

Format #2 - Attachments: X-ray traces, photomicrographs,

0167 002 BSB

CUSTOMER: Solid Waste Administration

Sample from: Great Swamp

Date: April 11, 1978

Prep'd. by: LH

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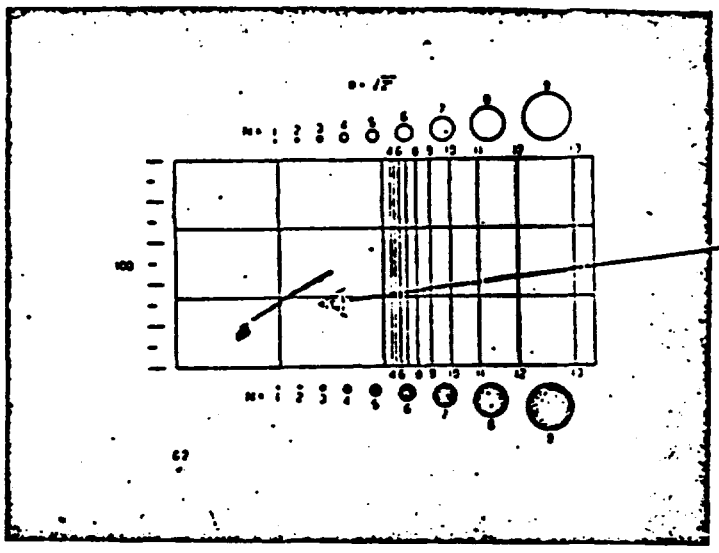
Photomicrographs showing fibers, dust or lint in microns (millionths of an inch):



Sample or Filter S/N Great Swam

This view shows an asbestos fiber of about 29 micron

Sample or Filter S/N _____

Notes:	1)	All photomicrographs are taken at 520X magnification using phase contrast optics.
	2)	A micron is 1/1,000,000 of a meter. In other words, 2½ microns equal .0001 inches.
	3)	The #7 Circle is 6 microns in diameter.
	4)	Each of the 6 rectangles shown in the Porton Reticle in the above photomicrograph(s) represents 1/171,000 of the filter area.

ASB 002 0168

Form #RA-213C

Pa. (215) 613-1650
N.J. (201) 839-4209

ROSSNAGEL & ASSOCIATES INC.

Engineering & Testing Consultants
1999 RT. 70
CHERRY HILL, N. J. 08003
(609) 424-4440

Envirolab Inc.
946 Richmond R
Painesville, Ohio 4
(216) 352-83

Southeastern Di
250 Arizona Aven
Atlanta, Georgia 3
(404) 377-42

AIR-WATER-NOISE
O.S.H.A.-ENERGY-WASTE

- STACK & EXHAUST TESTING
- DESIGN OF AIR/WATER/NOISE POLLUTION CONTROL SYSTEMS
- SPECIFICATIONS / DRAWINGS
- WATER POLLUTION TESTING
- CHEMICAL ANALYSIS
- GAS CHROMATOGRAPHY
- INDUSTRIAL HYGIENE (O.S

ASBESTOS TEST REPORT #2976

The results of your asbestos sample(s) submitted to ROSSNAGEL ASSOCIATES for analysis show numerous asbestos fibers of about 25 micron These are within the >5-100 micron range of fibers which are dangero in excessive quantities.

This report confirms that asbestos fibers are present in the sample(s) submitted as shown on the attached pages. If you wish a further analysis, we can do either of the following:

1) X-ray Diffraction Scan Test for determining the actual % and type of asbestos fibers. Send in 1-2 tablespoonful sample if this test is desired.
   Cost $150/sample
2) Conduct actual airborne asbestos level tests (as was dor at the Ramtown School in Howell Twp., N.J. by our firm to determine if excessive levels of asbestos fibers ar present or not.
   Cost - $500 for technician and two test locations in build
   $100 each additional test location

ROSSNAGEL & ASSOCIATES INC.
1999 RT. 70
CHERRY HILL, N. J. 08003
(609) 424-4440

INVOICE

No. I-00
Date: 1/n

TO: SOLID WASTE ADMINISTRATION
32 E. HANOVER STREET, TRENTON, NJ. 08625
ATTEN. DR. R. BUCH

YOUR ORDER NO.	DATE SHIPPED	SHIPPED VIA	F.O.B. POINT	TERMS
			N/A	Net 10 Days

QUANTITY	DESCRIPTION	UNIT PRICE	TO
1	ASBESTOS CONTAMINATION TEST	25.00	

2x(2)

Thank You

Form #RA-214B

ASB 002 0169

"TEST IT FIRST SO YOU REALLY KNOW WHAT THE PROBLEM IS"

RUSSNAGEL & ASSOCIATES
Engineering & Testing Consultants
1999 Rt. 70 • Cherry Hill, N.J. 08003

Southeastern Division
250 ARIZONA AVE., N
ATLANTA, GA. 3030
(404) 377-4248

FIBER SUMMARY & CALCULATION SHEET

Lab Report # 1730 Date 1/17/78

Test Report # 2976 Made by MLK

Customer Name SOLID WASTE ADMINISTRATION Checked by MJ

Address 32 E. HANOVER STREET, TRENTON, N.J. 08625

Personal Sampler # — Filter S/N —

SAMPLE FROM NATIONAL GYPSUM

Operation —

Type of Fiber ASBESTOS

If more than one Form 130 is used for a given filter, then the total counts are tabulated below:

	CATEGORIES OF LENGTHS					
	≤ 5 μ	> 5-10 μ	>10-20 μ	>20-50 μ	>50-100 μ	>100 μ
Totals		SEE	ATTACHED	SHEETS		
Percent						
	*	← Fibers →				*

Total Fibers Counted —

Average Net Fiber Count = $\frac{\text{fibers}}{\text{No. fields counted}}$ = — based on — fields count

Sampling Rate: — liters/min.

Sampling Time: — minutes

Sampling Volume = Rate x Time = — x — x 1000 = — milli

Fiber Concentration = $\frac{\text{Avg. Net Fiber Count} \times 171{,}000}{\text{Vol. Sampled, ml}}$ = — x 171,000 = — fibe

REMARKS: THE TESTS PERFORMED ON THE SAMPLE ABOVE SHOW DEFINITE ASBESTOS CONTENT WITH FIBERS IN THE GREATER THAN FIVE TO ONE HUNDRED MICRON RANGE.

* Do not count as fibers

Form #RA-211B

ASB 002 0170

ATLANTA, GA. 30...
(404) 377-424...

Engineering & Testing Consu...
1999 Rt. 70 • Cherry Hill, N.J. 08003

Job Name SOLID WASTE ADM
Lab # 1730
Job # 2976
Date 1/17/78
Filter S/N —
Personal Sampler # —
Made by MLK
Location NATIONAL GYPSUM
Filter Type —
Checked by [illegible]

PARTICLE MICRON SIZE DISTRIBUTION BY COUNT

Magnification 400 X
Classification ASBESTOS FIBE...
Type Reticle PORTON
Operation —
Field Sampling Method GRAB
Field Sample Time — min...

Field No.	Lat.	Long.	CATEGORIES OF LENGTHS ≤ 5 μ	>5-10 μ	>10-20 μ	>20-50 μ	>50-100 μ	>100 μ	Rema...
			CONCLUSION: THIS SAMPLE SHOWS						
			DEFINITE ASBESTOS CONTENT.						
Totals									
Percent									

← Fibers →

Note: 1. Count 100 random fields or 100 fibers in not less than 20 field...
2. Count only fibers having an aspect ratio of at least 3:1 and a length of greater than 5 microns up to 100 microns.
3. Longitude is left-to-right on filter. Latitude is in-and-out o... fil...
4. Fibers counted under phase contrast optics.
5. This distribution IS NOT on a wgt. basis.

Total Fields Counte...
Total Fibers Counte...

Form #RA-130-3C

Page ___ . ___

ASB 002 0171