



EMSL Analytical, Inc.

29 North Plains Highway, Unit # 4 Wallingford, CT 06492

Tel/Fax: (203) 284-5948 / (203) 284-5978

<http://www.EMSL.com> / wallingfordlab@emsl.com

EMSL Order: 241903989

Customer ID: TIGH62

Customer PO:

Project ID:

Attention: Meredith Febbraio

Tighe & Bond

213 Court Street

Suite 1100

Middletown, CT 06457

Phone: (860) 704-4760

Fax: (860) 704-4775

Received Date: 07/23/2019 5:00 PM

Analysis Date: 07/24/2019

Collected Date: 07/22/2019

Project: 28-2087-033U/ SMTF, STAMFORD HIGH SCHOOL, STAMFORD HIGH SCHOOL

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
0722BH-13A 241903989-0001	Original building roof-south - fiberboard insulation-brown	Brown Fibrous Homogeneous	65% Cellulose	25% Perlite 10% Non-fibrous (Other)	None Detected
0722BH-13B 241903989-0002	Original building roof-north - fiberboard insulation-brown	Yellow Non-Fibrous Homogeneous	65% Cellulose	20% Perlite 15% Non-fibrous (Other)	None Detected
0722BH-13C 241903989-0003	Original building roof-upper at slate roof - fiberboard insulation-brown	Tan Fibrous Homogeneous	75% Cellulose	25% Non-fibrous (Other)	None Detected
0722BH-14A 241903989-0004	Original building roof-south - iso-board insulation-yellow	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
0722BH-14B 241903989-0005	Original building roof-north - iso-board insulation-yellow	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
0722BH-15A 241903989-0006	Original building roof-south - tar on concrete deck-black	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
0722BH-15B 241903989-0007	Original building roof-north - tar on concrete deck-black	Black Non-Fibrous Homogeneous		2% Quartz 98% Non-fibrous (Other)	None Detected
0722BH-15C 241903989-0008	Original building roof-upper at slate roof - tar on concrete deck-black	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
0722BH-16A 241903989-0009	Original building roof-south - top layer modified roofing-black	Black Fibrous Homogeneous	25% Glass	75% Non-fibrous (Other)	None Detected
0722BH-16B 241903989-0010	Original building roof-north - top layer modified roofing-black	Black Non-Fibrous Homogeneous	20% Glass	80% Non-fibrous (Other)	None Detected
0722BH-16C 241903989-0011	Original building roof-upper at slate roof - top layer modified roofing-black	Black Non-Fibrous Homogeneous		2% Quartz 98% Non-fibrous (Other)	None Detected
0722BH-17A 241903989-0012	Original building roof-south - wall modified roofing-black	Black Fibrous Homogeneous	10% Glass	10% Quartz 80% Non-fibrous (Other)	None Detected
0722BH-17B 241903989-0013	Original building roof-upper at slate roof - wall modified roofing-black	Black Fibrous Homogeneous	10% Glass	10% Quartz 80% Non-fibrous (Other)	None Detected
0722BH-17C 241903989-0014	Original building roof-north - curb modified roofing-black	Black Non-Fibrous Homogeneous	2% Cellulose	3% Quartz 95% Non-fibrous (Other)	None Detected
0722BH-18A 241903989-0015	Original building roof-south - wall tar on concrete-black	Black Non-Fibrous Homogeneous	5% Cellulose	3% Quartz 77% Non-fibrous (Other)	15% Chrysotile

Initial report from: 07/24/2019 18:06:36



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Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
0722BH-18B 241903989-0016	Original building roof-upper at slate roof - wall tar on concrete-black				Positive Stop (Not Analyzed)
0722BH-18C 241903989-0017	Original building roof-north - curb tar on concrete-black				Positive Stop (Not Analyzed)
0722BH-19A 241903989-0018	Original building roof-north - tar on older exhaust-black	Black Fibrous Homogeneous	50% Cellulose	50% Non-fibrous (Other)	None Detected
0722BH-19B 241903989-0019	Original building roof-south - tar on older exhaust-black	Black Fibrous Homogeneous	35% Cellulose	65% Non-fibrous (Other)	None Detected
0722BH-20A 241903989-0020	Original building roof-north - pitch pocket tar-black	Black Fibrous Homogeneous	25% Cellulose	75% Non-fibrous (Other)	None Detected
0722BH-20B 241903989-0021	Original building roof-south - pitch pocket tar-black	Black Non-Fibrous Homogeneous	25% Cellulose	75% Non-fibrous (Other)	None Detected
0722BH-21A 241903989-0022	Original building roof-north - textured concrete wall-tan/gray	Gray Non-Fibrous Homogeneous		10% Quartz 90% Non-fibrous (Other)	None Detected
0722BH-21B 241903989-0023	Original building roof-south - textured concrete wall-tan/gray	Gray Non-Fibrous Homogeneous		10% Quartz 90% Non-fibrous (Other)	None Detected
0722BH-22A 241903989-0024	Original building roof-north - paint on roof cover-silver	Silver Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
0722BH-22B 241903989-0025	Original building roof-north - paint on exhaust-silver	Silver Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
0722BH-23A 241903989-0026	Original building roof-slate roof - slate shingles-gray	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
0722BH-23B 241903989-0027	Original building roof-slate roof - slate shingles-gray	Gray Non-Fibrous Homogeneous	2% Cellulose	98% Non-fibrous (Other)	None Detected
0722BH-24A 241903989-0028	Original building roof-slate roof - paper under slate-black	Black Fibrous Homogeneous	50% Cellulose	50% Non-fibrous (Other)	None Detected
0722BH-24B 241903989-0029	Original building roof-slate roof - paper under slate-black	Brown/Black Fibrous Homogeneous	80% Cellulose	20% Non-fibrous (Other)	None Detected
0722BH-25A 241903989-0030	Original building roof-slate roof - lightweight concrete-white	Gray Non-Fibrous Homogeneous		10% Quartz 88% Non-fibrous (Other)	2% Chrysotile
0722BH-25B 241903989-0031	Original building roof-slate roof - lightweight concrete-white				Positive Stop (Not Analyzed)
0722BH-26A 241903989-0032	Original building roof-slate roof - tar below bottom late line-black	Black Fibrous Homogeneous	5% Cellulose	5% Quartz 78% Non-fibrous (Other)	12% Chrysotile

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Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
0722BH-26B 241903989-0033	Original building roof-slate roof - tar below bottom late line-black				Positive Stop (Not Analyzed)
0722BH-27A 241903989-0034	Original building roof-slate roof - slate seam tar-black	Black Non-Fibrous Homogeneous		90% Non-fibrous (Other)	10% Chrysotile
0722BH-27B 241903989-0035	Original building roof-slate roof - slate seam tar-black				Positive Stop (Not Analyzed)

Analyst(s) _____

Leslie Tetrick (15)

Quetcy Castro Romero (15)

Almedina Hodzic, Asbestos Laboratory Manager
or Other Approved Signatory

EMSL maintains liability limited to cost of analysis. The above analyses were performed in general compliance with Appendix E to Subpart E of 40 CFR (previously EPA 600/M4-82-020 "Interim Method"), but augmented with procedures outlined in the 1993 ("final") version of the method. This report relates only to the samples reported above, and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. Interpretation and use of test results are the responsibility of the client. All samples received in acceptable condition unless otherwise noted. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST or any agency of the federal government. EMSL recommends gravimetric reduction for all non-friable organically bound materials prior to analysis. Estimation of uncertainty is available on request.

Samples analyzed by EMSL Analytical, Inc. Wallingford, CT NVLAP Lab Code 200700-0,

Initial report from: 07/24/2019 18:06:36



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Attention: Meredith Febbraio Tighe & Bond 213 Court Street Suite 1100 Middletown, CT 06457	Phone: (860) 704-4760 Fax: (860) 704-4775 Received Date: 07/23/2019 5:00 PM Analysis Date: 07/25/2019 Collected Date: 07/22/2019
Project: 28-2087-033U/ SMTF, STAMFORD HIGH SCHOOL, STAMFORD HIGH SCHOOL	

Test Report: Asbestos Analysis of Non-Friable Organically Bound Materials by TEM via EPA/600/R-93/116 Section 2.5.5.1

Sample ID	Description	Appearance	% Matrix Material	% Non-Asbestos Fibers	Asbestos Types
0722BH-15A 241903989-0006	Original building roof-south - tar on concrete deck-black	Black Fibrous Homogeneous	100.0 Other	None	No Asbestos Detected
0722BH-16A 241903989-0009	Original building roof-south - top layer modified roofing-black	Black Fibrous Homogeneous	100.0 Other	None	No Asbestos Detected
0722BH-17A 241903989-0012	Original building roof-south - wall modified roofing-black	Black Fibrous Homogeneous	99.74 Other	None	0.26% Chrysotile
0722BH-19A 241903989-0018	Original building roof-north - tar on older exhaust-black	Black Fibrous Homogeneous	99.75 Other	None	0.25% Chrysotile
0722BH-20A 241903989-0020	Original building roof-north - pitch pocket tar-black	Black Fibrous Homogeneous	100.0 Other	None	No Asbestos Detected

Analyst(s)

Almedina Hodzic (5)

Almedina Hodzic, Asbestos Laboratory
Manager
or other approved signatory

This laboratory is not responsible for % asbestos in total sample when the residue only is submitted for analysis. The above report relates only to the items tested. This report may not be reproduced, except in full, without written approval by EMSL Analytical, Inc. Samples received in good condition unless otherwise noted. Unless requested by the client, building materials manufactured with multiple layers (i.e. linoleum, wallboard, etc.) are reported as a single sample.

Samples analyzed by EMSL Analytical, Inc. Wallingford, CT

Initial report from: 07/25/2019 16:47:42

241903989

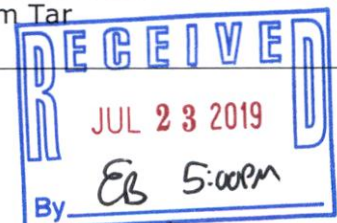
SAMPLE LOG FOR ASBESTOS BULKSSheet 1 of 3Project Name: SMTF – Stamford High School Project No. 28-2087-033UBuilding: Stamford High School Project Manager: Meredith Febbraio

Sample ID	Material Description	Color	Sample Location
0722BH-13A	Original Building Roof – South	Brown	Fiberboard Insulation
0722BH-13B	Original Building Roof – North	Brown	Fiberboard Insulation
0722BH-13C	Original Building Roof – Upper at Slate Roof	Brown	Fiberboard Insulation
0722BH-14A	Original Building Roof – South	Yellow	Iso-Board Insulation
0722BH-14B	Original Building Roof – North	Yellow	Iso-Board Insulation
*0722BH-15A	Original Building Roof – South	Black	Tar on Concrete Deck
0722BH-15B	Original Building Roof – North	Black	Tar on Concrete Deck
0722BH-15C	Original Building Roof – Upper at Slate Roof	Black	Tar on Concrete Deck
*0722BH-16A	Original Building Roof – South	Black	Top Layer Modified Roofing
0722BH-16B	Original Building Roof – North	Black	Top Layer Modified Roofing
0722BH-16C	Original Building Roof – Upper at Slate Roof	Black	Top Layer Modified Roofing
*0722BH-17A	Original Building Roof – South	Black	Wall Modified Roofing
0722BH-17B	Original Building Roof – Upper at Slate Roof	Black	Wall Modified Roofing
0722BH-17C	Original Building Roof – North	Black	Curb Modified Roofing
*0722BH-18A	Original Building Roof – South	Black	Wall Tar on Concrete
0722BH-18B	Original Building Roof – Upper at Slate Roof	Black	Wall Tar on Concrete
0722BH-18C	Original Building Roof – North	Black	Curb Modified Roofing Tar on concrete



SAMPLE LOG FOR ASBESTOS BULKSheet 2 of 3Project Name: SMTF - KT MurphyProject No. 28-2087-033EBuilding: KT Murphy Elementary SchoolProject Manager: Meredith Febbraio

Sample ID	Material Description	Color	Sample Location
*0722BH-19A	Original Building Roof - North	Black	Tar on Older Exhaust
0722BH-19B	Original Building Roof - South	Black	Tar on Older Exhaust
*0722BH-20A	Original Building Roof - North	Black	Pitch Pocket Tar
0722BH-20B	Original Building Roof - South	Black	Pitch Pocket Tar
0722BH-21A	Original Building Roof - North	Tan/Gray	Textured Concrete Wall
0722BH-21B	Original Building Roof - South	Tan/Gray	Textured Concrete Wall
0722BH-22A	Original Building Roof - North	Silver	Paint on Roof Cover
0722BH-22B	Original Building Roof - North	Silver	Paint on Exhaust
0722BH-23A	Original Building - Slate Roof	Gray	Slate Shingles
0722BH-23B	Original Building - Slate Roof	Gray	Slate Shingles
0722BH-24A	Original Building - Slate Roof	Black	Paper Under Slate
0722BH-24B	Original Building - Slate Roof	Black	Paper Under Slate
0722BH-25A	Original Building - Slate Roof	White	Lightweight Concrete
0722BH-25B	Original Building - Slate Roof	White	Lightweight Concrete
*0722BH-26A	Original Building - Slate Roof	Black	Tar Below Bottom Slate Line
0722BH-26B	Original Building - Slate Roof	Black	Tar Below Bottom Slate Line
*0722BH-27A	Original Building - Slate Roof	Black	Slate Seam Tar
0722BH-27B	Original Building - Slate Roof	Black	Slate Seam Tar



241903989

213 Court Street, Suite 1100, Middletown, CT 06457

Phone 860-704-4760

SAMPLE LOG FOR ASBESTOS BULKS

Sheet 3 of 3

Project Name: SMTF - Stamford High School Project No. 28-2087-033U

Building: Stamford High School Project Manager: Meredith Febbraio

TOTAL # OF SAMPLES: 35 State sample collected in: CT

Analysis Method: PLM TEM-NOB Point CT - 400 Other

Turnaround Time (check one): 3-hr 6-hr 24-hr 48-hr 72-hr 96-hr 1-week 2-week

Please call the office if analyses will be late at: _____

Email Results to: mfebbraio@tighebond.com **Do Not Mail Hard Copy Report**

Special Instructions: Stop analysis on first positive sample in each homogeneous set of samples unless otherwise noted. Do not layer samples unless indicated. Do Not Point Count. If NOB group sample results are 0% - < 1% by PLM, analyze only "A" group sample above by TEM NOB, per group, as noted by asterisk and bold front.

Samples collected by: Bob Hobbins **Date:** 7-22-19 **Time:** _____

Samples Relinquished by: BH **Date:** 7-23-19 **Time:** _____

Samples Received by: _____ **Date:** _____ **Time:** _____

Shipped To: EMSL State CT Other _____

Method of Shipment: Overnight (Check one: Fed Ex / UPS) Other _____



W.I.