Inc

LabCor 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

PDX Job Number: 196392 Client: TRC Environmental Corp.

Address: 4105 SE International Way, #505

Milwaukie, OR 97222

Project Name: Highland Park M.S. -Dust Project

Project No.: 332367 PO Number: Sub Project: Reference No.:

Report Number: 196392R01

Report Date: 11/22/2019

Enclosed please find	results for samples submitted to our la	boratory. A list of samples	and analyses follows:	
Lab/Cor Sample #	Client Sample # and Description	Analysis	Analysis Notes	Date Received:
196392 - S1	HPMS-Cor2-PCM-1 - Corridor 2 North	NIOSH 7400 - PCM		11/22/2019
196392 - S2	HPMS-Cor2-PCM-2 - Corridor 2 South	NIOSH 7400 - PCM		11/22/2019
196392 - S3	HPMS-B9-PCM-1 - Room B9	NIOSH 7400 - PCM		11/22/2019
196392 - S4	HPMS-B7-PCM-1 - Room B7	NIOSH 7400 - PCM		11/22/2019
196392 - S5	HPMS-B5-PCM-1 - Room B5	NIOSH 7400 - PCM		11/22/2019
196392 - S6	HPMS-HWB-PCM-1 - Hall B West	NIOSH 7400 - PCM		11/22/2019
196392 - S7	HPMS-B3-PCM-1 - Room B3	NIOSH 7400 - PCM		11/22/2019
196392 - S8	HPMS-B1-PCM-1 - Room B1	NIOSH 7400 - PCM		11/22/2019
196392 - S9	HPMS-B2-PCM-1 - Room B2	NIOSH 7400 - PCM		11/22/2019
196392 - S10	HPMS-B4-PCM-1 - Room B4	NIOSH 7400 - PCM		11/22/2019
196392 - S11	HPMS-B6-PCM-1 - Room B6	NIOSH 7400 - PCM		11/22/2019
196392 - S12	HPMS-B8-PCM-1 - Room B8	NIOSH 7400 - PCM		11/22/2019
196392 - S13	HPMS-B10-PCM-1 - Room B10	NIOSH 7400 - PCM		11/22/2019
196392 - S14	HPMS-HCB-PCM-1 - Hall B Central	NIOSH 7400 - PCM		11/22/2019
196392 - S15	HPMS-BRR3-PCM-1 - Boys Restroom 3	NIOSH 7400 - PCM		11/22/2019
196392 - S16	HPMS-GRR3-PCM-1 - Girls Restroom 3	NIOSH 7400 - PCM		11/22/2019
196392 - B1	Blank -	NIOSH 7400 - PCM		11/22/2019
196392 - B2	Blank -	NIOSH 7400 - PCM	·	11/22/2019

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Project Name: Highland Park M.S. - Dust Project

NIOSH 7400 - Preparation and analysis of the above samples was conducted in accordance with the NIOSH 7400 method dated August 15th. PCM 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,

x Elsabel Burgos

Isabel Burgos Analyst

LabCor Portland, Inc.

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Asbestos and Environmental Analysis

NIOSH 7400 - PCM

Job Number: 196392 PDX Client: TRC Environmental Corp.

Portland, OR 97239

Project Name: Highland Park M.S. -Dust Project

Report Number: 196392R01 **Date Received:** 11/22/2019

> Analyst: IB 11/22/2019

Lab/Cor Sample No.	Client Sample No.	Description	Volume (L)	¹Total Adj. Fibers	Total Field s	³ Density (Fibers/mm2)	Concen- tration (Fibers/cc)	95% Confidence Interval (LCL – UCL)	² LOD (Fibers/cc)
S1	HPMS-Cor2- PCM-1	Corridor 2 North	1212	7.25	100	9.615	0.003	0.001 - 0.006	0.002
S2	HPMS-Cor2- PCM-2	Corridor 2 South	1212	3.75	100	< 7.0	< 0.002	0 - 0.004	0.002
S3	HPMS-B9- PCM-1	Room B9	1212	3.75	100	< 7.0	< 0.002	0 - 0.004	0.002
S4	HPMS-B7- PCM-1	Room B7	1200	2.75	100	< 7.0	< 0.002	0 - 0.004	0.002
S5	HPMS-B5- PCM-1	Room B5	1200	7.75	100	10.279	0.003	0.001 - 0.007	0.002
S6	HPMS-HWB- PCM-1	Hall B West	1200	1.25	100	< 7.0	< 0.002	0 - 0.002	0.002
S7	HPMS-B3- PCM-1	Room B3	1200	5.25	100	< 7.0	< 0.002	0.001 - 0.005	0.002
S8	HPMS-B1- PCM-1	Room B1	1200	0.75	100	< 7.0	< 0.002	0 - 0.002	0.002
S9	HPMS-B2- PCM-1	Room B2	1200	2.25	100	< 7.0	< 0.002	0 - 0.003	0.002
S10	HPMS-B4- PCM-1	Room B4	1200	0.75	100	< 7.0	< 0.002	0 - 0.002	0.002
S11	HPMS-B6- PCM-1	Room B6	1200	0.25	100	< 7.0	< 0.002	0 - 0.002	0.002
S12	HPMS-B8- PCM-1	Room B8	1200	4.75	100	< 7.0	< 0.002	0.001 - 0.005	0.002
S13	HPMS-B10- PCM-1	Room B10	1212	4.25	100	< 7.0	< 0.002	0 - 0.004	0.002
S14	HPMS-HCB- PCM-1	Hall B Central	1200	1.75	100	< 7.0	< 0.002	0 - 0.003	0.002
S15	HPMS-BRR3- PCM-1	Boys Restroom 3	1200	7.25	100	9.615	0.003	0.001 - 0.006	0.002
S16	HPMS-GRR3- PCM-1	Girls Restroom 3	1200	6.25	100	8.289	0.003	0.001 - 0.006	0.002
B1	Blank		0	0.5	100	< 7.0			
B2	Blank		0	0	100	< 7.0			

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

¹ Net fiber counts after average blank count reduction.

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

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Lab/Cor	Client	Description	Volume	¹Total	Total	3Density	Concen-	95% Confidence	² LOD
Sample	Sample No.		(L)	Adj.	Field	(Fibers/mm2)	tration	Interval	(Fibers/cc)
No.				Fibers	s		(Fibers/cc)	(LCL – UCL)	

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		
LAB	0.6	0.5	0.7		

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

Reviewed by:

x Usabel Burgos

Isabel Burgos

Analyst

¹ Net fiber counts after average blank count reduction.

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