FILE NAME: Flooring (FLR)

DATE: 1989 May 30

DOC#: FLR025

DOCUMENT DESCRIPTION: Unpublished Report by Atlantic Environmental - Monitoring of Airborne Asbestos Fiber Release - Sent to Randolph Board of Education, NJ - with Several Letters and Memos Attached

BC Note (attached to next page)

Floor tile
Maintenance data

RANDOLPH TOWNSHIP SCHOOLS

EDWARD H. BRZEZOWSKI, P.E.
DISTRICT ENGINEER

BUSINESS OFFICE
SCHOOLHOUSE ROAD, RANDOLPH, N.J. 07869
(201) 328-2786

June 14, 1989

NJDOH
Asbestos Control Service
CN 360
Trenton, NJ 08625

Att: Mr. Michael Lakat
Special Assistant to the Director

Ref: Vinyl Asbestos Tiles - Air Monitoring Report

Dear Mr. Lakat:

As per our telephone conversation earlier today, Wednesday, June 14, 1989 attached please find a copy of the report prepared by Atlantic Environmental Inc. (AEI) and our original scope of work.

Based on your recommendation I have requested AEI to rerun the four TEM samples using another lab. We should have these new results within one week. I will call you with these findings as soon as they are available.

The results of these preliminary tests may effect educational and public facilities across the State. We therefore are formally requesting the combined assistance and technical expertise of NJDOH Asbestos Control Service and NJ PEOSHA to deal with this potential State wide problem.

Since "time is of the essence" with the summer cleaning period rapidly approaching and our intent to provide a safe, clean, and healthy working environment for our staff and students your guidance will be needed within the next two weeks.

We will provide any assistance that may be required to complete these tasks. Should your require any additional information please do not hesitate to call. We look forward to your response.

Sincerely,

Edward H. Brzezowski, P.E.
District Engineer

Enclosure

CC: Mr. Robert Gordon, Superintendent
Mr. Frank Pepe, Assistant Superintendent for Business
[illegible] Brenton, Program Specialist II, NJ PEOSHA

Randolph Township Schools
Office of the Superintendent

TO: Principals, K-8

FROM: Robert Gordon, Superintendent

RE: Asbestos Abatement

DATE: June 27, 1989

This memorandum is a follow-up to the meeting held yesterday regarding the cleaning of tile floors.

Until further notice, no power equipment of any kind is to be used on tile floors. Custodians may continue to use normal cleaning and care procedures on terrazzo and wooden floors.

This directive is designed to ensure against possible high levels of airborne asbestos fibers caused by abrasive treatments of these floors. There is to be absolutely no deviation from the terms of this directive.

RG:dec
Copy: Frank Pepe
Edward Brzezowski

RANDOLPH TOWNSHIP SCHOOLS

EDWARD H. BRZEZOWSKI, P.E.
DISTRICT ENGINEER

BUSINESS OFFICE
SCHOOLHOUSE ROAD, RANDOLPH, N.J. 07869
(201) 328-2786

June 29, 1989

NJDOH
Asbestos Control Service
CN 360
Trenton, NJ 08625

Attn: Mr. Michael Lakat
Special Assistant to the Director

Ref: Vinyl Asbestos Tiles - Air Monitoring Report

Dear Mr. Lakat:

Pursuant to our telephone conversation, Monday, June 26, 1989 in reference to the above:

1. The second lab TEM tests by EMSC confirm the original tests by AMA.

2. Based on these results, the normal process of stripping and waxing VAT appears to be above the PEOSHA action level of 0.05 F/CC.

3. NJDOH and NJ PEOSHA are reviewing the methodology and report prepared by Atlantic Environmental Inc.

4. Formal recommendations and guidance will be provided by NJDOH/NJ PEOSHA by the end of July 1989 or sooner.

During this review process, Randolph Township Schools will refrain from all stripping and waxing of vinyl asbestos floor tiles.

I thank you in advance for your prompt and serious attention to these matters.

Sincerely,

Edward H. Brzezowski, P.E.
District Engineer

EHB:gb

cc: Mr. Robert Gordon, Superintendent of Schools
Mr. Frank Pepe, Assistant Superintendent for Business
Mrs. Ann O'Connor, District Health Coordinator

State of New Jersey

DEPARTMENT OF HEALTH
CN 360, TRENTON, N.J. 08625-0360

MOLLY JOEL COYE, M.D., M.P.H.
COMMISSIONER

BOARD OFFICE

July 28, 1989

Frank M. Makein, Supervisor
Health and Safety Cooperative
Pequannock Township Board of Education
Oak Avenue and Lincoln Park Road
Pequannock, NJ 07440

Dear Mr. Makein:

The Asbestos Control Service (ACS) has reviewed the environmental survey comparing three methods of stripping and waxing vinyl asbestos floor tile (VAT). Major problem areas regarding the basic study design, execution, and conclusions were noted. These problems have caused the results and any subsequent interpretation to be called into question. At best, any inferences which can be drawn are of very limited value.

Although no compelling evidence was presented which would warrant any regulatory action, the Service finds it necessary to issue an interim advisory for the maintenance of vinyl asbestos floor tiles. This action was predicated by the concerns raised primarily by members of the Health and Safety Cooperative for employee and occupant safety.

1. Pursuant to 40 C.F.R. 763.91(a), "[a]ny material identified as nonfriable ACBM or nonfriable assumed ACBM must be treated as friable ACBM for purposes of this section when the material is about to become friable as a result of activities performed in the school building." Since VAT falls within the purview of the above-referenced section, general guidelines found in the non-mandatory Appendix B to Subpart E--Work Practices and Engineering Controls for Small-Scale, Short Duration Operations, Maintenance and Repair (O&M) Activities Involving ACM are instructive;
2. Any operations and maintenance activity which has the potential to release fibers from vinyl asbestos floor tiles should be avoided;
3. If these activities must be performed, they shall be conducted only when the building is unoccupied;

4. All operations and maintenance activities i volving VAT shall be performed by individuals who have received he two-day O & M training;
5. Dry stripping shall not be performed;
6. Non-abrasive means of stripping and buffing shall be employed;
7. Due to the potential for direct exposure to the individuals performing these activities, adherence to the provisions of the Safety and Health Standards for Public Employees (N.J.A.C. 12:100 et seq.) shall be required. Specific references include, but are not limited to:
   a. engineering controls (N.J.A.C. 12:100-12.4),
   b. general work practices (N.J.A.C. 12:100-12.5),
   c. respiratory protection (N.J.A.C. 12:100-12.8), and
   d. personal protective clothing (N.J.A.C. 12:100-12.9); and
8. Pursuant to 40 C.F.R. 763.94(f), records regarding this activity shall be maintained as part of the school's asbestos management plan.

As stated above, these recommendations are predicated on the results of a flawed study. However, the ACS has entered into preliminary discussions with several outside consultants as a prelude to fully addressing this issue during the early part of 1990.

If I can be of further assistance in this matter, do not hesitate to contact me at 1-609-984-2193.

Very truly yours,

Michael F. Lakat
Special Assistant to the Director
Asbestos Control Service

c: Virginia Brenton
Edward H. Brzezowski

VINYL ASBESTOS FLOOR TILE
Operations and Maintenance
Field Testing

GOAL:
To test for the release of asbestos fibers during the normal process of stripping and waxing vinyl asbestos floor tiles. These tests would provide documented results for both proper "wet" stripping and worst case "dry" stripping and waxing.

TEAM:
The team would be comprised of an NJDCA approved Asbestos Safety Control Monitoring (ASCM) firm and a NJDOL licensed asbestos contractor. A host school will provide the work site and associated floor stripping and waxing equipment and materials.

SEQUENCE:
An isolated area of a school will be used as the test site on a day that school is not in session. Prior to running the tests the ASCM will take samples of the floor tiles to confirm the presence of asbestos fibers. The contractor will isolate three separate work areas and install "critical barriers" in order to prevent any possible contamination during the test. The asbestos contractor will also operate the stripping and waxing equipment during the test. The work site shall be returned to original conditions and all debri shall be disposed of by the asbestos contractor.

METHOD#1
(SEMI-DRY STRIPPING)

Strip dry/damp floor w/coarse pad using water/soap/stripper mix.

Rinse w/clear water & vac.
(Repeat 2 -3 times)

Wax w/no-buff floor wax.
(Repeat 2 times)

METHOD#2
(WET STRIPPING)

Strip wet floor w/coarse pad using water/soap/stripper mix.

Rinse w/clear water & vac.
(Repeat 2 -3 times)

Wax w/no-buff floor wax.
(Repeat 2 times)

METHOD#3

Same as Method#2 except a non-scrubbable stripper will be used.

RESULTS:
Multiple air sampling results will be analyzed using TEM to confirm the presence of asbestos fibers and their concentration levels during all test methods. A background test prior to starting this work shall also be made.

RECOMMENDATIONS:
After the results are analyzed, if asbestos fibers are released the ASCM will provide a 1 day "in-service" to review the proper methods of stripping and waxing VAT without releasing asbestos fibers. A written guidance document will also be prepared by the ASCM firm.

RANDOLPH TOWNSHIP SCHOOLS

OFFICE OF DISTRICT ENGINEER

SCHOOLHOUSE ROAD
RANDOLPH, N.J. 07869
(201)328-2786

EDWARD H. BRZEZOWSKI, P.E.
DISTRICT ENGINEER

December 5, 1989

Mr. Tom Leary
c/o Annerardale County Public Schools
9034 Fort Smallwood Road
Pasadena, Maryland 21122

Dear Mr. Leary:

In response to your recent request, I am forwarding a copy of the air monitoring report for tests conducted on vinyl asbestos tiles in the Randolph Schools. I hope you find it to be useful.

Sincerely,

Edward H. Brzezowski/gb

Edward H. Brzezowski
District Engineer

EHB:gb

Enclosure

ATLANTIC
ENVIRONMENTAL
INCORPORATED
2 E BLACKWELL STREET, DOVER, NJ 07801 • (201) 366-4660 • FAX (201) 366-3116

RECEIVED
JUN 1 - 1989
BOARD OFFICE

June 14, 1989

RECEIVED
BOARD OFFICE

Mr. Ed Brzezowski
Randolph Board of Education
Office of the Superintendent
Schoolhouse Road
Randolph, NJ 07869

Dear Mr. Brzezowski:

Enclosed is the report for the air monitoring performed at Ironia School on May 30, 1989. I am forwarding a copy of the report to the New Jersey Department of Health as per your request.

Thank you for allowing us to be involved in your project. Should you have any questions regarding this report, or if we may be of further service, please feel free to call.

Sincerely,

Melissa Bowles

enc.
cc: NJ DOH

1.0 INTRODUCTION

Atlantic Environmental Inc. was retained by the Randolph Board of Education to perform monitoring of airborne asbestos fiber release during a comparative study of three methods of stripping and waxing vinyl asbestos floor tiles. The test was performed at Ironia School, Ironia, New Jersey.

All three methods of stripping and waxing were performed under full containment by Bergen Tech, a licensed asbestos removal contractor, New Jersey license #00125. Monitoring was performed at the request of Ed Brzezowski of Randolph Board of Education by Melissa Bowles of Atlantic Environmental.

2.0 PROCEDURES

The tests were performed on asbestos containing floor tiles located in the cafeteria/auditorium of Ironia School. (Please see Appendix A for bulk sample results.) Three portable 4'X 4'X 7' #4400 "Dispos-A-Con" containments, made of 2 layers of 6 mil plastic supported by pvc tubes, were erected in the center of the room. The containments were placed approximately four feet apart and were connected by plasticized chambers constructed by the contractor. The workers stood in these chambers while performing the stripping and waxing processes inside the containments. The three different stripping/waxing processes are described as follows:

Method #1 (Semi-Dry Stripping)

Strip dry/damp floor with course pad using water, soap and stripper mix

Rinse with clear water and vacuum (repeat 2-3 times)

Wax with no-buff floor wax (repeat 2 times)

Method #2 - (Wet Stripping)

Strip wet floor with coarse pad using water, soap and stripper mix.

Rinse with clear water and vacuum (repeat 2-3 times)

Wax with no-buff floor wax (repeat 2 times)

Method #3 - (Non-Scrubbable Stripper)

Strip wet floor with non-scrubbable stripper mixture.

Rinse with clear water and vacuum (repeat 2-3 times)

Each of the above methods was used in a separate containment. The contractor was briefed on the proper procedures for these methods by the head custodian of Ironia School. Each method took less than fifteen minutes to complete. Two samplers were set up inside each containment. Samples to be analyzed by Transmission Electron Microscopy (TEM) were set at five feet above the floor and samples to be analyzed by Atlantic Environmental using Phase Contrast Microscopy were placed two feet above the floor. One TEM background sample was taken before

stripping procedures commenced. Other samplers were turned on at the beginning of each procedure and were turned off approximately two and a half hours later (the time required to collect a sufficient volume of air to perform analysis.) After sampling was completed, the contractors collapsed the portable chambers and double bagged all other materials. All materials were to be disposed of by the contractor as hazardous waste. (See Appendix A for air sample results and Appendix B for a diagram of sample locations.)

3.0 SAMPLING METHODS AND ANALYSIS

Electric pumps were used to monitor the fiber concentration in the air during the stripping procedures. Air was pulled by the pumps through 0.8 micron mixed cellulose ester filters mounted in electrically conductive 25 mm plastic cassettes attached to the pumps using plastic tubing. All pumps were calibrated before use for a flow rate of 15 liters per minute, and checked immediately afterward for accuracy.

Air samples were obtained using open faced methods required by the National Institute of Occupational Safety and Health (NIOSH).

Transmission Electron Microscopy (TEM) was used to analyze the background sample and for cassettes placed in the breathing zone of each containment. This method is in accordance with AHERA level II method for airborne asbestos fibers. Phase Contrast

Microscopy was used to analyze cassette filters placed two feet above the floor and for the clearance sample. This method is in accordance with NIOSH specifications #7400 Method for airborne asbestos fibers.

4.0 RESULTS

All TEM air samples taken (except for the background sample) were found to contain between 0.0199 and 0.0822 fibers per cubic centimeter of air (f/cc). These results are within the Occupational Safety and Health Administration (OSHA) permissible exposure of 0.2 f/cc for an eight hour time weighted average;and are within the OSHA and the Asbestos Hazard Emergency Response Act (AHERA) "action level" of 0.1 f/cc at which employers must initiate compliance activities such as worker training and medical surveillance. Results associated with scrubbable strippers (methods #1 and #2) are above the action level of 0.05 f/cc set by the New Jersey Public Employees Occupational Safety and Health Act. All sample results are above the Environmental Protection Agency (EPA) recommended level of 0.01 f/cc for air quality outside of a containment during abatement operations and also above the acceptable criteria for the re-occupation of an area after abatement (also 0.01 f/cc).

All samples analyzed by PCM method resulted in levels of less than 0.002 f/cc except for the sample associated with Method #1, the semi-dry stripping method, which resulted in a level of

0.007 f/cc. According to AMA Analytical Services of NY/NJ, Inc., the majority of fibers in the samples analyzed by their laboratory using TEM were of less than .25 microns in diameter. Fibers this small are not easily detectable using PCM method.

CONCLUSIONS AND RECOMMENDATIONS

While actual sample results cannot be compared to permissible exposure limits based on eight hour time weighted averages, the data suggests that a significant number of airborne fibers were released in the scrubbable stripper methods (Method #1 and #2). If similar levels resulted during the stripping and waxing of a normal sized area using normal custodial procedures, and if no containment were erected, then these levels would exceed the EPA and AHERA recommended level of 0.01 f/cc for areas outside a containment and for re-occupancy of an area after abatement. In fact, sample results would indicate that even Method #3, the non-scrubbable method, resulted in unacceptable levels of airborne asbestos fibers. It seems possible, however, based on observations of the containment construction, that cross contamination between the containments occurred. In summary, additional data, including personal exposure data, would be needed to draw any definite conclusions.

We strongly recommend, however, that in accordance with 40 CFR Part 763 Asbestos-Containing Materials in Schools; Final Rule and Notice, under Appendix B to subpart E "Prohibited activities"

that the floor tiles containing asbestos not be sanded or abraded unless proper containments, respiratory and air sampling methods are employed.

Report written by: Melissa Bowles

Report Reviewed by: Michael Donovan,
Manager, Field Operations

File\arp1\RBED0530

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APPENDIX A

RESULTS

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ENVIRONMENTAL

SAMPLE ANALYSIS FOR BULK ASBESTOS

Material Sampled:	Vinyl Asbestos Floor Tiles
Client:	Randolph Board of Education
Location:	Ironia School Ironia, New Jersey
SURVEY DATE:	May 22, 1989
SAMPLING METHOD:	Bulk Asbestos sampling
ANALYTICAL METHOD:	Polarized Light Microscopy in accordance with EPA recommended methods.
SAMPLING PERFORMED BY:	Kevin Collins
ANALYSIS PERFORMED BY:	Paul Valvo

Sample Number	Description	Results
IEM0522A	Cafeteria, Brown floor tile	Chrysotile: 5% Non-fibrous minerals, binders
IEM0522B	Cafeteria, Red floor tile	Chrysotile:4% Non-fibrous minerals binders
IEM0522C	Cafeteria, Grey flocr tile	Chrysotile: 5% Non-fibrous minerals binders

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SAMPLE ANALYSIS FOR AIRBORNE ASBESTOS

Material Sampled:	Airborne Asbestos
Client:	Randolph Board of Education
Location:	Ironia School Ironia, New Jersey
SURVEY DATE:	May 30, 1989
SAMPLING METHOD:	Electric air samplers calibrated before use and checked after use
SAMPLING MEDIA:	25 mm cassette with 0.8 micron mixed ester filters Samples obtained using open faced method required by OSHA & NIOSH methods.
ANALYTICAL METHOD:	Transmission Electron Microscopy according to AHERA level II method and Phase Contrast Microscopy in accordance with OSHA & NIOSH
required	methods.
SAMPLING PERFORMED BY:	Melissa Bowles
PCM ANALYSIS PERFORMED BY:	Melissa Bowles
TEM ANALYSIS PERFORMED BY:	AMA Analytical Services of NY/NJ

Sample Number	Location		Results fibers/cc
RBB0530A	Outside containment, in center of cafeteria (background)	TEM	<0.0088
RBB0530B	Inside containment #1 5 feet from floor Method #1	TEM	0.0822

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RBB0530E	Inside containment #1 2 feet from floor Method #1	PCM	0.007
RBB0530C	Inside containment #2 5 feet from floor Method #2	TEM	0.0552
RBB0530F	Inside containment #2 2 feet from floor Method #2	PCM	<0.002
RBB0530D	Inside containment #3 5 feet from floor Method #3	TEM	0.0199
RBB0530G	Inside containment #3 2 feet from floor Method #3	PCM	<0.002
RBB0530H	Outside containments center of cafeteria adjacent to contain #1 (clearance)	PCM	<0.002

AMA Analytical Services of NY/NJ, Inc.

Environmental Consultants

CERTIFICATE OF ANALYSIS

Atlantic Environmental
2 East Blackwell Street, Suite 24
Dover, NJ 07801

JOB SITE: Randolph Board of Ed
JOB NUMBER: 0804-0832
SUBMITTED BY: Atlantic Environmental

DATE ANALYZED:
CHAIN OF CUSTODY #
PERSON SUBMITTING:

ATTN: Melissa Bowles

FILTER MEDIA: MCE 25mm Diameter 0.8 Micron Porosity

SUMMARY OF TRANSMISSION ELECTRON MICROSC

DATE SAMPLED	AMA LAB NUMBER	CLIENT NUMBER	VOLUME SAMPLED (LITERS)	FILTER AREA ANALYZED (mm^2)	ANALYTICAL SENSITIVITY S/mm^2	S/CC	NO. OF ASBESTOS STRUCTURES CHRY.	AMPH.	NO. OF NON-ASBESTOS STRUCTURES	ASI CONCE S/mm^2
5/30/89	N9060101	RBB0530A	2100	.0830	13	0.0022	1	0	0	13
5/30/89	N9060102	RBB0530B	2145	.0830	13	0.0022	38	0	30	458
5/30/89	N9060103	RBB0530C	2100	.0830	13	0.0022	25	0	9	302
5/30/89	N9060104	RBB0530D	2100	.0830	13	0.0022	9	0	0	109

Analytical procedures used meet or exceed the AHERA "Interim Transmission Electron Microscopy Analytical Methods" protocol described in Appendix A to Subpart E of 40 CFR Part 763.

ANALYST: Robert M. P

This report applies only to the sample, or samples, investigated and is not necessarily indicative of the quality or condition of apparently identical or similar products. As a these laboratories, this report is submitted and accepted for the exclusive use of the client to whom it is addressed and upon the condition that it is not to be used, in whole matter without prior written authorization from us. Sample types, formulations and collection protocols are based upon the information provided by the persons submitting them Laboratories we expressly disclaim any knowledge and liability for the accuracy and completeness of this information. All rights reserved AMA Ana

1090 King Georges Post Road • Suite 307 • Edison, NJ 08837 • (201) 417-0660 • FAX: (201) 417-0664 • Toll Free 1 (800) A

AMA Analytical Services of NY/NJ, Inc.

Environmental Consultants

CERTIFICATE OF ANALYSIS

Atlantic Environmental
2 East Blackwell Street, Suite 24
Dover, NJ 07801

JOB SITE: Randolph Board of Ed
JOB NUMBER: 0804-0832
SUBMITTED BY: Atlantic Environmental

DATE ANALYZED:
CHAIN OF CUSTODY
PERSON SUBMITTING:

ATTN: Melissa Bowles

FILTER MEDIA: MCE 25mm Diameter 0.8 Micron Porosity

SUMMARY OF TRANSMISSION ELECTRON MICROSC

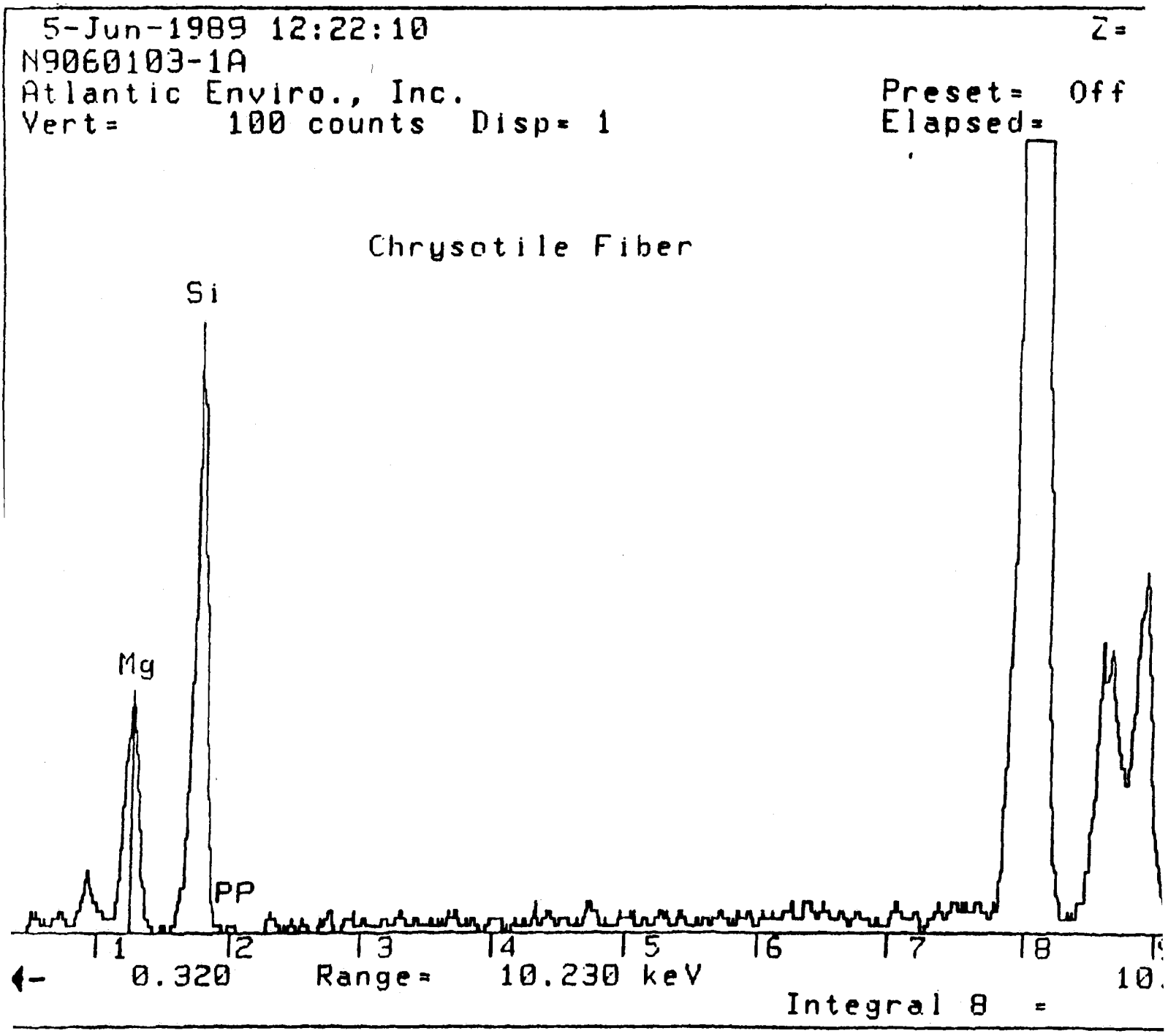
DATE SAMPLED	AMA LAB NUMBER	CLIENT NUMBER	VOLUME SAMPLED (LITERS)	FILTER AREA ANALYZED (mm^2)	ANALYTICAL SENSITIVITY S/mm^2	S/CC	NO. OF ASBESTOS STRUCTURES CHRY.	AMPH.	NO. OF NON-ASBESTOS STRUCTURES	AS CONCE S/mm^2
5/30/89	N9060101	RBB0530A	2100	.0830	13	0.0022	1	0	0	13
5/30/89	N9060102	RBB0530B	2145	.0830	13	0.0022	38	0	30	458
5/30/89	N9060103	RBB0530C	2100	.0830	13	0.0022	25	0	9	302
5/30/89	N9060104	RBB0530D	2100	.0830	13	0.0022	9	0	0	109

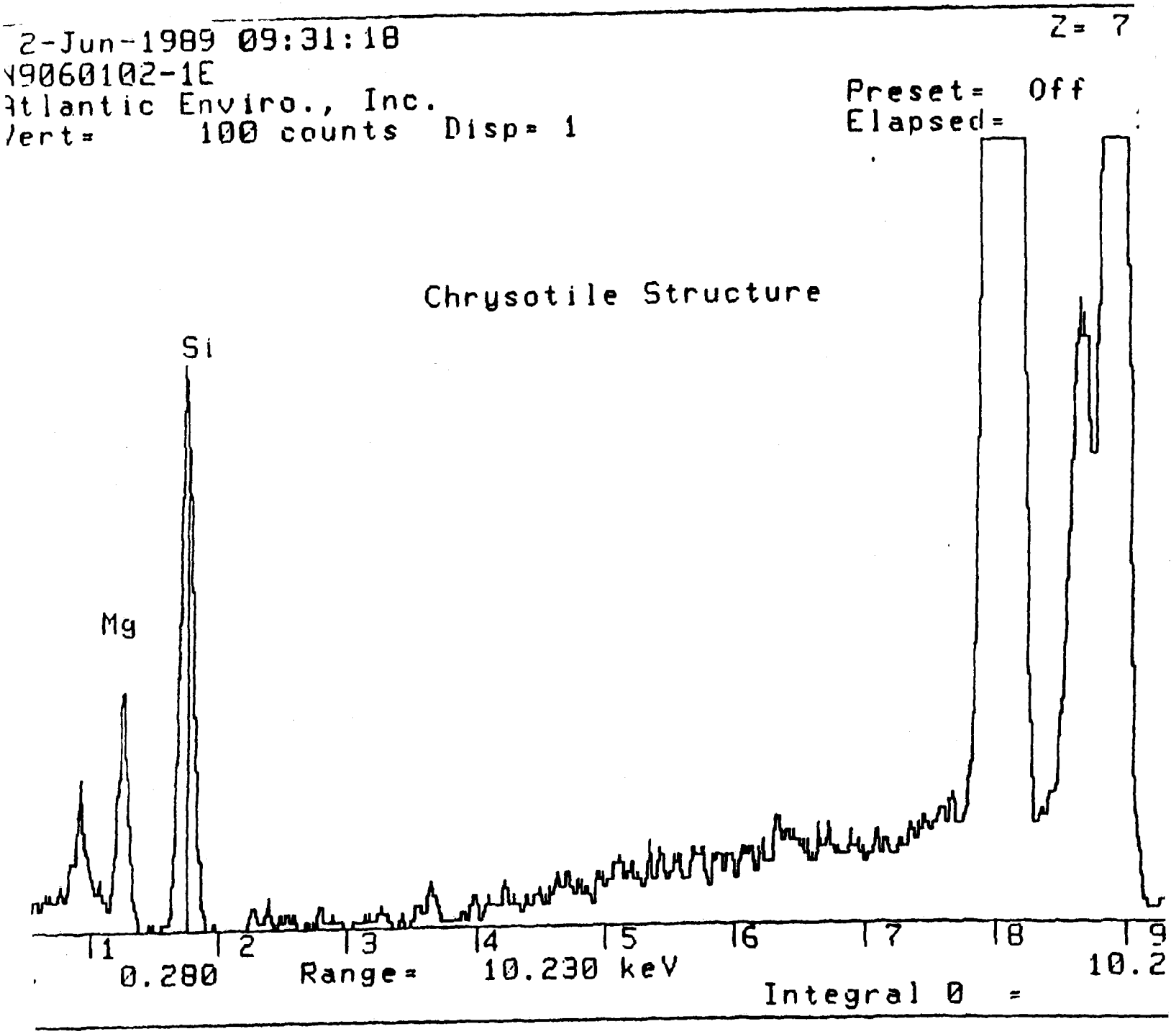
Analytical procedures used meet or exceed the AHERA "Interim Transmission Electron Microscopy Analytical Methods" protocol described in Appendix A to Subpart E of 40 CFR Part 763.

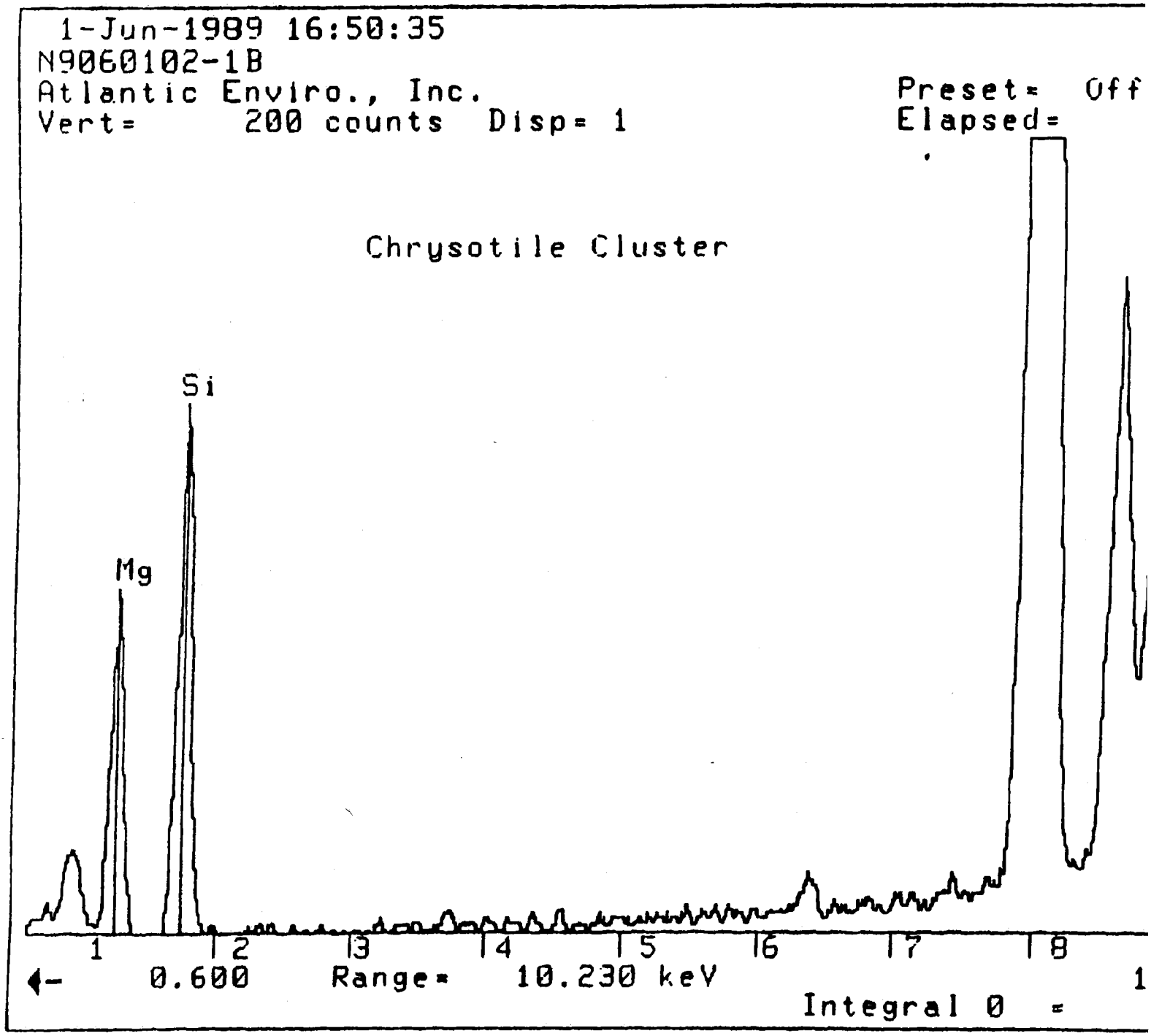
ANALYST: Robert M.

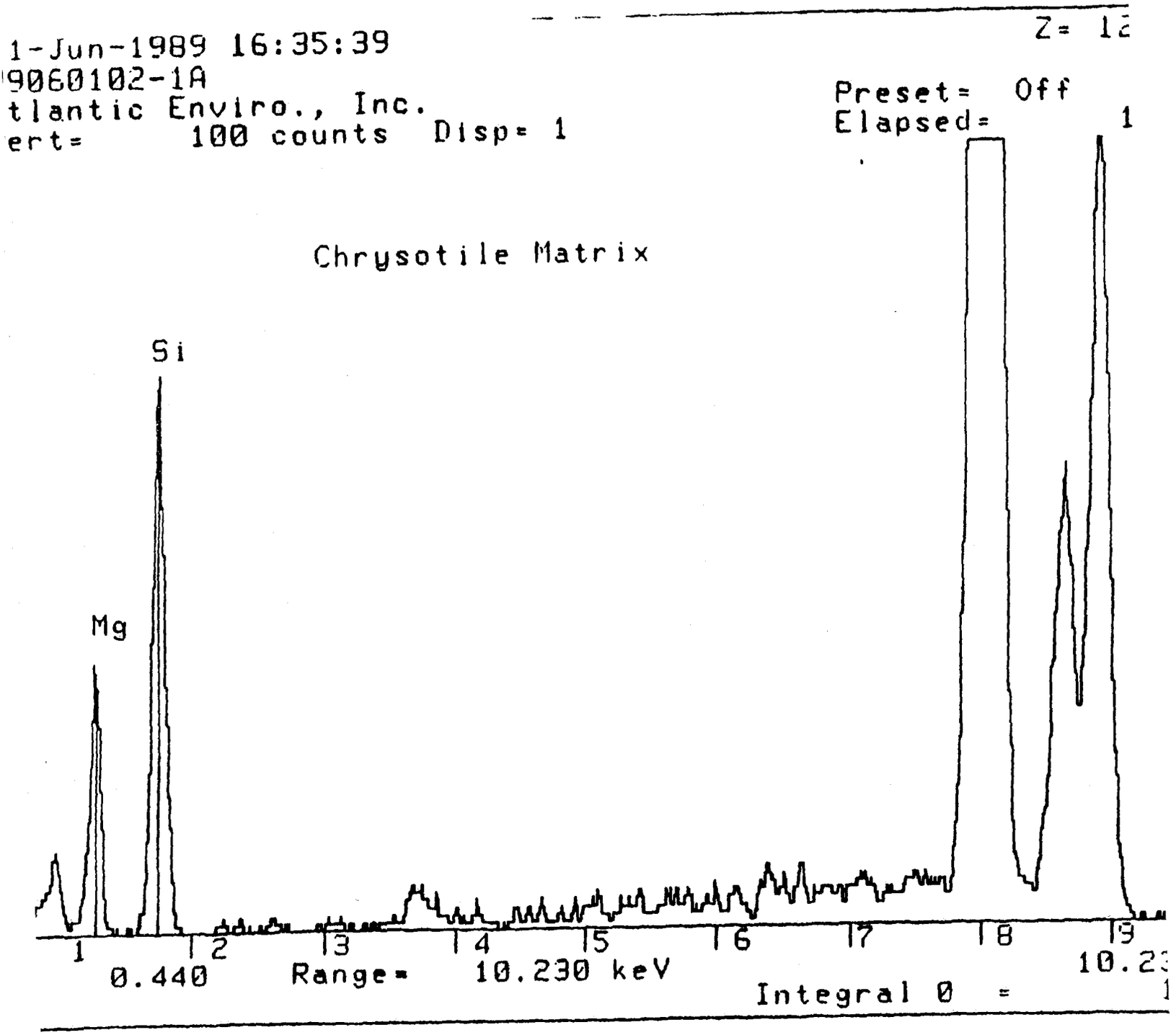
This report applies only to the sample, or samples, investigated and is not necessarily indicative of the quality or condition of apparently identical or similar products. As a these Laboratories, this report is submitted and accepted for the exclusive use of the client to whom it is addressed and upon the condition that it is not to be used in whole matter without prior written authorization from us. Sample types, locations and collection protocols are based upon the information provided by the persons submitting them Laboratories, we expressly disclaim any knowledge and liability for the accuracy and completeness of this information. All rights reserved. AMA An

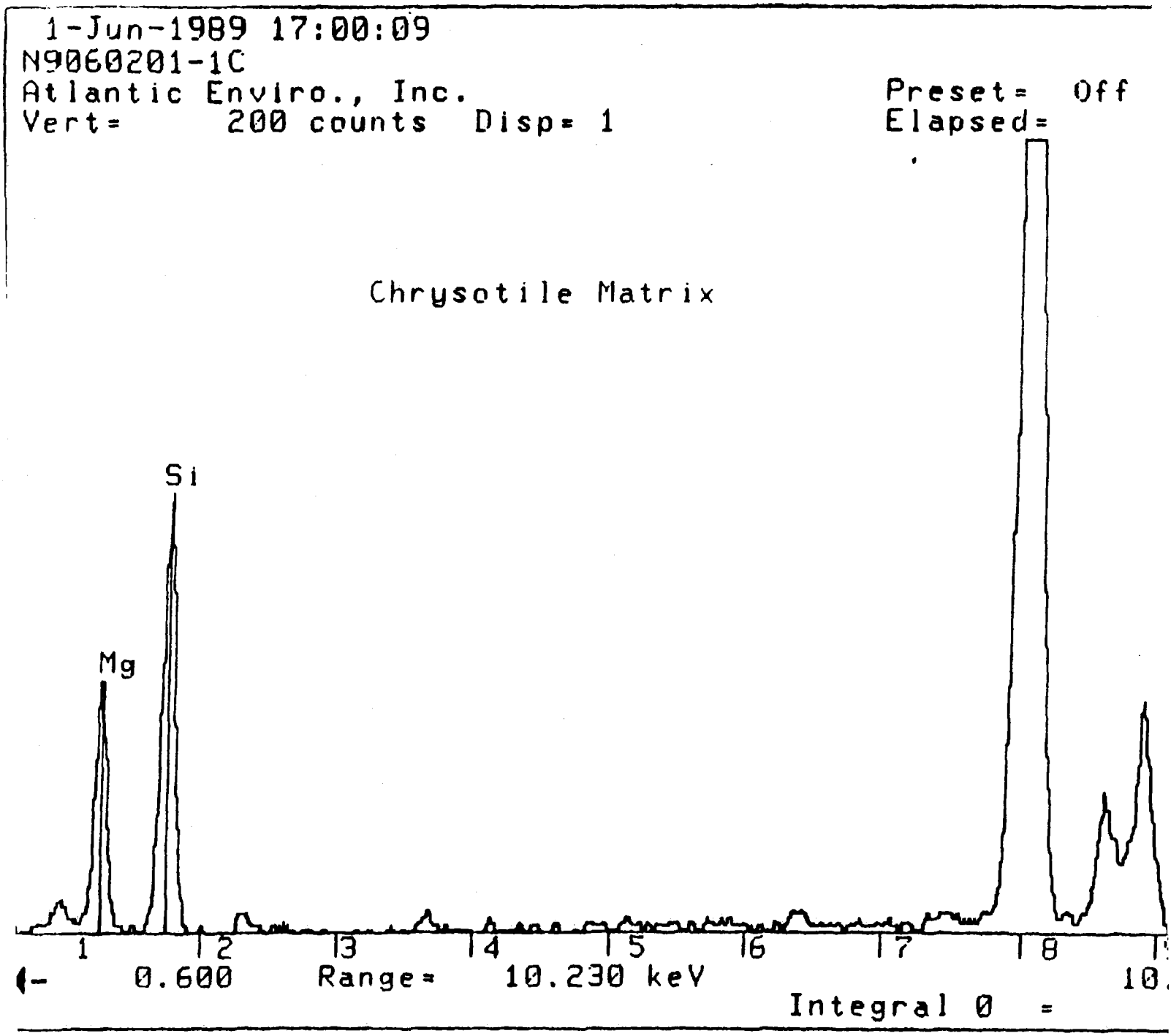
1090 King Georges Post Road • Suite 307 • Edison, NJ 08837 • (201) 417-0660 • FAX (201) 417-0664 • Toll Free 1 (800)

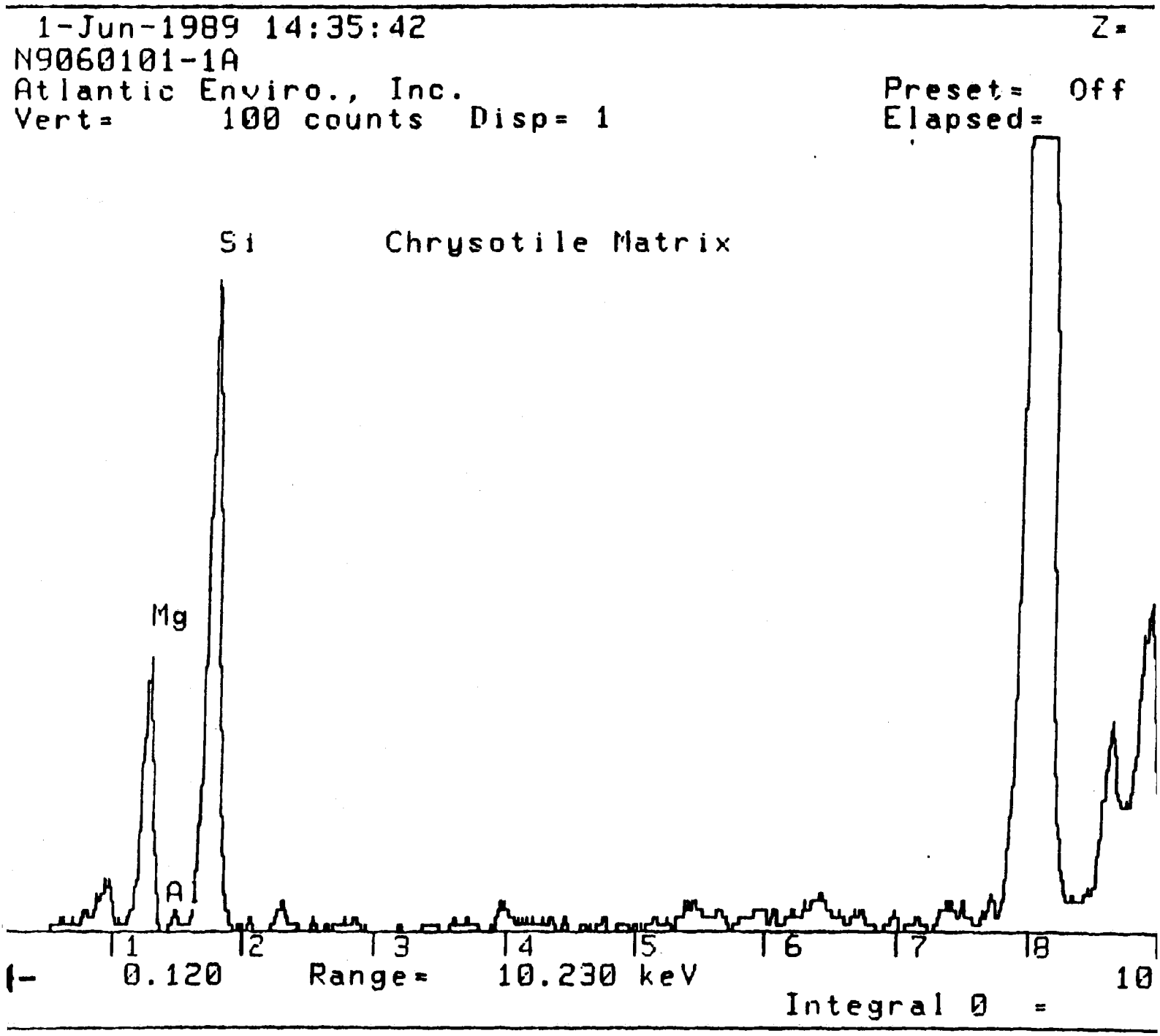

5-Jun-1989 12:22:10
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N9060103-1A
Atlantic Enviro., Inc.
Preset= Off
Vert= 100 counts Disp= 1
Elapsed=
Chrysotile Fiber
Si
Mg
PP
1
2
3
4
5
6
7
8
0.320
Range= 10.230 keV
Integral 8 =


2-Jun-1989 09:31:18
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Elapsed=
Chrysotile Structure
Si
Mg
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2
3
4
5
6
7
8
9
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Range= 10.230 keV
10.2
Integral 0 =


1-Jun-1989 16:50:35
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Atlantic Enviro., Inc.
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Preset= Off
Elapsed=
Chrysotile Cluster
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Mg
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5
6
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8
0.600
Range= 10.230 keV
Integral 0 =


Z= 1
1-Jun-1989 16:35:39
9060102-1A
tlantic Enviro., Inc.
ert= 100 counts Disp= 1
Preset= Off
Elapsed=
Chrysotile Matrix
Si
Mg
1
2
3
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5
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7
8
9
0.440
Range= 10.230 keV
Integral 0 =


1-Jun-1989 17:00:09
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Atlantic Enviro., Inc.
Vert= 200 counts Disp= 1
Preset= Off
Elapsed=
Chrysotile Matrix
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Mg
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2
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8
0.600
Range= 10.230 keV
Integral 0 =


1-Jun-1989 14:35:42
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N9060101-1A
Atlantic Enviro., Inc.
Preset= Off
Vert= 100 counts Disp= 1
Elapsed=
Si
Chrysotile Matrix
Mg
A
1
2
3
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5
6
7
8
0.120
Range= 10.230 keV
10
Integral 0 =

Chain of Custody & Sample Description For Microscopy Services

AMA Analytical Services of NY/NJ, Inc.

Nº 2153
(Please Refer to this Number for Inquires)

SUBMITTAL DATA

Date 6/1/89 Job # 0804-0832

By M Bowles (print)

(sign)

Job Site Randolph Board of Ed
Company Name Atlantic Environmental
Dept/Division
Street/RFD/Box 2E Blackwell Street, Suite 24
City Dover State NJ ZIP 07801
Telephone (201) 366-4660 Fax # (201) 366-3116
Verbal Results Date ___/___/___
Verbal Results Needed By ___ ___ AM___ PM___
To Whom
Written Results Date ___/___/___

INVOICE TO

P.O. # ___ or ___ # ___ Exp. Date ___/___
Company Name
Dept/Division
Attention
Street/RFD/Box
City State ZIP
Telephone (___) ___-___ Fax # (___) ___-___

CERTIFICATE TO

Company Name
Dept/Division
In Name Of
Street/RFD/Box
City State ZIP
Telephone (___) ___-___ Fax # (___) ___-___

SAMPLE DATA

OPTICAL MICROSCOPY Number of Samples___ BY METHOD EPA Interim Method___ NIOSH Method 7400___ OTHER___
BY TYPE AIRS___ BLANKS___ BULKS___ WIPES___ OTHER___

ELECTRON MICROSCOPY Number of Samples 4 BY METHOD EPA Level II ✓ AHERA___ SEM___ OTHER___
BY TYPE AIRS ✓ BLANKS___ BULKS___ WIPES___ OTHER___

Number of Samples by Filter Type. PC___ MCE 4 Porosity 0.___µm (PC) 0.8 µm (MCE)

Total Number of Samples (All Types) 4

Release Criteria/Analytical Sensitivity ☑ 0.010 s/cc ☐ 0.005 s/cc ☐ AHERA ☐ % Asbestos ☐ Other___

Field Sheet Attached? ☑ Yes ☐ No If NO, Please complete the table below Additional sheets may be attached.

SUBMITTED SAMPLE ID NO.	SAMPLE LOCATION	TYPE *	DIAM (mm)	VOLUME (LITERS)	TEM	SEM	PCM	PLM	AIR	BULK	WIPE	FOR LABORATORY USE ONLY AMA SAMPLE #	G1	G2	s/mm²
RBB0530A	n/a	n/a	25	2100	✓				✓			N90601 01	5	9	13,000
RBB0530B	↓	↓	25	2175	✓				✓			N90601 02	5	9	13,000
RBB0530C	↓	↓	25	2100	✓				✓			N90601 03	5	9	13,000
RBB0530D	↓	↓	25	2100	✓				✓			N90601 04	5	9	13,000

* IWA = Inside Work Area OWA = Outside Work Area FB = Field Blank LB = Laboratory Blank

FOR LABORATORY USE ONLY (CUSTODY)

Method of Receipt: Overnight "Express" Mail (Fed Ex, etc.) ✓ Hand Carried___ 1st Class Mail___ Courier___ OTHER___
Date/Time Rec'd 6/1/89 @ 10:15 Comments