APTIM
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Jacksonville, FL 32256
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September 24, 2018 Project No. 631237084

Mr. James G. Bernier, P.E.

Territorial Director of Capital Projects & Facilities
Division of Architectural Engineering
Virgin Islands Department of Education (VIDE)

Re: Report of Project Monitoring – Pearl B. Larsen Elementary School
Estate Street Peters
St. Croix, US.V.I 00820

Dear Mr. Bernier:

Aptim Environmental & Infrastructure, Inc. (APTIM) has completed visual observations and air monitoring associated with the abatement of asbestos-containing floor tile and associated mastic within the Pearl B. Larsen Elementary School, located at Estate Street Peters, St. Croix, USVI. The abatement was performed prior to scheduled renovations which would disturb these materials. This report presents our visual observations and the results of our air monitoring analyses.

APTIM appreciates the opportunity to serve as your asbestos consultant on this project. Please feel free to call us with any questions regarding the content of this report.

Sincerely,

David Mosher
Environmental Project Manager

1 ASBESTOS ABATEMENT BACKGROUND

As part of the planned renovations of the Venetia Elementary School campus, the Virgin Islands Department of Education (VIDE) requested that APTIM provide abatement oversite, onsite observations and air monitoring during the removal of identified asbestos-containing materials. Adcon Environmental Services, a licensed USVI abatement contractor, performed the abatement. Daily observation of work practices was performed by an APTIM representative to ensure adherence by the abatement contractor to the Asbestos Work Plan developed by APTIM and all applicable Federal EPA and OSHA regulations, to the most practicable extent.

After the abatement work was completed by the abatement contractor, a visual inspection of the work area was performed by the APTIM representative. The visual inspection was performed to determine the readiness of the work area for clearance sampling. Critical barriers remained in place in the work areas until satisfactory visual or sampling clearance results were confirmed by APTIM. Phase Contrast Microscopy (PCM) was used to analyze clearance air samples in removal areas exceeding 160 square feet. Visual clearances only were performed for the remaining areas.

On August 13 through August 17, 2018, the following materials were removed from the facility:

Location	Material Description	Approximate Amount
Limited areas throughout the school	FLOOR TILE AND MASTIC	4,630 SF

SF = square feet LF = linear feet EA = each

2 SUMMARY OF ABATEMENT OBSERVATIONS

The abatement contractor's preparation of each work area was accomplished by placing critical barriers; setting up a decontamination station, and where applicable, establishing diminished air pressure within the work area using high efficiency particulate air (HEPA) filtered ventilating machines. Removal of the asbestos-containing materials was performed with the contractor's workers wearing full face, positive pressure air purifying respirators with P100 cartridges, and using HEPA vacuums and wet cleaning methods. Asbestos containing materials were placed in appropriately labeled 6-mil polyethylene bags for disposal. Bagged materials were double bagged for transport to the disposal site.

Following removal of the asbestos-containing materials, an inspection of the abatement area(s) was conducted by an APTIM representative for visual clearance to allow the contractor to proceed with encapsulation or lockdown. Manual cleaning was repeated, as necessary, until no visible dust or debris was present in the work area. Five final clearance samples were collected within each work area exceeding 160 SF. The sampling and subsequent analysis of the clearance samples were performed by a APTIM representative trained in accordance with NIOSH 582, "Sampling and Evaluation of Airborne Asbestos Dust in general accordance with NIOSH Method 7400 for Phase Contrast Microscopy (PCM). Results were reported in fibers per cubic centimeter (f/cm^3), and were compared to the AHERA clearance criteria of less than 0.01 f/cm3, for each sample.

Table 1 contains a summary of the air samples and clearance samples collected during the project, including sample numbers, the types of samples, and the result for each sample. All clearance air samples collected following the abatement and analyzed were below 0.01 f/cm3.

The figure, located at the end of the report text, indicates the air sample locations.

QUALIFICATIONS OF THE REPORT

The services described in this report were performed consistent with generally accepted professional consulting principles and practices. No other warranty, express or implied, is made. These services were performed consistent with our client, Virgin Islands Department of Education, and this report is solely for the use and information of our client, unless otherwise noted. Any reliance of this report by a third party is at such party's sole risk.

Opinions and recommendations contained in this report apply to conditions existing when services were performed and are intended only for the client, purposes, locations, time frames, and project parameters indicated. We are not responsible for the impacts of any changes in environmental standards, practices, or regulations subsequent to performance of services. We do not warrant the accuracy of information supplied by others, or the use of segregated portions of this report.

Table 1

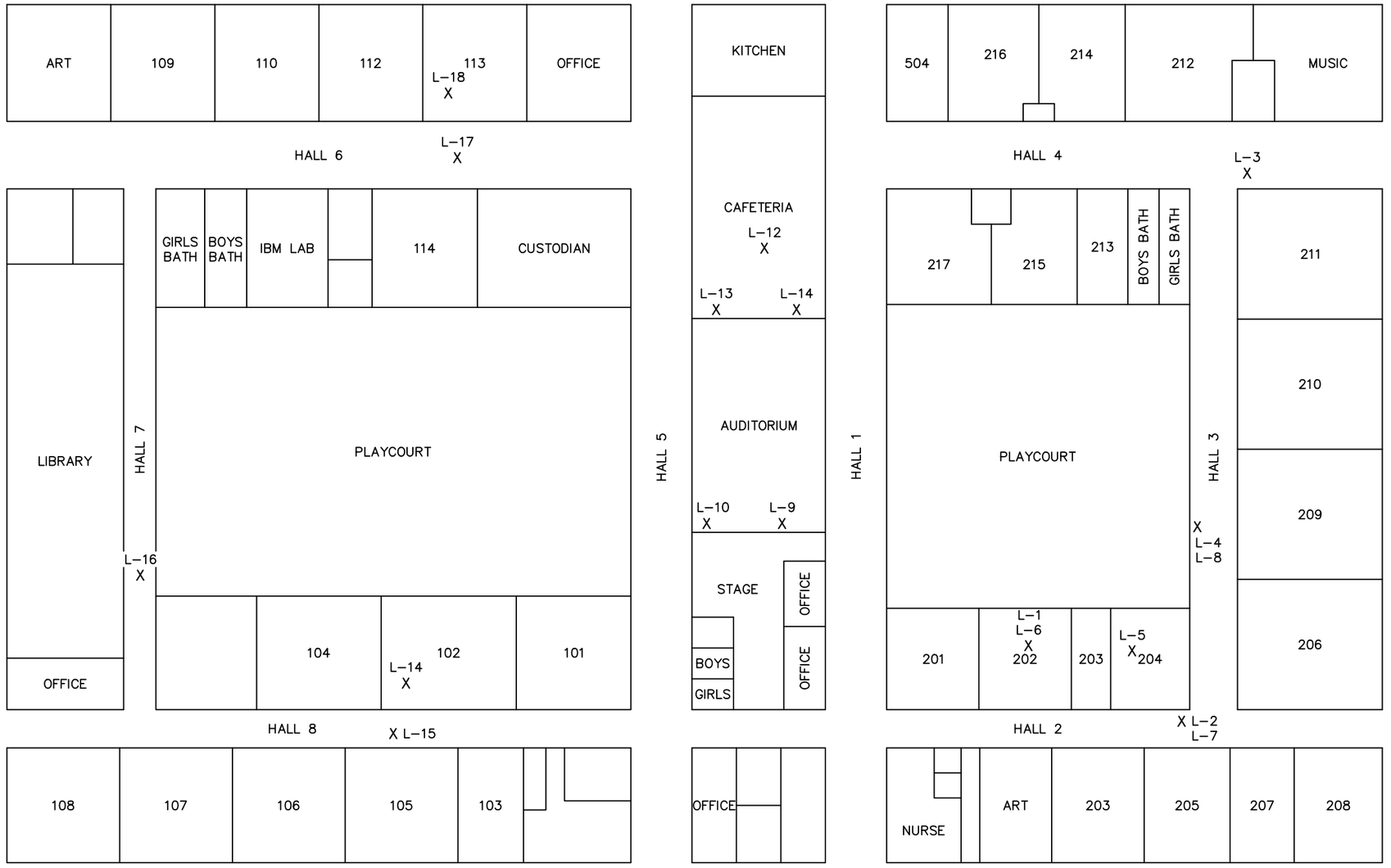
Summary of Air Monitoring by PCM

Pearl B. Larsen Elementary School, USVI

SAMPLING DATE	SAMPLE ID	SAMPLE LOCATION	SAMPLE TYPE	SAMPLE VOLUME (liters)	FIBER CONCEN-TRATION (f/cm^3)
8/14/18	L-1	WEST WING – RM 202	CL	1300	<0.01
8/14/18	L-2	WEST WING – HALLWAY 2	CL	1300	<0.01
8/14/18	L-3	WEST WING – HALLWAY 4	CL	1300	<0.01
8/14/18	L-4	WEST WING – HALLWAY 3	CL	1300	<0.01
8/14/18	L-5	WEST WING –RM 204	CL	1300	<0.01
8/15/18	L-6	WEST WING –RM 202	OWA	3601	<0.01
8/15/18	L-7	WEST WING – HALLWAY 2	OWA	3588	<0.01
8/15/18	L-8	WEST WING – HALLWAY 3	OWA	3575	<0.01
8/15/18	L-9	AUDITORIUM/CAFETERIA	CL	1391	<0.01
8/16/18	L-10	AUDITORIUM/CAFETERIA	CL	1391	<0.01
8/16/18	L-11	AUDITORIUM/CAFETERIA	CL	1378	<0.01
8/16/18	L-12	AUDITORIUM/CAFETERIA	CL	1391	<0.01
8/16/18	L-13	AUDITORIUM/CAFETERIA	CL	1391	<0.01
8/17/18	L-14	EAST WING – RM 102	CL	1300	<0.01
8/17/18	L-15	EAST WING – HALLWAY 8	CL	1313	<0.01
8/17/18	L-16	EAST WING – HALLWAY 7	CL	1300	<0.01
8/17/18	L-17	EAST WING - HALLWAY 6	CL	1313	<0.01
8/17/18	L-18	EAST WING – RM 113	CL	1313	<0.01
8/17/18	L-BL	FIELD BLANK	BL	------	0 f/bl

NOTE:
PCM = phase contrast microscopy.
f/bl = fibers per blank.
f/cm^3 = fibers per cubic centimeter.
BL = field blank
CL = clearance testing.
DUP = duplicate sample.
OWA = outside work area.
IWA = inside work area.

FIGURES



LEGEND:

X PCM SAMPLE LOCATION

APTIM ENVIRONMENTAL & INFRASTRUCTURE, INC.
9143 PHILIPS HIGHWAY, SUITE 400
JACKSONVILLE, FLORIDA 32256
(904) 367-6000 OFFICE
(904) 367-6001 FAX

OFFICE:	DATE:	ACAD FILE:
JACKSONVILLE	9-24-18	7084B20

ASBESTOS FLOOR TILE AND MASTIC ABATEMENT
AUGUST 13 - 17, 2018

CLIENT:	PM:
ST. CROIX SCHOOL DISTRICT ST. CROIX, U.S. VIRGIN ISLANDS	DM

LOCATION:
PEARL B. LARSON ELEMENTARY SCHOOL
ESTATE ST. PETERS
ST. CROIX, U.S. VIRGIN ISLANDS 00820

DESIGNED:	DRAWN:	PROJECT NO.:	FIGURE:
DM	SDJF	631237084	1

AIR MONITORING LOGS

Client Name:	St Croix School District	APTIM Proj/Task No.:	631237084
Site Name:	Pearl Larson Elem	Date Sampled:	8/14/18
Bldg Name:		Technician Name:	D. Mosher
Floor:	West Wing		

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AIR SAMPLES COLLECTED FOR ANALYSIS FOR AIRBORNE FIBERS BY PCM ANALYSIS

Sample Number	Pump ID Number	Sample Type	Sample Description and Location	SAMPLING PERIOD			FLOW RATE L/M			Total Volume	SAMPLE RESULTS	
				Start	Stop	Total Min.	Start	Stop	Avg.		Fiber per Field	NIOSH 7400 f/cm³/Limit of Detection
L-1	1722	CL	West wing Rm 202	12:10	1:50	100	13	13	13	1300	12/100	0.005
L-2	1723	CL	west wing hall	12:12	1:52	100	13	13		1300	5/100	0.002
L-3	1944	CL	west wing hall	12:15	1:55	100	13	13		1300	13/100	0.005
L-4	1594	CL	west wing hall	12:17	1:57	100	13	13		1300	7/100	0.003
L-5	1729	CL	west wing Rm 209	12:20	2:00	100	13	13		1300	5/100	0.002

HEADING KEY

L/m = Liters Per Minute
PCM = Phase Contrast Microscopy
f/cm³ = Fibers per Cubic Centimeter
TLTC = To Loaded To Count

CALIBRATION:

Rotometer _____
Critical Orifice _____
Bubble Meter _____

SAMPLE TYPE KEY

AA = Ambient Air
BB = Background/Baseline
BL = Blank
CL = Clearance
DU = Decontamination Unit
DUP = Duplicate Sample
EB = Exterior of Building
IWA = Inside Work Area
NAE = Negative Air Exhaust
OWA = Outside Work Area/Barrier
RC = Recount
RS = Reference Slide

Microscope Number: Deb S

Signature

Client Name:	St Croix School District	APTIM Proj/Task No.:	631237084
Site Name:	Pearl Larson	Date Sampled:	8/14
Bldg Name/No.:		Technician Name:	D Mosher
Site Location/Rooms:	West Wing		

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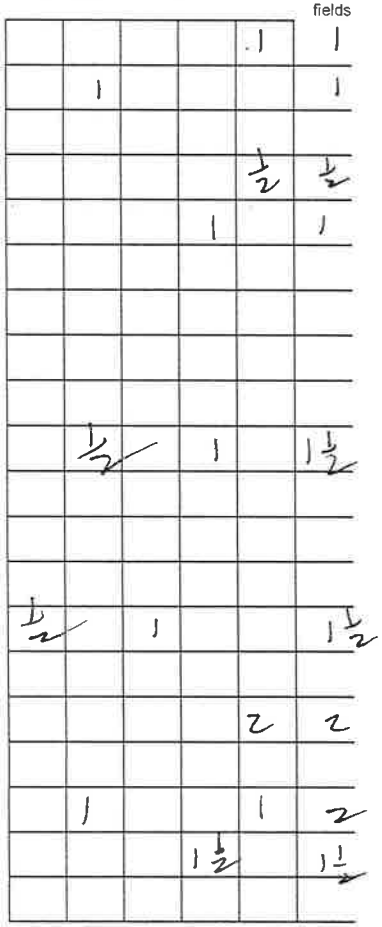
PCM COUNT SHEET

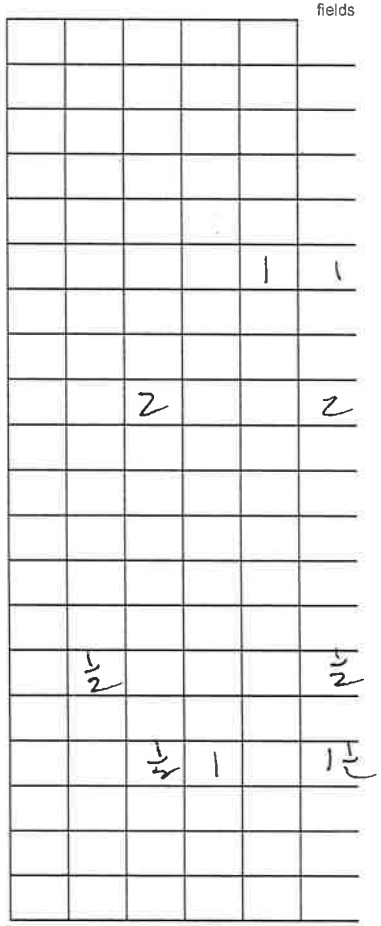
Sample No. C-1



Count for 5 fields
1
1
½
1
1½
1½
2
2
1½

Fibers / Fields: 12/100

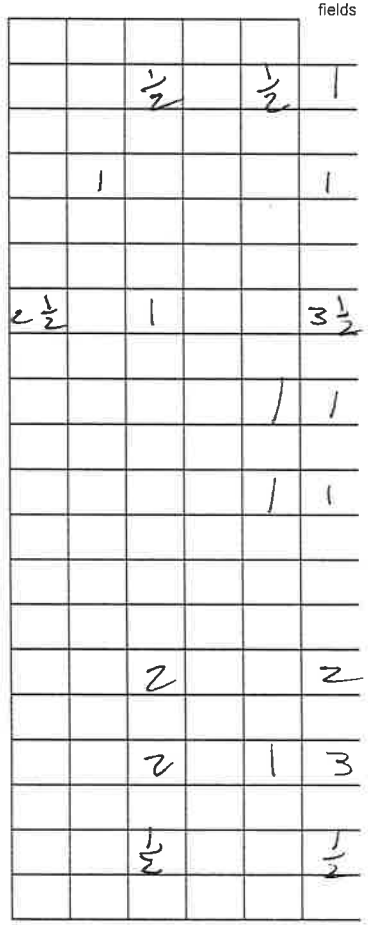
Sample No. C-2



Count for 5 fields
1
2
½
1½

Fibers / Fields: 5/100

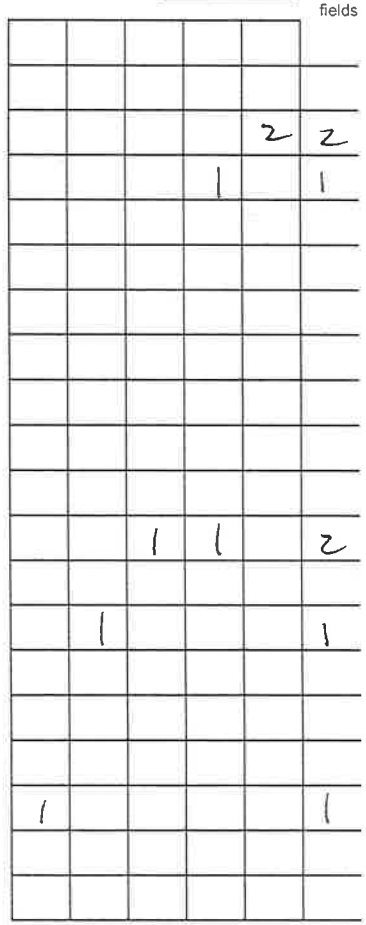
Sample No. C-3



Count for 5 fields
1
1
3½
1
1
1
2
3
½

Fibers / Fields: 13/100

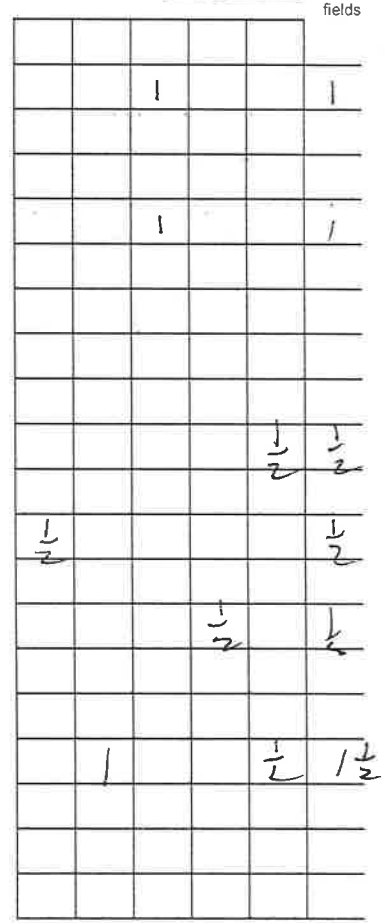
Sample No. C-4



Count for 5 fields
2
1
2
1
1

Fibers / Fields: 7/100

Sample No. C-5



Count for 5 fields
1
1
½
½
½
½
½
½
1½

Fibers / Fields: 5/100

Client Name:		APTIM Proj/Task No.:	631237084
Site Name:	Larsen	Date Sampled:	8/15/18 - 8/16/18
Bldg Name:	Larsen-Westwing	Technician Name:	D. Mosher
Floor:			

APTIM

AIR SAMPLES COLLECTED FOR ANALYSIS FOR AIRBORNE FIBERS BY PCM ANALYSIS

Sample Number	Pump ID Number	Sample Type	Sample Description and Location	SAMPLING PERIOD			FLOW RATE L/M			Total Volume	SAMPLE RESULTS	
				Start	Stop	Total Min.	Start	Stop	Avg.		Fiber per Field	NIOSH 7400 f/cm³/Limit of Detection
8/15 L-6	1944	IWA	westwing-Rm 202	1:35	6:12	277	13	13	13	3601	2.5/100	0.0004
L-7	1729	IWA	westwing - hallway	1:37	6:13	276	13	13	13	3588	3/100	0.0004
L-8	1594	IWA	westwing - hallway	1:39	6:14	275	13	13	13	3575	15/100	0.0020
L-9	1594	CL	auditorium/cafe	9:28	11:15	107	13	13	13	1,391	3.5/100	0.0012
8/16 L-10	1944	CL	↓	9:28	11:15	107	13	13	13	1391	4/100	0.00014
L-11	1723	CL		9:29	11:15	106	13	13	13	1378	3/100	0.0010
L-12	1729	CL		9:29	11:16	107	13	13	13	1391	35/100	0.0012
L-13	1722	CL	↓	9:29	11:16	107	13	13	13	1391	7/100	0.0025

HEADING KEY

L/m = Liters Per Minute
PCM = Phase Contrast Microscopy
f/cm³ = Fibers per Cubic Centimeter
TLTC = To Loaded To Count

CALIBRATION:

Rotometer _____
Critical Orifice _____
Bubble Meter _____

SAMPLE TYPE KEY

AA = Ambient Air
BB = Background/Baseline
BL = Blank
CL = Clearance
DU = Decontamination Unit
DUP = Duplicate Sample
EB = Exterior of Building
IWA = Inside Work Area
NAE = Negative Air Exhaust
OWA = Outside Work Area/Barrier
RC = Recount
RS = Reference Slide

Microscope Number _____

Signature

Client Name:		APTIM Proj/Task No.:	6312370 84
Site Name:	Lassen	Date Sampled:	8/15/18 - 16/18
Bldg Name/No.:		Technician Name:	D. Mask
Site Location/Rooms:			

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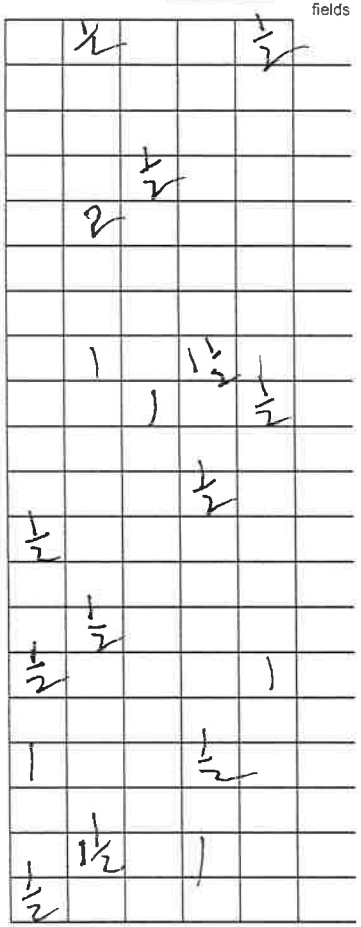
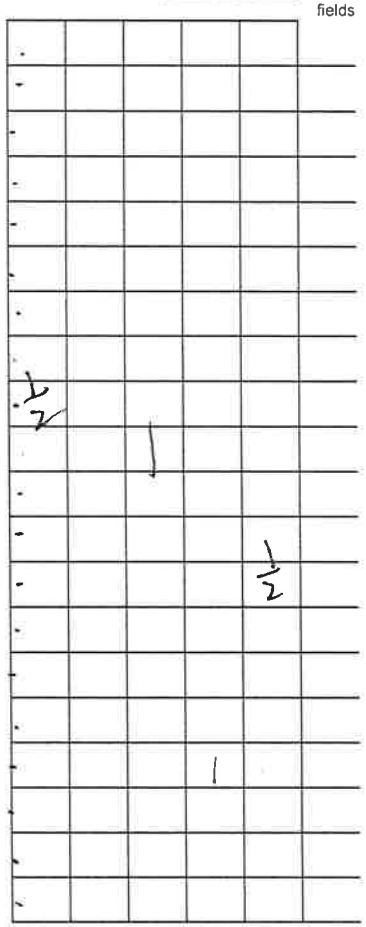
PCM COUNT SHEET

Sample No. L-8 — Count for 5 fields



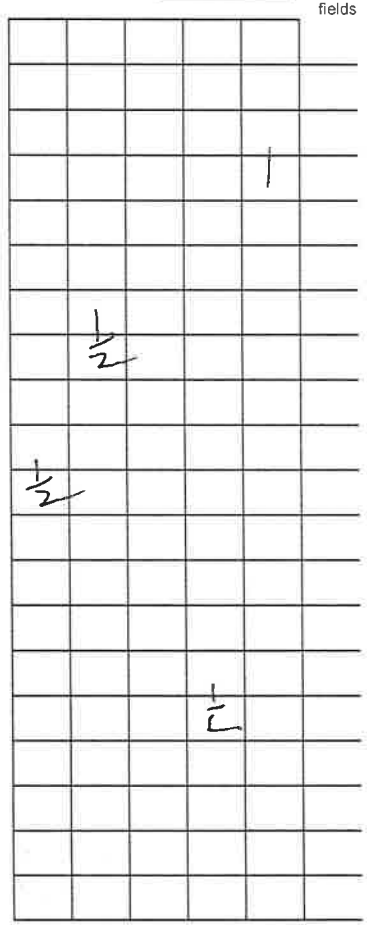
Fibers / Fields: 15/100

Sample No. L-7 — Count for 5 fields



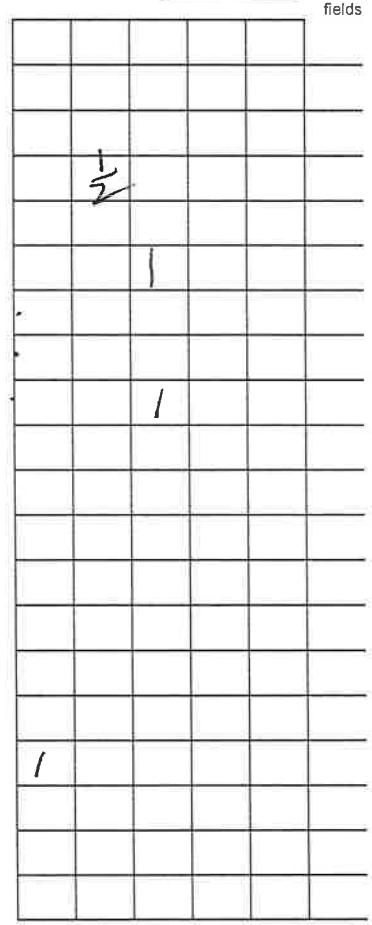
Fibers / Fields: 3/100

Sample No. L-6 — Count for 5 fields



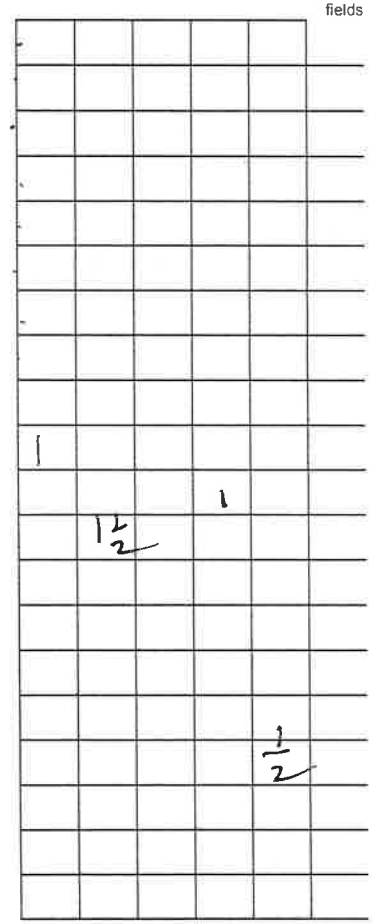
Fibers / Fields: 2.5/100

Sample No. L-9 — Count for 5 fields



Fibers / Fields: 3.5/100

Sample No. L-10 — Count for 5 fields



Fibers / Fields: 4/100

Client Name:		APTIM Proj/Task No.:	63 12370 84
Site Name:		Date Sampled:	8/17/18
Bldg Name:	Larson Elem	Technician Name:	D. Nash
Floor:	East Wing		

APTIM

AIR SAMPLES COLLECTED FOR ANALYSIS FOR AIRBORNE FIBERS BY PCM ANALYSIS

Sample Number	Pump ID Number	Sample Type	Sample Description and Location	SAMPLING PERIOD			FLOW RATE L/M			Total Volume	SAMPLE RESULTS	
				Start	Stop	Total Min.	Start	Stop	Avg.		Fiber per Field	NIOSH 7400 f/cm³ /Limit of Detection
L-14	1722	CL	East Wing Rm102	7:00	8:40	100	13	13	13	1300	1/100	0.0004
L-15	1723	CL	East Wing H-8	7:00	8:41	101	13	13	13	1313	3/100	0.011
L-16	1594	CL	East Wing H-7	7:01	8:41	100	13	13	13	1300	0/100	0.0
L-17	1729	CL	East Wing H-6	7:01	8:42	101	13	13	13	1313	1.5/100	0.0006
L-18	1944	CL	East Wing Rm113	7:01	8:42	101	13	13	13	1313	4/100	0.0015
L-BL		BL									0/100	

HEADING KEY

L/m = Liters Per Minute
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f/cm³ = Fibers per Cubic Centimeter
TLTC = To Loaded To Count

CALIBRATION:

Rotometer _____
Critical Orifice _____
Bubble Meter _____

SAMPLE TYPE KEY

AA = Ambient Air
BB = Background/Baseline
BL = Blank
CL = Clearance
DU = Decontamination Unit
DUP = Duplicate Sample
EB = Exterior of Building
IWA = Inside Work Area
NAE = Negative Air Exhaust
OWA = Outside Work Area/Barrier
RC = Recount
RS = Reference Slide

Microscope Number _____

Signature

Client Name:		APTIM Proj/Task No.:	631237084
Site Name:	Larsen	Date Sampled:	8/16
Bldg Name/No.:		Technician Name:	D. Mosher
Site Location/Rooms:			

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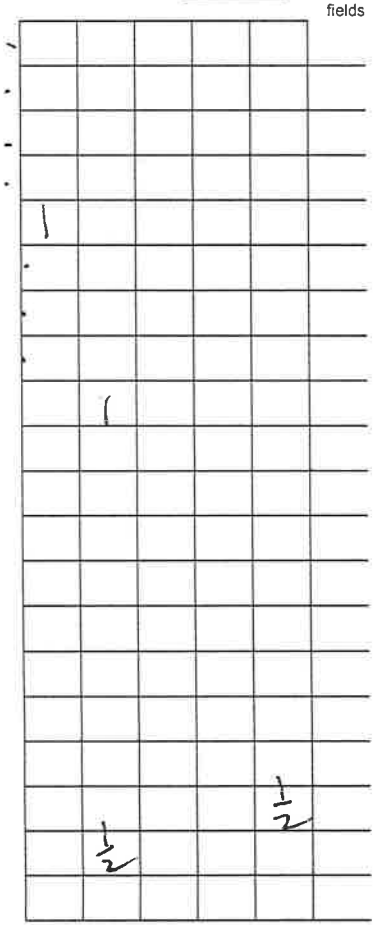
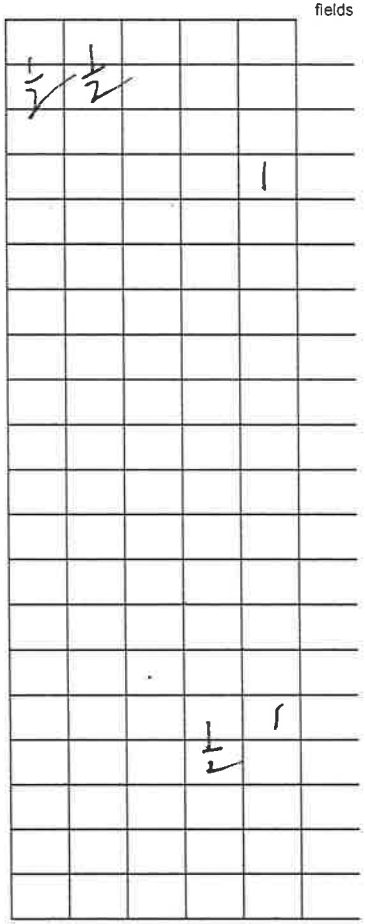
PCM COUNT SHEET

Sample No. L-11 — Count for 5 fields



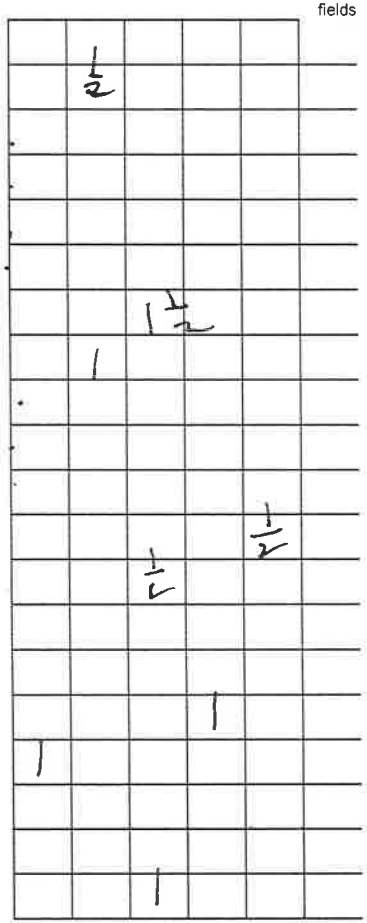
Fibers / Fields: 3/100

Sample No. L-12 — Count for 5 fields



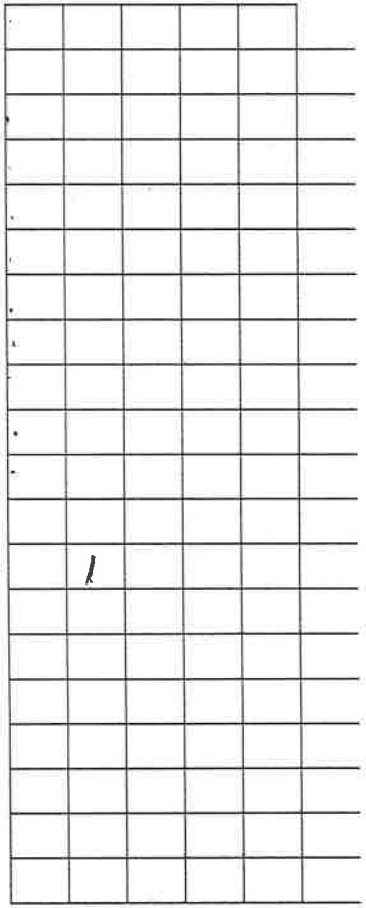
Fibers / Fields: 3.5/100

Sample No. L-13 — Count for 5 fields



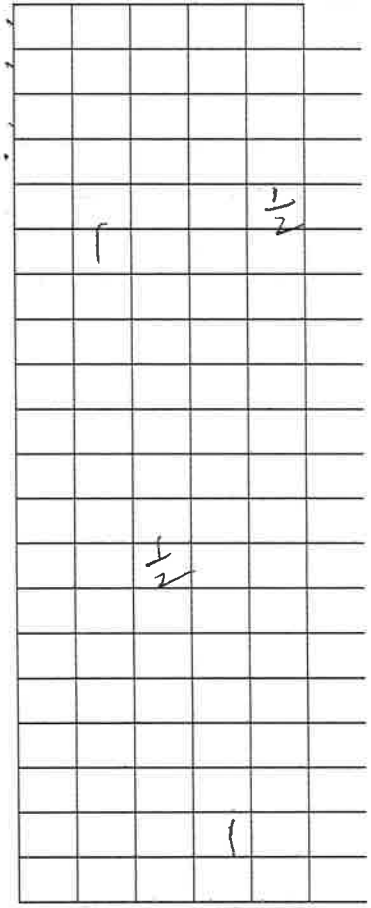
Fibers / Fields: 7/100

Sample No. L-14 — Count for 5 fields



Fibers / Fields: 1/100

Sample No. L-15 — Count for 5 fields



Fibers / Fields: 3/100

Client Name:		APTIM Proj/Task No.:	631237084
Site Name:		Date Sampled:	8/17/18
Bldg Name/No.:	Larsen	Technician Name:	D. Mason
Site Location/Rooms:			

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PCM COUNT SHEET

Sample No. L-16	Sample No. L-17	Sample No. L-18	Sample No. BL	Sample No. _____
Count for 5 fields	Count for 5 fields	Count for 5 fields	Count for 5 fields	Count for 5 fields
	1	½		
	½	1		
		1		
		1		
		½		
Fibers / Fields 0/100	Fibers / Fields 1.5/100	Fibers / Fields 4/100	Fibers / Fields 0/100	Fibers / Fields

CERTIFICATION

M·E·T·A

Mayhew Environmental Training Associates

INCORPORATED

Certificate # MEC99B726E8428407

David Mosher

has on 1/17/2018, in Jacksonville, FL
completed the requirements for asbestos accreditation under Section 206 of TSCA Title II, 15 USC 2646

Asbestos Abatement Contractor/Supervisor Refresher

as approved by FL
and the US EPA under 40 CFR 763 (AHERA)
from 1/17/2018 to 1/17/2018 and passed the associated exam on 1/17/2018
with a score of at least 70%

KANSAS EST. 1985 MAYHEW INC. 1987 ENVIRONMENTAL TRAINING ASSOCIATES SAFETY IN GOD ALONE

Bill Young
Instructor

Thomas Mayhew
President

Training Provider #: FL49-0001221
Course #: 180117ASBSRFL

SSN: XXX-XX-6863
Expiration: 1/17/2019

P.O. Box 786 - Lawrence, KS. 66044 - 800.444.6382
www.metaenvironmental.net

The Deep South Center for Occupational Health & Safety

Certifies that

David W. Mosher

Has Satisfactorily Completed

NIOSH 582-Sampling & Evaluating Airborne Asbestos Dust

August 25-29, 1986

And is Hereby Awarded This Certificate.

Course Instructor

Director, Center for Occupational Health & Safety

Dean, School of Public Health