



ENVIRONMENTAL CONSULTING
 228 Moore Street • Philadelphia, Pennsylvania 19148
 Phone 215-755-2305 • Fax 215-755-2405
 www.gosynertech.com

Project: Benjamin Franklin HS Date: 10-9-19
 Project Number: 010-4507 Rotometer No.: HVR 1 LVR
 Laboratory: IATL Analysis: TEW Phila. Requirements: YES NO
AIR SAMPLE LOG & CHAIN OF CUSTODY

No.	SAMPLES Location	Code	TIME			CALIBRATION			ANALYTICAL	
			On	Off	Total	Start	Finish	Liers	Laboratory # Fibers/Fields	Results
AT-10-01	Rotc Room	1A	6:56 PM	9:56 PM	180	10	10	1800	8895110	
	18 North									
AT-10-02	Rotc Room	1A	6:56 PM	9:56 PM	180	10	10	1800	8895111	
	18 South									
AT-10-03	Rotc Room	1A	6:56 PM	9:56 PM	180	10	10	1800	8895112	
	West									
AT-10-04	Rotc Room	1N	6:56 PM	9:56 PM	180	10	10	1800	8895113	
	Out side									
AT-10-05	Rotc Room	1N	6:56 PM	9:56 PM	180	10	10	1800	8895114	
	New Bathroom									
AT-10-06	Rotc Room	1N	6:56 PM	9:56 PM	180	10	10	1800	8895115	
	Out side									
AT-10-07	Rotc Room	1N	6:56 PM	9:56 PM	180	10	10	1800	8895116	
	New Bathroom									
AT-10-08	Rotc Room	1N	6:56 PM	9:56 PM	180	10	10	1800	8895117	
	Field									
	DO NOT ANALYZE									

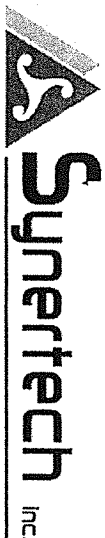
Sampling Codes

- 1 Diagnostic
 - 2 Preliminary
 - 3 Clearance/Final
 - 4 Personnel Work Area
 - 5 Environmental Work Area
 - 6 Personnel Clean Area
 - 7 Environmental Clean Area
- A Aggressive
 - N Normal
 - E Excursion
 - I TWA
 - R Representative

Turnaround Time (TAT): Immediate 6 Hour 24 Hour 48 Hour Other

6 Hour TAT Contact: Beverly Bryson at: DH
 Samples Collected By: Beverly Bryson Date: 10-9-19
 Transmitted to Lab By: Cathy Date: 10-29-19
 Received in Lab By: _____ Date: _____
 Samples Analyzed By: SS 10/10/19 Date: 10/9/19

Prep: DH 10/9/19



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 Project Number: 010-4507 Rotometer No.: HVR 1 LVR
 Laboratory: IATL Analysis: TEW Phila. Requirements: YES NO

AIR SAMPLE LOG & CHAIN OF CUSTODY

No.	SAMPLES Location	Code	On	TIME			CALIBRATION			ANALYTICAL	
				Off	Total	Start	Finish	Liters	Laboratory # Fibers/Fields	Results	
1	AT 10-09 QC Blank DOWT analysis									0050118	
2											
3											
4											
5											
6											
7											

Sampling Codes

- 1 Diagnostic
- 2 Preliminary
- 3 Clearance/Final
- 4 Personnel Work Area
- 5 Environmental Work Area
- 6 Personnel Clean Area
- 7 Environmental Clean Area

- A Aggressive
- N Normal
- E Excursion
- I TWA
- R Representative

Turnaround Time (TAT): Immediate 6 Hour 24 Hour 48 Hour Other

6 Hour TAT Contact: Bernie Bryson at: 1019-9-19

Samples Collected By: Bernie Bryson Date: 10-9-19

Transmitted to Lab By: Cuddy Date: 10-9-19

Received in Lab By: _____ Date: _____

Samples Analyzed By: ATL-BY DH

PRELIMINARY RESULTS
Airborne Asbestos Analysis
TEM AHERA

Client: Synertech Inc.
228 Moore Street
Philadelphia, PA 19148

Client No.: SYN177

Batch No.: 601519
Project: Benjamin Franklin HS
Project No.: 010-4507
Philly Regs: Y
Turn-Around Time: 6 Hour Rush

Client Contacts:	Laboratory Contacts:
Contacts: _____	Contacts: Frank E. Ehrenfeld III
Phone: _____	Phone: (856) 231-9449
Fax: _____	Fax: (856) 231-9818
Cell/Pager: _____	Cell/Pager: (609) 929-4211
E-Mail: _____	E-Mail: frankehrenfeld@iatl.com

Chain of Custody:			
Samples Taken in Field:	<u>Client</u>	Date: <u>10/9/2019</u>	Time: _____
Samples Rec'd at Laboratory:	<u>DH</u>	Date: <u>10/9/2019</u>	Time: _____
Samples Analyzed:	<u>J. Jeon</u>	Date: <u>10/10/2019</u>	Time: _____
Preliminary Results Faxed:	_____	Date: _____	Time: _____
Preliminary Results E-Mail:	_____	Date: _____	Time: _____

Summary Data
Transmission Electron Microscopy
AHERA 40CFR 763

Client Sample ID #	IATL Sample ID #	Volume (L)	Comments	Results s/mm ²	Results s/cc
ATS-1009-01	6895110	1800	None Detected	< 19.2	< 0.0041
ATS-1009-02	6895111	1800	None Detected	< 19.2	< 0.0041
ATS-1009-03	6895112	1800	None Detected	< 19.2	< 0.0041
ATS-1009-04	6895113	1800	None Detected	< 19.2	< 0.0041
ATS-1009-05	6895114	1800	None Detected	< 19.2	< 0.0041
ATS-1009-06	6895115	1800	None Detected	< 19.2	< 0.0041

AHERA Clearance Criteria is **70 s/mm²**. Average (s/mm²) = **19.2**
Phila. Regulations Clearance Criteria is **0.00554 s/cc** based on 5 samples Geo = **0.0041**
Z Test Results (see attached, if applicable)

Grid Box #: 1750

Instrument (I, II, III) II

These preliminary results are issued by IATL to expedite procedures by the clients based upon the above data. IATL assumes that all of the sampling methods and data upon which these results are based, has been accurately supplied by the client. These results may not have been reviewed by the Laboratory Director. Final Certificates of Analysis will follow these preliminary results. The signed COAs are to be considered the official results.

Client Name: Synertech Inc. **Analysis Date:** 10/10/19 **IATL Sample #:** 6895110
Client Project #: 010-4507 **Client Sample #:** ATS-1009-01
Sample Type: AHERA -Philly Regulations **IATL Grid Box #:** 1750
QC Submittal R **Grid Archive ID #:** 0608

Electron Microscope ID:	Filter Dia. (mm): <u>25</u>	Magnification: <u>20,000X</u>
	Effective Area (mm): <u>385</u>	
II Hitachi H600AB, 542-47-7	Filter Type: <u>MCE</u>	Accelerating Voltage: <u>100KeV</u>
EVEX	Filter Pore Size (µm): <u>0.45</u>	

Grid Opening: <u>0.115</u> mm	Volume of Air Sampled: <u>1800</u> Liters
Grid opening Area: <u>0.013</u> mm ²	
Grid Openings Read/Required: <u>4</u> / <u>4</u>	Analytical Sensitivity: <u>19.2</u> mm ²
Total Area Analyzed: <u>0.0520</u> mm ²	Minimum Detection Limit: <u>0.0041</u> s/cc

Total Asbestos Structures: <u>NSD</u>	Non-Asbestos Structures: <u>NSD</u>
0.5µm - 5.0µm: <u>NSD</u>	
>5.0µm: _____	
Asbestos: <u>< 19.2</u> s/mm ²	Non-Asbestos: <u>< 19.2</u> s/mm ²
Asbestos: <u>< 0.0041</u> s/cc	Non-Asbestos: <u>< 0.0041</u> s/cc

Analysis Data:

Grid Opening ID	Structure Number	Structure Type F/B/C/M	¹ Length 0.5 -5.0 µm	² Length > 5.0 µm	* Chrysotile	**Amphibole	***Non-Asbestos	Micrograph / EDS ID
O6	C2	NSD						
	C3	NSD						
O8	E3	NSD						
	E4	NSD						
Total:	NSD	NSD	0	0	0	0	0	

* Must confirm by Morphology, SAED, and EDXA for each suspect asbestos fiber
Record visible prominent Chrysotile DP reflections (002 ,004, 110, 130, 220, 200)
** Define Amphibole (DP obtained Y/N). Print-out EDS and attach.
*** Characterize by EDS
1, 2 Record Structure Length & Width (µm) SEE REVERSE: FIBER ORIENTATION MAP

Prep Quality:	
Dissolution	<u>Good</u>
Carbon Film	<u>Good</u>
Loading	<u>2%</u>

Comments: _____ Analyzed By: J. Jeon
_____ Reviewed By: _____

Client Name: Synertech Inc.

Analysis Date:

IATL Sample #: 6895111

Client Project #: 010-4507

10/10/19

Client Sample #: ATS-1009-02

Sample Type: **AHERA -Philly Regulations**

IATL Grid Box #: 1750

QC Submittal

Grid Archive ID #: **O10P1**

Electron Microscope ID:	Filter Dia. (mm): <u>25</u>	Magnification:	<u>20,000X</u>
II Hitachi H600AB, 542-47-7	Effective Area (mm): <u>385</u>	Accelerating Voltage:	<u>100KeV</u>
EVEX	Filter Type: <u>MCE</u>		
	Filter Pore Size (µm): <u>0.45</u>		

Grid Opening: <u>0.115</u> mm	Volume of Air Sampled: <u>1800</u> Liters
Grid opening Area: <u>0.013</u> mm ²	Analytical Sensitivity: <u>19.2</u> mm ²
Grid Openings Read/Required: <u>4</u> / <u>4</u>	Minimum Detection Limit: <u>0.0041</u> s/cc
Total Area Analyzed: <u>0.0520</u> mm ²	

Total Asbestos Structures: <u>NSD</u>	Non-Asbestos Structures: <u>NSD</u>
0.5µm - 5.0µm: <u>NSD</u>	
>5.0µm: _____	
Asbestos: <u>< 19.2</u> s/mm ²	Non-Asbestos: <u>< 19.2</u> s/mm ²
Asbestos: <u>< 0.0041</u> s/cc	Non-Asbestos: <u>< 0.0041</u> s/cc

Analysis Data:

Grid Opening ID	Structure Number	Structure Type F/B/C/M	¹ Length 0.5 - 5.0 µm	² Length > 5.0 µm	* Chrysotile	**Amphibole	***Non-Asbestos	Micrograph / EDS ID
O10	E5	NSD						
	E6	NSD						
P1	D4	NSD						
	D5	NSD						
Total:	NSD	NSD	0	0	0	0	0	

- * Must confirm by Morphology, SAED, and EDXA for each suspect asbestos fiber
Record visible prominent Chrysotile DP reflections (002 ,004, 110, 130, 220, 200)
- ** Define Amphibole (DP obtained Y/N). Print-out EDS and attach.
- *** Characterize by EDS
- 1, 2 Record Structure Length & Width (µm) SEE REVERSE: FIBER ORIENTATION MAP

Prep Quality:	
Dissolution	<u>Good</u>
Carbon Film	<u>Good</u>
Loading	<u>2%</u>

Comments: _____

Analyzed By: J. Jeon
Reviewed By: _____

Client Name: Synertech Inc.
 Client Project #: 010-4507
 Sample Type: **AHERA -Philly Regulations**
 QC Submittal

Analysis Date:
10/10/19

IATL Sample #: 6895112
 Client Sample #: ATS-1009-03
 IATL Grid Box #: 1750
 Grid Archive ID #: P3P5

Electron Microscope ID: II Hitachi H600AB, 542-47-7 EVEX
 Filter Dia. (mm): 25
 Effective Area (mm): 385
 Filter Type: MCE
 Filter Pore Size (µm): 0.45
 Magnification: 20,000X
 Accelerating Voltage: 100KeV

Grid Opening: 0.115 mm
 Grid opening Area: 0.013 mm²
 Grid Openings Read/Required: 4 / 4
 Total Area Analyzed: 0.0520 mm²
 Volume of Air Sampled: 1800 Liters
 Analytical Sensitivity: 19.2 mm²
 Minimum Detection Limit: 0.0041 s/cc

Total Asbestos Structures: NSD
 0.5µm - 5.0µm: NSD
 >5.0µm: _____
 Asbestos: < 19.2 s/mm²
 Asbestos: < 0.0041 s/cc
 Non-Asbestos Structures: NSD
 Non-Asbestos: < 19.2 s/mm²
 Non-Asbestos: < 0.0041 s/cc

Analysis Data:

Grid Opening ID	Structure Number	Structure Type F/B/C/M	¹ Length 0.5 -5.0 µm	² Length > 5.0 µm	* Chrysotile	** Amphibole	***Non-Asbestos	Micrograph / EDS ID
P3	D3	NSD						
	D4	NSD						
P5	E4	NSD						
	E5	NSD						
Total:	NSD	NSD	0	0	0	0	0	

* Must confirm by Morphology, SAED, and EDXA for each suspect asbestos fiber
 Record visible prominent Chrysotile DP reflections (002 .004, 110, 130, 220, 200)
 ** Define Amphibole (DP obtained Y/N). Print-out EDS and attach.
 *** Characterize by EDS
 1, 2 Record Structure Length & Width (µm) SEE REVERSE: FIBER ORIENTATION MAP

Prep Quality:	
Dissolution	<u>Good</u>
Carbon Film	<u>Good</u>
Loading	<u>2%</u>

Comments: _____
 Analyzed By: J. Jeon
 Reviewed By: _____

Client Name: Synertech Inc.
 Client Project #: 010-4507
 Sample Type: **AHERA -Philly Regulations**
 QC Submittal

Analysis Date:
10/10/19

IATL Sample #: 6895113
 Client Sample #: ATS-1009-04
 IATL Grid Box #: 1750
 Grid Archive ID #: P7P9

Electron Microscope ID: II Hitachi H600AB, 542-47-7 EVEX
 Filter Dia. (mm): 25
 Effective Area (mm): 385
 Filter Type: MCE
 Filter Pore Size (µm): 0.45
 Magnification: 20,000X
 Accelerating Voltage: 100KeV

Grid Opening: 0.115 mm
 Grid opening Area: 0.013 mm²
 Grid Openings Read/Required: 4 / 4
 Total Area Analyzed: 0.0520 mm²
 Volume of Air Sampled: 1800 Liters
 Analytical Sensitivity: 19.2 mm²
 Minimum Detection Limit: 0.0041 s/cc

Total Asbestos Structures: NSD
 0.5µm - 5.0µm: NSD
 >5.0µm: _____
 Asbestos: < 19.2 s/mm²
 Asbestos: < 0.0041 s/cc
 Non-Asbestos Structures: NSD
 Non-Asbestos: < 19.2 s/mm²
 Non-Asbestos: < 0.0041 s/cc

Analysis Data:

Grid Opening ID	Structure Number	Structure Type F/B/C/M	¹ Length 0.5 -5.0 µm	² Length > 5.0 µm	* Chrysotile	**Amphibole	***Non-Asbestos	Micrograph / EDS ID
P7	C4	NSD						
	C5	NSD						
P9	F3	NSD						
	F4	NSD						
Total:	NSD	NSD	0	0	0	0	0	

* Must confirm by Morphology, SAED, and EDXA for each suspect asbestos fiber
 Record visible prominent Chrysotile DP reflections (002 ,004, 110, 130, 220, 200)
 ** Define Amphibole (DP obtained Y/N). Print-out EDS and attach.
 *** Characterize by EDS
 1, 2 Record Structure Length & Width (µm) SEE REVERSE: FIBER ORIENTATION MAP

Prep Quality:	
Dissolution	<u>Good</u>
Carbon Film	<u>Good</u>
Loading	<u>2%</u>

Comments: _____
 Analyzed By: J. Jeon
 Reviewed By: _____

Client Name: Synertech Inc.

Analysis Date: 10/10/19

IATL Sample #: 6895114

Client Project #: 010-4507

Client Sample #: ATS-1009-05

Sample Type: AHERA -Philly Regulations

IATL Grid Box #: 1750

QC Submittal

Grid Archive ID #: Q2Q4

Electron Microscope ID:	Filter Dia. (mm): <u>25</u>	Magnification:	<u>20,000X</u>
	Effective Area (mm): <u>385</u>		
II Hitachi H600AB, 542-47-7 EVEX	Filter Type: <u>MCE</u>	Accelerating Voltage:	<u>100KeV</u>
	Filter Pore Size (µm): <u>0.45</u>		

Grid Opening: <u>0.115</u> mm	Volume of Air Sampled: <u>1800</u> Liters
Grid opening Area: <u>0.013</u> mm ²	
Grid Openings Read/Required: <u>4</u> / <u>4</u>	Analytical Sensitivity: <u>19.2</u> mm ²
Total Area Analyzed: <u>0.0520</u> mm ²	Minimum Detection Limit: <u>0.0041</u> s/cc

Total Asbestos Structures: <u>NSD</u>	Non-Asbestos Structures: <u>NSD</u>
0.5µm - 5.0µm: <u>NSD</u>	
>5.0µm: _____	
Asbestos: <u>< 19.2</u> s/mm ²	Non-Asbestos: <u>< 19.2</u> s/mm ²
Asbestos: <u>< 0.0041</u> s/cc	Non-Asbestos: <u>< 0.0041</u> s/cc

Analysis Data:

Grid Opening ID	Structure Number	Structure Type F/B/C/M	¹ Length 0.5 -5.0 µm	² Length > 5.0 µm	* Chrysotile	**Amphibole	***Non-Asbestos	Micrograph / EDS ID
Q2	A3	NSD						
	A4	NSD						
Q4	C4	NSD						
	C5	NSD						
Total:	NSD	NSD	0	0	0	0	0	

- * Must confirm by Morphology, SAED, and EDXA for each suspect asbestos fiber
Record visible prominent Chrysotile DP reflections (002 ,004, 110, 130, 220, 200)
- ** Define Amphibole (DP obtained Y/N). Print-out EDS and attach.
- *** Characterize by EDS
- 1, 2 Record Structure Length & Width (µm) SEE REVERSE: FIBER ORIENTATION MAP

Prep Quality:	
Dissolution	<u>Good</u>
Carbon Film	<u>Good</u>
Loading	<u>2%</u>

Comments: _____

Analyzed By: J. Jeon
Reviewed By: _____

Client Name: Synertech Inc.
 Client Project #: 010-4507
 Sample Type: **AHERA -Philly Regulations**
 QC Submittal

Analysis Date:
10/10/19

IATL Sample #: 6895115
 Client Sample #: ATS-1009-06
 IATL Grid Box #: 1750
 Grid Archive ID #: Q6Q8

Electron Microscope ID:	Filter Dia. (mm): <u>25</u>	Magnification: <u>20,000X</u>
II Hitachi H600AB, 542-47-7 EVEX	Effective Area (mm): <u>385</u>	Accelerating Voltage: <u>100KeV</u>
	Filter Type: <u>MCE</u>	
	Filter Pore Size (µm): <u>0.45</u>	

Grid Opening: <u>0.115</u> mm	Volume of Air Sampled: <u>1800</u> Liters
Grid opening Area: <u>0.013</u> mm ²	Analytical Sensitivity: <u>19.2</u> mm ²
Grid Openings Read/Required: <u>4</u> / <u>4</u>	Minimum Detection Limit: <u>0.0041</u> s/cc
Total Area Analyzed: <u>0.0520</u> mm ²	

Total Asbestos Structures: <u>NSD</u>	Non-Asbestos Structures: <u>NSD</u>
0.5µm - 5.0µm: <u>NSD</u>	
>5.0µm: _____	
Asbestos: <u>< 19.2</u> s/mm ²	Non-Asbestos: <u>< 19.2</u> s/mm ²
Asbestos: <u>< 0.0041</u> s/cc	Non-Asbestos: <u>< 0.0041</u> s/cc

Analysis Data:

Grid Opening ID	Structure Number	Structure Type F/B/C/M	¹ Length 0.5 -5.0 µm	² Length > 5.0 µm	* Chrysotile	**Amphibole	***Non-Asbestos	Micrograph / EDS ID
Q6	D4	NSD						
	D5	NSD						
Q8	E4	NSD						
	E5	NSD						
Total:	NSD	NSD	0	0	0	0	0	

* Must confirm by Morphology, SAED, and EDXA for each suspect asbestos fiber
 Record visible prominent Chrysotile DP reflections (002 ,004, 110, 130, 220, 200)
 ** Define Amphibole (DP obtained Y/N). Print-out EDS and attach.
 *** Characterize by EDS
 1, 2 Record Structure Length & Width (µm) SEE REVERSE: FIBER ORIENTATION MAP

Prep Quality:	
Dissolution	<u>Good</u>
Carbon Film	<u>Good</u>
Loading	<u>2%</u>

Comments: _____

Analyzed By: J. Jeon
 Reviewed By: _____