



# Lab/Cor Portland, Inc.

4321 SW Corbett Ave., Ste A  
Portland, OR 97239

## Analysis Report Cover Final Report

*Asbestos and Environmental Analysis*

Phone: (503) 224-5055  
<http://www.labcorpdx.net>

**Job Number: 196382**      **PDX**  
**Client: TRC Environmental Corp.**  
**Address: 21 Griffin Rd North**  
**Windsor, CT 06095**  
**Project Name: BSD - Highland Park Middle School**  
**Project No.: 362317**  
**PO Number:**  
**Sub Project:**  
**Reference No.:**

**Report Number: 196382R01**  
**Report Date: 11/22/2019**

Enclosed please find results for samples submitted to our laboratory. A list of samples and analyses follows:

Lab/Cor Sample #	Client Sample # and Description	Analysis	Analysis Notes	Date Received:
196382 - S1	HPMS-A12-PCM1 - Rm A12	NIOSH 7400 - PCM		11/22/2019
196382 - S2	HPMS-A10-PCM1 - Rm A10	NIOSH 7400 - PCM		11/22/2019
196382 - S3	HPMS-GRR4-PCM1 - Girls RR 4	NIOSH 7400 - PCM		11/22/2019
196382 - S4	HPMS-BRR4-PCM1 - Boy's RR 4	NIOSH 7400 - PCM		11/22/2019
196382 - S5	HPMS-A8-PCM1 - Rm A8	NIOSH 7400 - PCM		11/22/2019
196382 - S6	HPMS-A6-PCM1 - Rm A6	NIOSH 7400 - PCM		11/22/2019
196382 - S7	HPMS-HWA-PCM1 - Hall A West	NIOSH 7400 - PCM		11/22/2019
196382 - S8	HPMS-A4-PCM1 - Rm A4	NIOSH 7400 - PCM		11/22/2019
196382 - S9	HPMS-A2-PCM1 - Rm A2	NIOSH 7400 - PCM		11/22/2019
196382 - S10	HPMS-A1-PCM1 - Rm A1	NIOSH 7400 - PCM		11/22/2019
196382 - S11	HPMS-A3-PCM1 - Rm A3	NIOSH 7400 - PCM		11/22/2019
196382 - S12	HPMS-A5-PCM1 - Rm A5	NIOSH 7400 - PCM		11/22/2019
196382 - S13	HPMS-A7-PCM1 - Rm A7	NIOSH 7400 - PCM		11/22/2019
196382 - S14	HPMS-A9-PCM1 - Rm A9	NIOSH 7400 - PCM		11/22/2019
196382 - S15	HPMS-A11-PCM1 - Rm A11	NIOSH 7400 - PCM		11/22/2019
196382 - S16	HPMS-HCA-PCM1 - A Hall Center	NIOSH 7400 - PCM		11/22/2019
196382 - S17	HPMS-MOE-PCM1 - Main Office East	NIOSH 7400 - PCM		11/22/2019
196382 - S18	HPMS-MOW-PCM1 - Main Office West	NIOSH 7400 - PCM		11/22/2019
196382 - B1	Blank -	NIOSH 7400 - PCM		11/22/2019
196382 - B2	Blank -	NIOSH 7400 - PCM		11/22/2019



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NIOSH 7400 - Preparation and analysis of the above samples was conducted in accordance with the NIOSH 7400 method dated August 15th, 1994. Phase contrast microscopy (PCM) analysis was conducted on air samples collected on mixed cellulose ester (MCE) filters. Samples are placed on a glass slide and exposed to hot acetone vapor until the filter material is completely collapsed. Approximately 0.02ml of Triacetin is placed on the collapsed filter and sealed with a #1.5 thickness cover slip. PCM analysis is then performed using a calibrated Olympus BHTU BH-2 phase contrast microscope with a Walton Beckett Graticule.

**Disclaimer** The results reported relate only to the samples tested or analyzed; the laboratory is not responsible for data collected by personnel who are not affiliated with the laboratory. Results reported in both structures/cm3 and structures/mm2 are dependent on the sample volume and area. These parameters are measured and recorded by non-laboratory personnel and are not covered by the laboratory's accreditation. Interpretation of these results is the sole responsibility of the client.

If further clarification of these results is needed, please call us. Thank you for allowing the staff at Lab/Cor Portland, Inc. the opportunity to provide you with the analytical services.

Sincerely,



**Isabel Burgos**

**Analyst**

*Asbestos and Environmental Analysis*

**NIOSH 7400 - PCM**

**Job Number: 196382      PDX**  
**Client: TRC Environmental Corp.**  
**Project Name: BSD - Highland Park Middle School**

**Report Number: 196382R01**  
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**Analyst: IB      11/22/2019**

Lab/Cor Sample No.	Client Sample No.	Description	Volume (L)	<sup>1</sup> Total Adj. Fibers	Total Fields	<sup>3</sup> Density (Fibers/mm2)	Concentration (Fibers/cc)	95% Confidence Interval (LCL - UCL)	<sup>2</sup> LOD (Fibers/cc)
S1	HPMS-A12-PCM1	Rm A12	1200	7	100	9.284	0.003	0.001 - 0.006	0.002
S2	HPMS-A10-PCM1	Rm A10	1200	9	100	11.936	0.004	0.002 - 0.007	0.002
S3	HPMS-GRR4-PCM1	Girls RR 4	1200	8	100	10.61	0.003	0.001 - 0.007	0.002
S4	HPMS-BRR4-PCM1	Boy's RR 4	1200	5	100	< 7.0	< 0.002	0.001 - 0.005	0.002
S5	HPMS-A8-PCM1	Rm A8	1200	2	100	< 7.0	< 0.002	0 - 0.003	0.002
S6	HPMS-A6-PCM1	Rm A6	1200	9	100	11.936	0.004	0.002 - 0.007	0.002
S7	HPMS-HWA-PCM1	Hall A West	1200	3	100	< 7.0	< 0.002	0 - 0.004	0.002
S8	HPMS-A4-PCM1	Rm A4	1200	3.5	100	< 7.0	< 0.002	0 - 0.004	0.002
S9	HPMS-A2-PCM1	Rm A2	1200	3	100	< 7.0	< 0.002	0 - 0.004	0.002
S10	HPMS-A1-PCM1	Rm A1	1200	3	100	< 7.0	< 0.002	0 - 0.004	0.002
S11	HPMS-A3-PCM1	Rm A3	1200	2	100	< 7.0	< 0.002	0 - 0.003	0.002
S12	HPMS-A5-PCM1	Rm A5	1200	7.5	100	9.947	0.003	0.001 - 0.007	0.002
S13	HPMS-A7-PCM1	Rm A7	1200	5.5	100	< 7.0	< 0.002	0.001 - 0.006	0.002
S14	HPMS-A9-PCM1	Rm A9	1200	4.5	100	< 7.0	< 0.002	0 - 0.004	0.002
S15	HPMS-A11-PCM1	Rm A11	1200	5.5	100	< 7.0	< 0.002	0.001 - 0.006	0.002
S16	HPMS-HCA-PCM1	A Hall Center	1200	4.5	100	< 7.0	< 0.002	0 - 0.004	0.002
S17	HPMS-MOE-PCM1	Main Office East	1200	9.5	100	12.599	0.004	0.002 - 0.008	0.002
S18	HPMS-MOW-PCM1	Main Office West	1200	5	100	< 7.0	< 0.002	0.001 - 0.005	0.002
B1	Blank		0	0	100	< 7.0			
B2	Blank		0	0	100	< 7.0			

Concentration = (((Total Adj Fibers) \* (Filter Area)) / (Number of Fields \* Field Area \* Volume \* 1000))

<sup>1</sup> Net fiber counts after average blank count reduction.

<sup>2</sup> LOD is calculated based on 5.5 fib/ 100 fields as referenced in NIOSH 7402 Method.

<sup>3</sup> Density is reported as <7.0 fib/mm2 when the Total Fiber Cnt. - Avg. Blank Fiber Cnt. is <5.5 fibers

*Asbestos and Environmental Analysis*

**NIOSH 7400 - PCM**

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IntraLab RSD Values			
Analyst	Low Fibs = 5-20 Flds = 100	Med Fibs=>20-50 Flds = 100	High Fibs=>50 Flds = 100
SG	0.5	0.39	0.7
PK	0.55	0.49	0.74
IB	0.75	0.61	0.66
<b>LAB</b>	<b>0.6</b>	<b>0.5</b>	<b>0.7</b>

Graticule Area	
Graticule Area	Date Meas.
0.00754	11/4/2019

**Reviewed by:**

*Isabel Burgos*  
Digital Signature for Lab Use Only  
**Isabel Burgos**  
**Analyst**

Concentration = (((Total Adj Fibers) \* (Filter Area)) / (Number of Fields \* Field Area \* Volume \* 1000))

<sup>1</sup> Net fiber counts after average blank count reduction.

<sup>2</sup> LOD is calculated based on 5.5 fib/ 100 fields as referenced in NIOSH 7402 Method.

<sup>3</sup> Density is reported as <7.0 fib/mm<sup>2</sup> when the Total Fiber Cnt. - Avg. Blank Fiber Cnt. is <5.5 fibers