

Room	Dates/Observations
A118	<p>9/17/19: Initial visual assessment. Wet water stained ceiling tiles along exterior south wall at Southwest corner. Some warped ceiling tiles throughout room with no water staining and dry moisture readings.</p> <p>9/18/19: Microbial air sampling conducted in this room, in the afternoon. Results did not indicate elevated fungal spore levels.</p> <p>9/19/19: Microbial air sampling conducted in this room, in the morning. Results indicated elevated <i>Penicillium/Aspergillus</i> levels (400 Count/m3).</p> <p>10/1/19: New water intrusion in this room. Wet moisture readings at vinyl floor tiles at southeast corner near sink, adjacent to staff lounge which was impacted by most recent leak event. Water staining and wet readings at ceiling tiles above southeast corner of room; appear new from most recent leak event. Dry moisture readings at wall.</p> <p>10/2/19: Wet moisture readings and positive infrared imaging at vinyl floor tiles at southeast corner near sink, approximately 10 SF (2 FT out from south wall for 5 LF). Wet readings and positive infrared imaging at ceiling tiles and upper 1 FT of south wall and east wall at southeast corner. TRC collected vinyl floor tile and associated glue samples for asbestos bulk testing. Water staining observed beneath cabinets to the right of the sink in southeast corner; dry moisture readings. Vinyl floor tile and associated glue results indicated non-detect for asbestos.</p> <p>10/7/19: Asbestos air testing performed today at containment in southwest section of room. Approximately 25 square feet of drywall removal at west wall. Asbestos containing material is the joint compound within the drywall system. Asbestos air clearance received.</p> <p>10/8/19: Asbestos air testing performed today at containment in southeast section of room. Approximately 40 square feet of drywall removal at east wall. Asbestos containing material is the joint compound within the drywall system. Asbestos air clearance received.</p>

Room	Dates/Observations
A118	<p>10/11/19: Ceiling tiles removed from several locations in the south section of the room, approximately 175 SF. Approximately 25 SF drywall removed at the west wall and 40 SF at the east wall. All else intact. No visible fungal growth or musty odor and no water staining. Dry moisture readings. Microbial air sampling conducted in this room. Results indicated elevated <i>Cladosporium</i> (1,700 Count/m³) and <i>Penicillium/Aspergillus</i> levels (240,000 Count/m³).</p> <p>10/14/19: Microbial air sampling performed in this room; visual clearance to be conducted 10/15/19. Results indicated elevated <i>Penicillium/Aspergillus</i> levels (320 Count/m³).</p> <p>10/15/19: Ceiling cavity is covered by plastic and was previously visually cleared. Room was re-cleaned. No visible fungal growth or musty odor and no water staining. Dry moisture readings.</p> <p>10/17/19: Drywall installed on Staff Room side of wall cavity at SE corner. Plastic still covering ceiling cavity. Plastic also covering 5 SF expose floorboards in SE corner. No additional removal or other changes noted. No visible fungal growth or musty odor and no water staining. Dry moisture readings. Microbial air sampling performed in this room. Results indicated elevated <i>Penicillium/Aspergillus</i> levels (400 Count/m³).</p> <p>10/18/19: TRC recommended that the open wall cavities be covered with plastic and the negative pressurization removed inside this room and replaced with HEPA filtration in air scrub mode. TRC also recommended the carpets be HEPA vacuumed and the room fogged with an environmentally safe disinfectant.</p> <p>10/21/19: New plastic up at west wall SW corner and east wall SE corner to secure the walls cavities. Room was under HEPA filtration. No visible fungal growth or musty odor and no water staining. Dry moisture readings. Microbial air sampling performed in this room. The results did not indicate elevated fungal spore levels.</p>

Report for:

Ms. Victoria Shepersky
TRC Solutions, Inc.
4105 SE International Way, Suite 505
Milwaukie, OR 97222

Regarding: Project: 362890 West Tualatin ES
EML ID: 2256569

Approved by:



Operations Manager
Joshua Cox

Dates of Analysis:

Spore trap analysis: 09-19-2019

Service SOPs: Spore trap analysis (EM-MY-S-1038)
AIHA-LAP, LLC accredited service, Lab ID #102297

All samples were received in acceptable condition unless noted in the Report Comments portion in the body of the report. Due to the nature of the analyses performed, field blank correction of results is not applied. The results relate only to the samples as received. Sample air volume is supplied by the client.

Eurofins EMLab P&K ("the Company") shall have no liability to the client or the client's customer with respect to decisions or recommendations made, actions taken or courses of conduct implemented by either the client or the client's customer as a result of or based upon the Test Results. In no event shall the Company be liable to the client with respect to the Test Results except for the Company's own willful misconduct or gross negligence nor shall the Company be liable for incidental or consequential damages or lost profits or revenues to the fullest extent such liability may be disclaimed by law, even if the Company has been advised of the possibility of such damages, lost profits or lost revenues. In no event shall the Company's liability with respect to the Test Results exceed the amount paid to the Company by the client therefor.

Eurofins EMLab P&K's LabServe® reporting system includes automated fail-safes to ensure that all AIHA-LAP, LLC quality requirements are met and notifications are added to reports when any quality steps remain pending.

Client: TRC Solutions, Inc.
 C/O: Ms. Victoria Shepersky
 Re: 362890 West Tualatin ES

Date of Sampling: 09-18-2019
 Date of Receipt: 09-19-2019
 Date of Report: 09-19-2019

SPORE TRAP REPORT: NON-VIABLE METHODOLOGY

Location:	28956406: Outside Air N @ Gym & Main Bldg				28956442: Principal's Office				28956403: Gym South Portion				28956463: Gym North Portion			
Comments (see below)	None				None				None				None			
Lab ID-Version‡:	10729973-1				10729974-1				10729975-1				10729976-1			
Analysis Date:	09/19/2019				09/19/2019				09/19/2019				09/19/2019			
Sample volume (liters)	75				75				75				75			
Background debris (1-4+)††	1+				3+				4+				4+			
	raw ct.	Count/m3	DL/m3*	%	raw ct.	Count/m3	DL/m3*	%	raw ct.	Count/m3	DL/m3*	%	raw ct.	Count/m3	DL/m3*	%
Hyphal fragments					1	13	13	n/a	2	27	13	n/a	7	93	13	n/a
Pollen																
§ TOTAL FUNGAL SPORES	109	5,400	n/a	100	2	27	n/a	100	18	240	n/a	100	28	370	n/a	100
Alternaria																
Ascospores	34	450	13	8					3	40	13	17				
Basidiospores	42	4,500	110	83					3	40	13	17	4	53	13	14
Botrytis	1	13	13	< 1												
Cercospora																
Chaetomium																
Cladosporium	25	330	13	6	1	13	13	50	6	80	13	33	12	160	13	43
Epicoccum																
Other brown													1	13	13	4
Penicillium/Aspergillus types	5	67	13	1	1	13	13	50	5	67	13	28	9	120	13	32
Smuts, Periconia, Myxomycetes	2	27	13	< 1					1	13	13	6	2	27	13	7
Stachybotrys																

Comments:

Spore types listed without a count or data entry were not detected during the course of the analysis for the respective sample, indicating a raw count of <1 spore.

The analytical sensitivity/limit of detection is the Count/m³ divided by the raw count, expressed in Count/m³.

*The detection limit/limit of detection (DL) per cubic meter (m³) has been rounded to two significant figures to reflect analytical precision.

††Background debris indicates the amount of non-biological particulate matter present on the trace (dust in the air) and the resulting visibility for the analyst. It is rated from 1+ (low) to 4+ (high). Counts from areas with 4+ background debris should be regarded as minimal counts and may be higher than reported. It is important to account for samples volumes when evaluating dust levels.

‡ A "Version" indicated by "-x" after the Lab ID# with a value greater than 1 indicates a sample with amended data. The revision number is reflected by the value of "x".

§ Total Fungal Spores has been rounded to two significant figures to reflect analytical precision.

Client: TRC Solutions, Inc.
 C/O: Ms. Victoria Shepersky
 Re: 362890 West Tualatin ES

Date of Sampling: 09-18-2019
 Date of Receipt: 09-19-2019
 Date of Report: 09-19-2019

SPORE TRAP REPORT: NON-VIABLE METHODOLOGY

Location:	28956428: Stage				28956426: A100				28956429: A102				28956421: Main Corridor N @ A102			
Comments (see below)	None				None				None				None			
Lab ID-Version‡:	10729977-1				10729978-1				10729979-1				10729980-1			
Analysis Date:	09/19/2019				09/19/2019				09/19/2019				09/19/2019			
Sample volume (liters)	75				75				75				75			
Background debris (1-4+)††	4+				4+				4+				4+			
	raw ct.	Count/m3	DL/m3*	%	raw ct.	Count/m3	DL/m3*	%	raw ct.	Count/m3	DL/m3*	%	raw ct.	Count/m3	DL/m3*	%
Hyphal fragments	3	40	13	n/a	10	130	13	n/a	13	170	13	n/a	10	130	13	n/a
Pollen									1	13	13	n/a				
§ TOTAL FUNGAL SPORES	36	480	n/a	100	50	670	n/a	100	93	1,200	n/a	100	66	880	n/a	100
Alternaria					3	40	13	6								
Ascospores	2	27	13	6					1	13	13	1	3	40	13	5
Basidiospores	8	110	13	22	6	80	13	12	3	40	13	3	5	67	13	8
Botrytis																
Chaetomium																
Cladosporium	13	170	13	36	21	280	13	42	53	710	13	57	36	480	13	55
Epicoccum	1	13	13	3												
Other brown									3	40	13	3				
Penicillium/Aspergillus types	12	160	13	33	17	230	13	34	28	370	13	30	17	230	13	26
Pithomyces					1	13	13	2	1	13	13	1				
Rusts									1	13	13	1				
Smuts, Periconia, Myxomycetes					2	27	13	4	3	40	13	3	5	67	13	8
Stachybotrys																

Comments:

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Client: TRC Solutions, Inc.
 C/O: Ms. Victoria Shepersky
 Re: 362890 West Tualatin ES

Date of Sampling: 09-18-2019
 Date of Receipt: 09-19-2019
 Date of Report: 09-19-2019

SPORE TRAP REPORT: NON-VIABLE METHODOLOGY

Location:	28956420: A104				28956469: A106				28956468: A108				28956720: Main Corridor Center @ Library			
Comments (see below)	None				None				None				None			
Lab ID-Version‡:	10729981-1				10729982-1				10729983-1				10729984-1			
Analysis Date:	09/19/2019				09/19/2019				09/19/2019				09/19/2019			
Sample volume (liters)	75				75				75				75			
Background debris (1-4+)††	3+				4+				3+				4+			
	raw ct.	Count/m3	DL/m3*	%	raw ct.	Count/m3	DL/m3*	%	raw ct.	Count/m3	DL/m3*	%	raw ct.	Count/m3	DL/m3*	%
Hyphal fragments	3	40	13	n/a	8	110	13	n/a	2	27	13	n/a	6	80	13	n/a
Pollen																
§ TOTAL FUNGAL SPORES	19	250	n/a	100	43	570	n/a	100	19	250	n/a	100	51	680	n/a	100
Alternaria																
Ascospores					2	27	13	5	1	13	13	5				
Basidiospores	2	27	13	11	2	27	13	5	2	27	13	11	5	67	13	10
Botrytis	1	13	13	5												
Cercospora																
Chaetomium																
Cladosporium	8	110	13	42	14	190	13	33	8	110	13	42	27	360	13	53
Epicoccum																
Other brown	1	13	13	5	1	13	13	2					1	13	13	2
Penicillium/Aspergillus types	7	93	13	37	23	310	13	53	8	110	13	42	17	230	13	33
Smuts, Periconia, Myxomycetes					1	13	13	2					1	13	13	2
Stachybotrys																

Comments:

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Client: TRC Solutions, Inc.
 C/O: Ms. Victoria Shepersky
 Re: 362890 West Tualatin ES

Date of Sampling: 09-18-2019
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SPORE TRAP REPORT: NON-VIABLE METHODOLOGY

Location:	28956443: A110				28956404: A112				28956402: A114				28956444: Main Corridor S @ A116			
Comments (see below)	None				None				None				None			
Lab ID-Version‡:	10729985-1				10729986-1				10729987-1				10729988-1			
Analysis Date:	09/19/2019				09/19/2019				09/19/2019				09/19/2019			
Sample volume (liters)	75				75				75				75			
Background debris (1-4+)††	4+				3+				4+				2+			
	raw ct.	Count/m3	DL/m3*	%	raw ct.	Count/m3	DL/m3*	%	raw ct.	Count/m3	DL/m3*	%	raw ct.	Count/m3	DL/m3*	%
Hyphal fragments	12	160	13	n/a	2	27	13	n/a	9	120	13	n/a	2	27	13	n/a
Pollen	1	13	13	n/a												
§ TOTAL FUNGAL SPORES	41	550	n/a	100	31	410	n/a	100	72	960	n/a	100	45	600	n/a	100
Alternaria																
Ascospores					3	40	13	10	1	13	13	1	8	110	13	18
Basidiospores	2	27	13	5	6	80	13	19	10	130	13	14	23	310	13	51
Botrytis																
Cercospora																
Chaetomium																
Cladosporium	25	330	13	61	13	170	13	42	33	440	13	46	7	93	13	16
Epicoccum																
Other brown					1	13	13	3	1	13	13	1	1	13	13	2
Penicillium/Aspergillus types	13	170	13	32	7	93	13	23	23	310	13	32	6	80	13	13
Pithomyces																
Smuts, Periconia, Myxomycetes	1	13	13	2	1	13	13	3	4	53	13	6				
Stachybotrys																

Comments:

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Client: TRC Solutions, Inc.
 C/O: Ms. Victoria Shepersky
 Re: 362890 West Tualatin ES

Date of Sampling: 09-18-2019
 Date of Receipt: 09-19-2019
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SPORE TRAP REPORT: NON-VIABLE METHODOLOGY

Location:	28956447: A116				28956396: A Hall @ A118				28956439: A118				28862359: A120			
Comments (see below)	None				None				None				None			
Lab ID-Version‡:	10729989-1				10729990-1				10729991-1				10729992-1			
Analysis Date:	09/19/2019				09/19/2019				09/19/2019				09/19/2019			
Sample volume (liters)	75				75				75				75			
Background debris (1-4+)††	2+				2+				2+				2+			
	raw ct.	Count/m3	DL/m3*	%	raw ct.	Count/m3	DL/m3*	%	raw ct.	Count/m3	DL/m3*	%	raw ct.	Count/m3	DL/m3*	%
Hyphal fragments	4	53	13	n/a	1	13	13	n/a	3	40	13	n/a	1	13	13	n/a
Pollen																
§ TOTAL FUNGAL SPORES	88	1,200	n/a	100	94	1,300	n/a	100	45	600	n/a	100	171	2,300	n/a	100
Alternaria					1	13	13	1								
Ascospores	14	190	13	16	16	210	13	17	7	93	13	16	31	410	13	18
Basidiospores	52	690	13	59	49	650	13	52	13	170	13	29	112	1,500	13	65
Botrytis																
Cercospora																
Chaetomium																
Cladosporium	11	150	13	13	11	150	13	12	4	53	13	9	6	80	13	4
Epicoccum																
Other brown																
Penicillium/Aspergillus types	6	80	13	7	17	230	13	18	20	270	13	44	17	230	13	10
Pithomyces	1	13	13	1									1	13	13	1
Smuts, Periconia, Myxomycetes	4	53	13	5					1	13	13	2	4	53	13	2
Stachybotrys																

Comments:

Spore types listed without a count or data entry were not detected during the course of the analysis for the respective sample, indicating a raw count of <1 spore.

The analytical sensitivity/limit of detection is the Count/m³ divided by the raw count, expressed in Count/m³.

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Date of Sampling: 09-18-2019
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SPORE TRAP REPORT: NON-VIABLE METHODOLOGY

Location:	28956348: A122				28956453: LL10 Music				28956408: Production Rm Off Library				28956709: Tech Rm Off Library			
Comments (see below)	None				None				None				None			
Lab ID-Version‡:	10729993-1				10729994-1				10729995-1				10729996-1			
Analysis Date:	09/19/2019				09/19/2019				09/19/2019				09/19/2019			
Sample volume (liters)	75				75				75				75			
Background debris (1-4+)††	2+				2+				2+				1+			
	raw ct.	Count/m3	DL/m3*	%	raw ct.	Count/m3	DL/m3*	%	raw ct.	Count/m3	DL/m3*	%	raw ct.	Count/m3	DL/m3*	%
Hyphal fragments	3	40	13	n/a	2	27	13	n/a								
Pollen																
§ TOTAL FUNGAL SPORES	58	770	n/a	100	26	350	n/a	100	9	120	n/a	100	9	120	n/a	100
Alternaria																
Ascospores	11	150	13	19	3	40	13	12	1	13	13	11				
Basidiospores	33	440	13	57	10	130	13	38	5	67	13	56	7	93	13	78
Botrytis																
Cercospora																
Chaetomium																
Cladosporium	7	93	13	12	1	13	13	4					1	13	13	11
Epicoccum																
Other brown																
Penicillium/Aspergillus types	6	80	13	10	12	160	13	46	3	40	13	33	1	13	13	11
Pithomyces	1	13	13	2												
Rusts																
Stachybotrys																

Comments:

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Date of Sampling: 09-18-2019
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SPORE TRAP REPORT: NON-VIABLE METHODOLOGY

Location:	28956414: Library North Portion				28956417: Library South Portion				28956451: Resource Rm Off Library			
Comments (see below)	None				None				None			
Lab ID-Version‡:	10729997-1				10729998-1				10729999-1			
Analysis Date:	09/19/2019				09/19/2019				09/19/2019			
Sample volume (liters)	75				75				75			
Background debris (1-4+)††	2+				2+				2+			
	raw ct.	Count/m3	DL/m3*	%	raw ct.	Count/m3	DL/m3*	%	raw ct.	Count/m3	DL/m3*	%
Hyphal fragments									1	13	13	n/a
Pollen												
§ TOTAL FUNGAL SPORES	11	150	n/a	100	8	110	n/a	100	31	410	n/a	100
Alternaria												
Ascospores	2	27	13	18					1	13	13	3
Basidiospores	4	53	13	36	2	27	13	25	16	210	13	52
Botrytis												
Cercospora												
Chaetomium												
Cladosporium	2	27	13	18	1	13	13	13	2	27	13	6
Epicoccum												
Other brown					2	27	13	25				
Penicillium/Aspergillus types	3	40	13	27	3	40	13	38	12	160	13	39
Pithomyces												
Rusts												
Stachybotrys												

Comments:

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Date of Sampling: 09-18-2019
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SPORE TRAP REPORT: NON-VIABLE METHODOLOGY

Location:	28956728: Speech Rm				28956690: Outside Air S @ A114 & A112			
Comments (see below)	None				None			
Lab ID-Version‡:	10730000-1				10730001-1			
Analysis Date:	09/19/2019				09/19/2019			
Sample volume (liters)	75				75			
Background debris (1-4+)††	2+				1+			
	raw ct.	Count/m3	DL/m3*	%	raw ct.	Count/m3	DL/m3*	%
Hyphal fragments	1	13	13	n/a				
Pollen					7	93	13	n/a
§ TOTAL FUNGAL SPORES	19	250	n/a	100	243	26,000	n/a	100
Alternaria								
Ascospores	1	13	13	5	73	970	13	4
Basidiospores	9	120	13	47	136	24,000	180	94
Botrytis								
Cercospora					1	13	13	< 1
Chaetomium								
Cladosporium	7	93	13	37	22	290	13	1
Epicoccum					2	27	13	< 1
Other brown								
Penicillium/Aspergillus types					9	120	13	< 1
Pithomyces								
Smuts, Periconia, Myxomycetes	2	27	13	11				
Stachybotrys								

Comments:

Spore types listed without a count or data entry were not detected during the course of the analysis for the respective sample, indicating a raw count of <1 spore.

The analytical sensitivity/limit of detection is the Count/m³ divided by the raw count, expressed in Count/m³.

*The detection limit/limit of detection (DL) per cubic meter (m³) has been rounded to two significant figures to reflect analytical precision.

††Background debris indicates the amount of non-biological particulate matter present on the trace (dust in the air) and the resulting visibility for the analyst. It is rated from 1+ (low) to 4+ (high). Counts from areas with 4+ background debris should be regarded as minimal counts and may be higher than reported. It is important to account for samples volumes when evaluating dust levels.

‡ A "Version" indicated by "-x" after the Lab ID# with a value greater than 1 indicates a sample with amended data. The revision number is reflected by the value of "x".

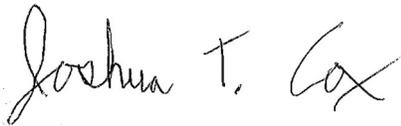
§ Total Fungal Spores has been rounded to two significant figures to reflect analytical precision.

Report for:

Ms. Victoria Shepersky
TRC Solutions, Inc.
4105 SE International Way, Suite 505
Milwaukie, OR 97222

Regarding: Project: 362890 West Tualatin View ES
EML ID: 2257669

Approved by:



Operations Manager
Joshua Cox

Dates of Analysis:

Spore trap analysis: 09-20-2019

Service SOPs: Spore trap analysis (EM-MY-S-1038)
AIHA-LAP, LLC accredited service, Lab ID #102297

All samples were received in acceptable condition unless noted in the Report Comments portion in the body of the report. Due to the nature of the analyses performed, field blank correction of results is not applied. The results relate only to the samples as received. Sample air volume is supplied by the client.

Eurofins EMLab P&K ("the Company") shall have no liability to the client or the client's customer with respect to decisions or recommendations made, actions taken or courses of conduct implemented by either the client or the client's customer as a result of or based upon the Test Results. In no event shall the Company be liable to the client with respect to the Test Results except for the Company's own willful misconduct or gross negligence nor shall the Company be liable for incidental or consequential damages or lost profits or revenues to the fullest extent such liability may be disclaimed by law, even if the Company has been advised of the possibility of such damages, lost profits or lost revenues. In no event shall the Company's liability with respect to the Test Results exceed the amount paid to the Company by the client therefor.

Eurofins EMLab P&K's LabServe® reporting system includes automated fail-safes to ensure that all AIHA-LAP, LLC quality requirements are met and notifications are added to reports when any quality steps remain pending.

Client: TRC Solutions, Inc.
 C/O: Ms. Victoria Shepersky
 Re: 362890 West Tualatin View ES

Date of Sampling: 09-19-2019
 Date of Receipt: 09-20-2019
 Date of Report: 09-20-2019

SPORE TRAP REPORT: NON-VIABLE METHODOLOGY

Location:	2895 6704: Outside Air A-112				2895 6437: A-114				2895 6412: A-112				2895 6446: A-116			
Comments (see below)	None				None				None				None			
Lab ID-Version‡:	10735902-1				10735903-1				10735904-1				10735905-1			
Analysis Date:	09/20/2019				09/20/2019				09/20/2019				09/20/2019			
Sample volume (liters)	75				75				75				75			
Background debris (1-4+)††	2+				2+				2+				2+			
	raw ct.	Count/m3	DL/m3*	%	raw ct.	Count/m3	DL/m3*	%	raw ct.	Count/m3	DL/m3*	%	raw ct.	Count/m3	DL/m3*	%
Hyphal fragments					3	40	13	n/a					1	13	13	n/a
Pollen					1	13	13	n/a								
§ TOTAL FUNGAL SPORES	336	36,000	n/a	100	10	130	n/a	100	4	53	n/a	100	5	67	n/a	100
Alternaria																
Ascospores	148	2,000	13	5	5	67	13	50	1	13	13	25	1	13	13	20
Basidiospores	124	33,000	270	92	4	53	13	40	1	13	13	25	4	53	13	80
Chaetomium																
Cladosporium	48	640	13	2	1	13	13	10	2	27	13	50				
Epicoccum	1	13	13	< 1												
Penicillium/Aspergillus types	13	170	13	< 1												
Pithomyces																
Rusts																
Smuts, Periconia, Myxomycetes	2	27	13	< 1												
Stachybotrys																
Torula																
Ulocladium																

Comments:

Spore types listed without a count or data entry were not detected during the course of the analysis for the respective sample, indicating a raw count of <1 spore.

The analytical sensitivity/limit of detection is the Count/m³ divided by the raw count, expressed in Count/m³.

*The detection limit/limit of detection (DL) per cubic meter (m³) has been rounded to two significant figures to reflect analytical precision.

††Background debris indicates the amount of non-biological particulate matter present on the trace (dust in the air) and the resulting visibility for the analyst. It is rated from 1+ (low) to 4+ (high). Counts from areas with 4+ background debris should be regarded as minimal counts and may be higher than reported. It is important to account for samples volumes when evaluating dust levels.

‡ A "Version" indicated by "-x" after the Lab ID# with a value greater than 1 indicates a sample with amended data. The revision number is reflected by the value of "x".

§ Total Fungal Spores has been rounded to two significant figures to reflect analytical precision.

Client: TRC Solutions, Inc.
 C/O: Ms. Victoria Shepersky
 Re: 362890 West Tualatin View ES

Date of Sampling: 09-19-2019
 Date of Receipt: 09-20-2019
 Date of Report: 09-20-2019

SPORE TRAP REPORT: NON-VIABLE METHODOLOGY

Location:	2895 6746: A-110				2895 6449: A-118				2895 6331: A-120				2895 6411: Library			
Comments (see below)	None				None				None				None			
Lab ID-Version‡:	10735906-1				10735907-1				10735908-1				10735909-1			
Analysis Date:	09/20/2019				09/20/2019				09/20/2019				09/20/2019			
Sample volume (liters)	75				75				75				75			
Background debris (1-4+)††	2+				2+				2+				2+			
	raw ct.	Count/m3	DL/m3*	%	raw ct.	Count/m3	DL/m3*	%	raw ct.	Count/m3	DL/m3*	%	raw ct.	Count/m3	DL/m3*	%
Hyphal fragments	1	13	13	n/a					2	27	13	n/a				
Pollen																
§ TOTAL FUNGAL SPORES	3	40	n/a	100	305	4,100	n/a	100	10	130	n/a	100	2	27	n/a	100
Alternaria																
Ascospores					30	400	13	10	1	13	13	10				
Basidiospores					239	3,200	13	78	8	110	13	80	1	13	13	50
Chaetomium																
Cladosporium					6	80	13	2	1	13	13	10	1	13	13	50
Epicoccum																
Penicillium/Aspergillus types					30	400	13	10								
Pithomyces	2	27	13	67												
Rusts	1	13	13	33												
Smuts, Periconia, Myxomycetes																
Stachybotrys																
Torula																
Ulocladium																

Comments:

Spore types listed without a count or data entry were not detected during the course of the analysis for the respective sample, indicating a raw count of <1 spore.

The analytical sensitivity/limit of detection is the Count/m³ divided by the raw count, expressed in Count/m³.

*The detection limit/limit of detection (DL) per cubic meter (m³) has been rounded to two significant figures to reflect analytical precision.

††Background debris indicates the amount of non-biological particulate matter present on the trace (dust in the air) and the resulting visibility for the analyst. It is rated from 1+ (low) to 4+ (high). Counts from areas with 4+ background debris should be regarded as minimal counts and may be higher than reported. It is important to account for samples volumes when evaluating dust levels.

‡ A "Version" indicated by "-x" after the Lab ID# with a value greater than 1 indicates a sample with amended data. The revision number is reflected by the value of "x".

§ Total Fungal Spores has been rounded to two significant figures to reflect analytical precision.

Client: TRC Solutions, Inc.
 C/O: Ms. Victoria Shepersky
 Re: 362890 West Tualatin View ES

Date of Sampling: 09-19-2019
 Date of Receipt: 09-20-2019
 Date of Report: 09-20-2019

SPORE TRAP REPORT: NON-VIABLE METHODOLOGY

Location:	2895 6433: Boiler Room				2895 6410: A-122				2895 6425: Outside Air A-122			
Comments (see below)	None				None				None			
Lab ID-Version‡:	10735910-1				10735911-1				10735912-1			
Analysis Date:	09/20/2019				09/20/2019				09/20/2019			
Sample volume (liters)	75				75				75			
Background debris (1-4+)††	2+				2+				2+			
	raw ct.	Count/m3	DL/m3*	%	raw ct.	Count/m3	DL/m3*	%	raw ct.	Count/m3	DL/m3*	%
Hyphal fragments	1	13	13	n/a	2	27	13	n/a				
Pollen												
§ TOTAL FUNGAL SPORES	210	18,000	n/a	100	120	1,600	n/a	100	227	27,000	n/a	100
Alternaria	1	13	13	< 1								
Ascospores	48	640	13	4	9	120	13	8	94	1,300	13	5
Basidiospores	123	16,000	130	93	18	240	13	15	94	25,000	270	93
Chaetomium												
Cladosporium	31	410	13	2	2	27	13	2	30	400	13	1
Epicoccum												
Penicillium/Aspergillus types	7	93	13	1	91	1,200	13	76	4	53	13	< 1
Pithomyces												
Rusts												
Smuts, Periconia, Myxomycetes									5	67	13	< 1
Stachybotrys												
Torula												
Ulocladium												

Comments:

Spore types listed without a count or data entry were not detected during the course of the analysis for the respective sample, indicating a raw count of <1 spore.

The analytical sensitivity/limit of detection is the Count/m³ divided by the raw count, expressed in Count/m³.

*The detection limit/limit of detection (DL) per cubic meter (m³) has been rounded to two significant figures to reflect analytical precision.

††Background debris indicates the amount of non-biological particulate matter present on the trace (dust in the air) and the resulting visibility for the analyst. It is rated from 1+ (low) to 4+ (high). Counts from areas with 4+ background debris should be regarded as minimal counts and may be higher than reported. It is important to account for samples volumes when evaluating dust levels.

‡ A "Version" indicated by "-x" after the Lab ID# with a value greater than 1 indicates a sample with amended data. The revision number is reflected by the value of "x".

§ Total Fungal Spores has been rounded to two significant figures to reflect analytical precision.

**CERTIFICATE
of
FINAL VISUAL INSPECTION
and
FINAL CLEARANCE AIR MONITORING**

Final Visual Inspection and Final Clearance Air Monitoring Protocol:

TRC Environmental Corporation (TRC) collected clearance samples in accordance with USEPA Regulation 40 CFR, Part 763 (AHERA), Oregon Department of Environmental Quality (DEQ), and the NIOSH 7400 method. At the conclusion of the asbestos abatement action, TRC visually inspected the work area to determine that ALL DUST AND DEBRIS HAD BEEN REMOVED. Any dust or debris identified during the inspection was cleaned or identified to be non-asbestos containing. Once the work area passed the final visual inspection, final air clearance samples were collected using sampling methods in accordance with 40 CFR Part 763, Appendix A. Final clearance air samples were collected by individuals qualified to collect air samples as defined by the USEPA and DEQ. The air samples were submitted to an accredited laboratory or a NIOSH 582 certified microscopist capable of performing Phase Contrast Microscopy (PCM). The abatement action is considered complete when all concentrations of the five PCM results are less than or equal to 0.010 f/cc. Fewer than five samples may be collected for secondary containments when abatement is less than 32 SF, 50 LF, or the quantity of a 55 gal. drum of ACM.

Project: BSD - West Tualatin View E.S. Project #: 362890
 Location: Room A118 (SE corner)
 Sample Analysis Conducted by: Jason Stone Date: 10/2/19

Sample #	Sample Location	Flow Rate (l/m)			Time			Total Volume	Fibers/Fields	LOD (2.7/vol)	PCM Result (f/cc)
		Pre	Post	Ave.	On	Off	Total				
A118-01	A118 SE corner	12	12	12	0900	1040	100	1200	2/100	0.0023	< LOD
-02		12	12	12	0900	1040	100	1200	2.5/100	0.0023	< LOD
-03		12	12	12	0900	1040	100	1200	2/100	0.0023	< LOD
-04		12	12	12	0900	1040	100	1200	1/100	0.0023	< LOD
-05		12	12	12	0900	1040	100	1200	2/100	0.0023	< LOD

Based on the analytical results presented in the table above, the abatement activity is considered to be complete, and the area is authorized for re-occupancy.

Comments:

TRC Rep: Jason Stone Contractor: PAS

**CERTIFICATE
of
FINAL VISUAL INSPECTION
and
FINAL CLEARANCE AIR MONITORING**

Final Visual Inspection and Final Clearance Air Monitoring Protocol:

TRC Environmental Corporation (TRC) collected clearance samples in accordance with USEPA Regulation 40 CFR, Part 763 (AHERA), Oregon Department of Environmental Quality (DEQ), and the NIOSH 7400 method. At the conclusion of the asbestos abatement action, TRC visually inspected the work area to determine that ALL DUST AND DEBRIS HAD BEEN REMOVED. Any dust or debris identified during the inspection was cleaned or identified to be non-asbestos containing. Once the work area passed the final visual inspection, final air clearance samples were collected using sampling methods in accordance with 40 CFR Part 763, Appendix A. Final clearance air samples were collected by individuals qualified to collect air samples as defined by the USEPA and DEQ. The air samples were submitted to an accredited laboratory or a NIOSH 582 certified microscopist capable of performing Phase Contrast Microscopy (PCM). The abatement action is considered complete when all concentrations of the five PCM results are less than or equal to 0.010 f/cc. Fewer than five samples may be collected for secondary containments when abatement is less than 32 SF, 50 LF, or the quantity of a 55 gal. drum of ACM.

Project: West Tualatin View E.S. Project #: 362890
 Location: Room A118 (SW corner)
 Sample Analysis Conducted by: Jason Stone Date: 10/7/19

Sample #	Sample Location	Flow Rate (l/m)			Time			Total Volume	Fibers/Fields	LOD (2.7/vol)	PCM Result (f/cc)
		Pre	Post	Ave.	On	Off	Total				
A118-01	A118 SW corner	12	12	12	1500	1640	100	1200	3/100	0.0023	< LOD
A118-02	↓	12	12	12	1500	1640	100	1200	3/100	0.0023	< LOD
A118-03		12	12	12	1500	1640	100	1200	3/100	0.0023	< LOD
A118-04		12	12	12	1500	1640	100	1200	1/100	0.0023	< LOD
A118-05		12	12	12	1500	1640	100	1200	1.5/100	0.0023	< LOD

Based on the analytical results presented in the table above, the abatement activity is considered to be complete, and the area is authorized for re-occupancy.

Comments:

TRC Rep: Jason Stone Contractor: PAS

Report for:

Ms. Victoria Shepersky
TRC Solutions, Inc.
4105 SE International Way, Suite 505
Milwaukie, OR 97222

Regarding: Project: 362890; West Tualatin View ES
EML ID: 2274514

Approved by:



Operations Manager
Joshua Cox

Dates of Analysis:

Spore trap analysis: 10-12-2019

Service SOPs: Spore trap analysis (EM-MY-S-1038)
AIHA-LAP, LLC accredited service, Lab ID #102297

All samples were received in acceptable condition unless noted in the Report Comments portion in the body of the report. Due to the nature of the analyses performed, field blank correction of results is not applied. The results relate only to the samples as received. Sample air volume is supplied by the client.

Eurofins EMLab P&K ("the Company") shall have no liability to the client or the client's customer with respect to decisions or recommendations made, actions taken or courses of conduct implemented by either the client or the client's customer as a result of or based upon the Test Results. In no event shall the Company be liable to the client with respect to the Test Results except for the Company's own willful misconduct or gross negligence nor shall the Company be liable for incidental or consequential damages or lost profits or revenues to the fullest extent such liability may be disclaimed by law, even if the Company has been advised of the possibility of such damages, lost profits or lost revenues. In no event shall the Company's liability with respect to the Test Results exceed the amount paid to the Company by the client therefor.

Eurofins EMLab P&K's LabServe® reporting system includes automated fail-safes to ensure that all AIHA-LAP, LLC quality requirements are met and notifications are added to reports when any quality steps remain pending.

Client: TRC Solutions, Inc.
 C/O: Ms. Victoria Shepersky
 Re: 362890; West Tualatin View ES

Date of Sampling: 10-11-2019
 Date of Receipt: 10-12-2019
 Date of Report: 10-12-2019

SPORE TRAP REPORT: NON-VIABLE METHODOLOGY

Location:	29149534: Outside Air East				29151531: A102				29149536: A118			
Comments (see below)	A				A				A			
Lab ID-Version‡:	10814715-1				10814716-1				10814717-1			
Analysis Date:	10/12/2019				10/12/2019				10/12/2019			
Sample volume (liters)	75				75				75			
Background debris (1-4+)††	3+				2+				2+			
	raw ct.	Count/m3	DL/m3*	%	raw ct.	Count/m3	DL/m3*	%	raw ct.	Count/m3	DL/m3*	%
Hypthal fragments	9	120	13	n/a	3	40	13	n/a	3	40	13	n/a
Pollen												
§ TOTAL FUNGAL SPORES	83	1,100	n/a	100	9	120	n/a	100	583	240,000	n/a	100
Alternaria	5	67	13	6								
Ascospores	16	210	13	19					1	13	13	< 1
Basidiospores	17	230	13	20	3	40	13	33	2	27	13	< 1
Chaetomium												
Cladosporium	22	290	13	27	5	67	13	56	128	1,700	13	1
Epicoccum												
Oidium	1	13	13	1								
Penicillium/Aspergillus types	6	80	13	7					450	240,000	530	99
Rusts	2	27	13	2								
Smuts, Periconia, Myxomycetes	13	170	13	16	1	13	13	11	2	27	13	< 1
Stachybotrys												
Torula	1	13	13	1								
Ulocladium												

Comments: A) Analysis of replicate sample is delayed. Secondary data review is delayed.

Spore types listed without a count or data entry were not detected during the course of the analysis for the respective sample, indicating a raw count of <1 spore.

The analytical sensitivity/limit of detection is the Count/m³ divided by the raw count, expressed in Count/m³.

*The detection limit/limit of detection (DL) per cubic meter (m³) has been rounded to two significant figures to reflect analytical precision.

††Background debris indicates the amount of non-biological particulate matter present on the trace (dust in the air) and the resulting visibility for the analyst. It is rated from 1+ (low) to 4+ (high). Counts from areas with 4+ background debris should be regarded as minimal counts and may be higher than reported. It is important to account for samples volumes when evaluating dust levels.

‡ A "Version" indicated by "-x" after the Lab ID# with a value greater than 1 indicates a sample with amended data. The revision number is reflected by the value of "x".

§ Total Fungal Spores has been rounded to two significant figures to reflect analytical precision.

Client: TRC Solutions, Inc.
 C/O: Ms. Victoria Shepersky
 Re: 362890; West Tualatin View ES

Date of Sampling: 10-11-2019
 Date of Receipt: 10-12-2019
 Date of Report: 10-12-2019

SPORE TRAP REPORT: NON-VIABLE METHODOLOGY

Location:	29149517: Tech Rm N. Containment				29151461: Tech Rm S. Containment				29149526: Outside Air West			
Comments (see below)	A				A				A			
Lab ID-Version‡:	10814718-1				10814719-1				10814720-1			
Analysis Date:	10/12/2019				10/12/2019				10/12/2019			
Sample volume (liters)	75				75				75			
Background debris (1-4+)††	3+				3+				3+			
	raw ct.	Count/m3	DL/m3*	%	raw ct.	Count/m3	DL/m3*	%	raw ct.	Count/m3	DL/m3*	%
Hypthal fragments	2	27	13	n/a	2	27	13	n/a	11	150	13	n/a
Pollen									2	27	13	n/a
§ TOTAL FUNGAL SPORES	348	110,000	n/a	100	116	14,000	n/a	100	126	1,700	n/a	100
Alternaria												
Ascospores	2	27	13	< 1	2	27	13	< 1	16	210	13	13
Basidiospores	2	27	13	< 1	2	27	13	< 1	20	270	13	16
Chaetomium												
Cladosporium	132	1,800	13	2	5	67	13	< 1	41	550	13	33
Epicoccum									2	27	13	2
Oidium												
Penicillium/Aspergillus types	211	110,000	530	98	105	14,000	130	99	31	410	13	25
Rusts									6	80	13	5
Smuts, Periconia, Myxomycetes	1	13	13	< 1	2	27	13	< 1	10	130	13	8
Stachybotrys												
Torula												
Ulocladium												

Comments: A) Analysis of replicate sample is delayed. Secondary data review is delayed.

Spore types listed without a count or data entry were not detected during the course of the analysis for the respective sample, indicating a raw count of <1 spore.

The analytical sensitivity/limit of detection is the Count/m³ divided by the raw count, expressed in Count/m³.

*The detection limit/limit of detection (DL) per cubic meter (m³) has been rounded to two significant figures to reflect analytical precision.

††Background debris indicates the amount of non-biological particulate matter present on the trace (dust in the air) and the resulting visibility for the analyst. It is rated from 1+ (low) to 4+ (high). Counts from areas with 4+ background debris should be regarded as minimal counts and may be higher than reported. It is important to account for samples volumes when evaluating dust levels.

‡ A "Version" indicated by "-x" after the Lab ID# with a value greater than 1 indicates a sample with amended data. The revision number is reflected by the value of "x".

§ Total Fungal Spores has been rounded to two significant figures to reflect analytical precision.

Client: TRC Solutions, Inc.
 C/O: Ms. Victoria Shepersky
 Re: 362890; West Tualatin View ES

Date of Sampling: 10-11-2019
 Date of Receipt: 10-12-2019
 Date of Report: 10-12-2019

MoldRANGE™: Extended Outdoor Comparison
Outdoor Location: 29149534, Outside Air East

Fungi Identified	Outdoor data	Typical Outdoor Data for: October in Oregon† (n‡=1240)						Typical Outdoor Data for: The entire year in Oregon† (n‡=14476)					
		very low	low	med	high	very high	freq %	very low	low	med	high	very high	freq %
Generally able to grow indoors*													
Alternaria	67	13	13	27	53	110	30	13	13	27	53	110	21
Bipolaris/Drechslera group	-	7	13	13	51	67	4	10	13	13	40	53	3
Chaetomium	-	10	13	13	27	40	7	10	13	13	27	50	6
Cladosporium	290	150	270	1,000	2,700	4,700	96	53	110	370	1,400	2,700	85
Curvularia	-	8	13	13	26	46	3	8	13	13	27	53	2
Epicoccum	-	13	13	27	67	130	28	13	13	20	53	89	15
Nigrospora	-	7	8	13	53	53	3	7	13	13	27	53	2
Penicillium/Aspergillus types	80	110	160	480	1,200	1,900	93	53	110	270	650	1,100	87
Stachybotrys	-	9	13	27	150	2,500	2	13	13	13	52	160	2
Torula	13	13	13	25	53	54	6	13	13	27	53	80	6
Seldom found growing indoors**													
Ascospores	210	110	240	1,000	3,400	5,700	94	53	110	430	1,500	2,800	89
Basidiospores	230	350	890	4,500	14,000	23,000	99	110	270	1,100	4,300	8,300	96
Oidium	13	13	13	25	53	80	18	13	13	27	67	120	14
Rusts	27	13	13	27	67	200	29	13	13	27	53	110	18
Smuts, Periconia, Myxomycetes	170	13	13	53	190	420	66	13	13	53	160	410	51
§ TOTAL SPORES/m3	1,100												

†The 'Typical Outdoor Data' represents the typical outdoor spore levels for the location and time frame indicated. The last column represents the frequency of occurrence. The very low, low, med, high, and very high values represent the 10, 20, 50, 80, and 90 percentile values of the spore type when it is detected. For example, if the frequency of occurrence is 63% and the low value is 53, it would mean that the given spore type is detected 63% of the time and, when detected, 20% of the time it is present in levels above the detection limit and below 53 spores/m3. These values are updated periodically, and if enough data is not available to make a statistically meaningful assessment, it is indicated with a dash.

§ Total Spores/m3 has been rounded to two significant figures to reflect analytical precision.

* The spores in this category are generally capable of growing on wet building materials in addition to growing outdoors. Building related growth is dependent upon the fungal type, moisture level, type of material, and other factors. *Cladosporium* is one of the predominant spore types worldwide and is frequently present in high numbers. *Penicillium/Aspergillus* species colonize both outdoor and indoor wet surfaces rapidly and are very easily dispersed. Other genera are usually present in lesser numbers.

** These fungi are generally not found growing on wet building materials. For example, the rusts and smuts are obligate plant pathogens. However, in each group there are notable exceptions. For example, agents of wood decay are members of the basidiomycetes and high counts of a single morphological type of basidiospore on an inside sample should be considered significant.

‡n = number of samples used to calculate data.

Interpretation of the data contained in this report is left to the client or the persons who conducted the field work. This report is provided for informational and comparative purposes only and should not be relied upon for any other purpose. "Typical outdoor data" are based on the results of the analysis of samples delivered to and analyzed by Eurofins EMLab P&K and assumptions regarding the origins of those samples. Sampling techniques, contaminants infecting samples, unrepresentative samples and other similar or dissimilar factors may affect these results. In addition, Eurofins EMLab P&K may not have received and tested a representative number of samples for every region or time period. Eurofins EMLab P&K hereby disclaims any liability for any and all direct, indirect, punitive, incidental, special or consequential damages arising out of the use or interpretation of the data contained in, or any actions taken or omitted in reliance upon, this report.

Report for:

Ms. Victoria Shepersky
TRC Solutions, Inc.
4105 SE International Way, Suite 505
Milwaukie, OR 97222

Regarding: Project: 362890; West Tualatin View Elementary
EML ID: 2276023

Approved by:



Operations Manager
Joshua Cox

Dates of Analysis:

Spore trap analysis: 10-15-2019

Service SOPs: Spore trap analysis (EM-MY-S-1038)
AIHA-LAP, LLC accredited service, Lab ID #102297

All samples were received in acceptable condition unless noted in the Report Comments portion in the body of the report. Due to the nature of the analyses performed, field blank correction of results is not applied. The results relate only to the samples as received. Sample air volume is supplied by the client.

Eurofins EMLab P&K ("the Company") shall have no liability to the client or the client's customer with respect to decisions or recommendations made, actions taken or courses of conduct implemented by either the client or the client's customer as a result of or based upon the Test Results. In no event shall the Company be liable to the client with respect to the Test Results except for the Company's own willful misconduct or gross negligence nor shall the Company be liable for incidental or consequential damages or lost profits or revenues to the fullest extent such liability may be disclaimed by law, even if the Company has been advised of the possibility of such damages, lost profits or lost revenues. In no event shall the Company's liability with respect to the Test Results exceed the amount paid to the Company by the client therefor.

Eurofins EMLab P&K's LabServe® reporting system includes automated fail-safes to ensure that all AIHA-LAP, LLC quality requirements are met and notifications are added to reports when any quality steps remain pending.

Client: TRC Solutions, Inc.
 C/O: Ms. Victoria Shepersky
 Re: 362890; West Tualatin View Elementary

Date of Sampling: 10-14-2019
 Date of Receipt: 10-15-2019
 Date of Report: 10-15-2019

SPORE TRAP REPORT: NON-VIABLE METHODOLOGY

Location:	2914 9710: Outdoor 1 Near Cafeteria				2914 9812: Main Office				2914 9693: Principals Office				2914 9264: Mail Room			
Comments (see below)	None				None				None				None			
Lab ID-Version‡:	10821181-1				10821182-1				10821183-1				10821184-1			
Analysis Date:	10/15/2019				10/15/2019				10/15/2019				10/15/2019			
Sample volume (liters)	75				75				75				75			
Background debris (1-4+)††	3+				3+				3+				4+			
	raw ct.	Count/m3	DL/m3*	%	raw ct.	Count/m3	DL/m3*	%	raw ct.	Count/m3	DL/m3*	%	raw ct.	Count/m3	DL/m3*	%
Hyphal fragments													1	13	13	n/a
Pollen																
§ TOTAL FUNGAL SPORES	65	5,500	n/a	100	4	53	n/a	100	22	290	n/a	100	17	230	n/a	100
Alternaria					1	13	13	25								
Ascospores	13	170	13	3									1	13	13	6
Basidiospores	39	5,200	130	94					10	130	13	45	6	80	13	35
Chaetomium																
Cladosporium	10	130	13	2	2	27	13	50	4	53	13	18	4	53	13	24
Other brown																
Penicillium/Aspergillus types	2	27	13	< 1					8	110	13	36	6	80	13	35
Smuts, Periconia, Myxomycetes	1	13	13	< 1	1	13	13	25								
Stachybotrys																
Stemphylium																
Torula																
Ulocladium																
Zygomycetes																

Comments:

Spore types listed without a count or data entry were not detected during the course of the analysis for the respective sample, indicating a raw count of <1 spore.

The analytical sensitivity/limit of detection is the Count/m³ divided by the raw count, expressed in Count/m³.

*The detection limit/limit of detection (DL) per cubic meter (m³) has been rounded to two significant figures to reflect analytical precision.

††Background debris indicates the amount of non-biological particulate matter present on the trace (dust in the air) and the resulting visibility for the analyst. It is rated from 1+ (low) to 4+ (high). Counts from areas with 4+ background debris should be regarded as minimal counts and may be higher than reported. It is important to account for samples volumes when evaluating dust levels.

‡ A "Version" indicated by "-x" after the Lab ID# with a value greater than 1 indicates a sample with amended data. The revision number is reflected by the value of "x".

§ Total Fungal Spores has been rounded to two significant figures to reflect analytical precision.

Client: TRC Solutions, Inc.
 C/O: Ms. Victoria Shepersky
 Re: 362890; West Tualatin View Elementary

Date of Sampling: 10-14-2019
 Date of Receipt: 10-15-2019
 Date of Report: 10-15-2019

SPORE TRAP REPORT: NON-VIABLE METHODOLOGY

Location:	2915 1532: Health Room				2914 9692: Book Room				2914 9685: Stairwell				2914 9885: A118			
Comments (see below)	None				None				None				None			
Lab ID-Version‡:	10821185-1				10821186-1				10821188-1				10821189-1			
Analysis Date:	10/15/2019				10/15/2019				10/15/2019				10/15/2019			
Sample volume (liters)	75				75				75				75			
Background debris (1-4+)††	3+				3+				3+				2+			
	raw ct.	Count/m3	DL/m3*	%	raw ct.	Count/m3	DL/m3*	%	raw ct.	Count/m3	DL/m3*	%	raw ct.	Count/m3	DL/m3*	%
Hyphal fragments																
Pollen					2	27	13	n/a								
§ TOTAL FUNGAL SPORES	12	160	n/a	100	4	53	n/a	100	42	560	n/a	100	43	570	n/a	100
Alternaria																
Ascospores																
Basidiospores	7	93	13	58	1	13	13	25	1	13	13	2	15	200	13	35
Chaetomium																
Cladosporium	2	27	13	17	1	13	13	25	4	53	13	10	4	53	13	9
Other brown																
Penicillium/Aspergillus types	3	40	13	25	2	27	13	50	37	490	13	88	24	320	13	56
Smuts, Periconia, Myxomycetes																
Stachybotrys																
Stemphylium																
Torula																
Ulocladium																
Zygomycetes																

Comments:

Spore types listed without a count or data entry were not detected during the course of the analysis for the respective sample, indicating a raw count of <1 spore.

The analytical sensitivity/limit of detection is the Count/m³ divided by the raw count, expressed in Count/m³.

*The detection limit/limit of detection (DL) per cubic meter (m³) has been rounded to two significant figures to reflect analytical precision.

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Client: TRC Solutions, Inc.
 C/O: Ms. Victoria Shepersky
 Re: 362890; West Tualatin View Elementary

Date of Sampling: 10-14-2019
 Date of Receipt: 10-15-2019
 Date of Report: 10-15-2019

SPORE TRAP REPORT: NON-VIABLE METHODOLOGY

Location:	2914 9899: Library				2914 9881: Rec Room				2914 9900: Staff Room				2914 9731: A120			
Comments (see below)	None				None				None				None			
Lab ID-Version‡:	10821190-1				10821191-1				10821192-1				10821193-1			
Analysis Date:	10/15/2019				10/15/2019				10/15/2019				10/15/2019			
Sample volume (liters)	75				75				75				75			
Background debris (1-4+)††	3+				3+				3+				3+			
	raw ct.	Count/m3	DL/m3*	%	raw ct.	Count/m3	DL/m3*	%	raw ct.	Count/m3	DL/m3*	%	raw ct.	Count/m3	DL/m3*	%
Hyphal fragments					1	13	13	n/a								
Pollen																
§ TOTAL FUNGAL SPORES	14	190	n/a	100	11	150	n/a	100	26	350	n/a	100	31	410	n/a	100
Alternaria																
Ascospores	1	13	13	7					2	27	13	8				
Basidiospores	8	110	13	57	7	93	13	64	16	210	13	62	12	160	13	39
Chaetomium																
Cladosporium	2	27	13	14	2	27	13	18	2	27	13	8	5	67	13	16
Other brown									1	13	13	4				
Penicillium/Aspergillus types	3	40	13	21	2	27	13	18	5	67	13	19	14	190	13	45
Smuts, Periconia, Myxomycetes																
Stachybotrys																
Stemphylium																
Torula																
Ulocladium																
Zygomycetes																

Comments:

Spore types listed without a count or data entry were not detected during the course of the analysis for the respective sample, indicating a raw count of <1 spore.

The analytical sensitivity/limit of detection is the Count/m³ divided by the raw count, expressed in Count/m³.

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§ Total Fungal Spores has been rounded to two significant figures to reflect analytical precision.

Client: TRC Solutions, Inc.
 C/O: Ms. Victoria Shepersky
 Re: 362890; West Tualatin View Elementary

Date of Sampling: 10-14-2019
 Date of Receipt: 10-15-2019
 Date of Report: 10-15-2019

SPORE TRAP REPORT: NON-VIABLE METHODOLOGY

Location:	2914 9893: A122				2914 9013: A114				2914 9269: Girls RR				2914 9889: Production Room			
Comments (see below)	None				None				None				None			
Lab ID-Version‡:	10821194-1				10821195-1				10821196-1				10821197-1			
Analysis Date:	10/15/2019				10/15/2019				10/15/2019				10/15/2019			
Sample volume (liters)	75				75				75				75			
Background debris (1-4+)††	3+				3+				3+				3+			
	raw ct.	Count/m3	DL/m3*	%	raw ct.	Count/m3	DL/m3*	%	raw ct.	Count/m3	DL/m3*	%	raw ct.	Count/m3	DL/m3*	%
Hyphal fragments	1	13	13	n/a												
Pollen																
§ TOTAL FUNGAL SPORES	21	280	n/a	100	11	150	n/a	100	13	170	n/a	100	7	93	n/a	100
Alternaria	1	13	13	5												
Ascospores	2	27	13	10	1	13	13	9	1	13	13	8				
Basidiospores	11	150	13	52	2	27	13	18	2	27	13	15	2	27	13	29
Chaetomium																
Cladosporium	1	13	13	5	4	53	13	36								
Other brown																
Penicillium/Aspergillus types	5	67	13	24	4	53	13	36	9	120	13	69	5	67	13	71
Smuts, Periconia, Myxomycetes	1	13	13	5												
Stachybotrys									1	13	13	8				
Stemphylium																
Torula																
Ulocladium																
Zygomycetes																

Comments:

Spore types listed without a count or data entry were not detected during the course of the analysis for the respective sample, indicating a raw count of <1 spore.

The analytical sensitivity/limit of detection is the Count/m³ divided by the raw count, expressed in Count/m³.

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§ Total Fungal Spores has been rounded to two significant figures to reflect analytical precision.

Client: TRC Solutions, Inc.
 C/O: Ms. Victoria Shepersky
 Re: 362890; West Tualatin View Elementary

Date of Sampling: 10-14-2019
 Date of Receipt: 10-15-2019
 Date of Report: 10-15-2019

SPORE TRAP REPORT: NON-VIABLE METHODOLOGY

Location:	2914 9686: Cafeteria 1C				2915 2548: Outdoor 2 Front			
Comments (see below)	None				None			
Lab ID-Version‡:	10821198-1				10821199-1			
Analysis Date:	10/15/2019				10/15/2019			
Sample volume (liters)	75				75			
Background debris (1-4+)††	3+				1+			
	raw ct.	Count/m3	DL/m3*	%	raw ct.	Count/m3	DL/m3*	%
Hyphal fragments								
Pollen					1	13	13	n/a
§ TOTAL FUNGAL SPORES	7	93	n/a	100	124	1,700	n/a	100
Alternaria								
Ascospores					14	190	13	11
Basidiospores	1	13	13	14	101	1,300	13	81
Chaetomium								
Cladosporium	2	27	13	29	1	13	13	1
Other brown								
Penicillium/Aspergillus types	3	40	13	43	8	110	13	6
Smuts, Periconia, Myxomycetes	1	13	13	14				
Stachybotrys								
Stemphylium								
Torula								
Ulocladium								
Zygomycetes								

Comments:

Spore types listed without a count or data entry were not detected during the course of the analysis for the respective sample, indicating a raw count of <1 spore.

The analytical sensitivity/limit of detection is the Count/m³ divided by the raw count, expressed in Count/m³.

*The detection limit/limit of detection (DL) per cubic meter (m³) has been rounded to two significant figures to reflect analytical precision.

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§ Total Fungal Spores has been rounded to two significant figures to reflect analytical precision.

Report for:

Ms. Victoria Shepersky
TRC Solutions, Inc.
4105 SE International Way, Suite 505
Milwaukie, OR 97222

Regarding: Project: 362890; West Tualatin View ES
EML ID: 2278857

Approved by:



Operations Manager
Joshua Cox

Dates of Analysis:

Spore trap analysis: 10-18-2019

Service SOPs: Spore trap analysis (EM-MY-S-1038)
AIHA-LAP, LLC accredited service, Lab ID #102297

All samples were received in acceptable condition unless noted in the Report Comments portion in the body of the report. Due to the nature of the analyses performed, field blank correction of results is not applied. The results relate only to the samples as received. Sample air volume is supplied by the client.

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Client: TRC Solutions, Inc.
 C/O: Ms. Victoria Shepersky
 Re: 362890; West Tualatin View ES

Date of Sampling: 10-17-2019
 Date of Receipt: 10-18-2019
 Date of Report: 10-18-2019

SPORE TRAP REPORT: NON-VIABLE METHODOLOGY

Location:	29149521: Outside Air East				29149525: Main Hall Entry at Main Office				29149540: Main Hall at A102				29149538: Main Hall at Library			
Comments (see below)	None				None				None				None			
Lab ID-Version‡:	10835475-1				10835476-1				10835477-1				10835478-1			
Analysis Date:	10/18/2019				10/18/2019				10/18/2019				10/18/2019			
Sample volume (liters)	75				75				75				75			
Background debris (1-4+)††	1+				3+				1+				1+			
	raw ct.	Count/m3	DL/m3*	%	raw ct.	Count/m3	DL/m3*	%	raw ct.	Count/m3	DL/m3*	%	raw ct.	Count/m3	DL/m3*	%
Hyphal fragments	1	13	13	n/a	1	13	13	n/a								
Pollen	1	13	13	n/a												
§ TOTAL FUNGAL SPORES	208	38,000	n/a	100	101	1,300	n/a	100	9	120	n/a	100	25	330	n/a	100
Ascospores	71	3,800	53	10	18	240	13	18	1	13	13	11	3	40	13	12
Basidiospores	127	34,000	270	90	82	1,100	13	81	8	110	13	89	21	280	13	84
Chaetomium																
Cladosporium	7	93	13	< 1												
Epicoccum																
Penicillium/Aspergillus types													1	13	13	4
Rusts	3	40	13	< 1												
Smuts, Periconia, Myxomycetes					1	13	13	1								
Stachybotrys																
Stemphylium																
Torula																
Ulocladium																
Zygomycetes																

Comments:

Spore types listed without a count or data entry were not detected during the course of the analysis for the respective sample, indicating a raw count of <1 spore.

The analytical sensitivity/limit of detection is the Count/m³ divided by the raw count, expressed in Count/m³.

*The detection limit/limit of detection (DL) per cubic meter (m³) has been rounded to two significant figures to reflect analytical precision.

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§ Total Fungal Spores has been rounded to two significant figures to reflect analytical precision.

Client: TRC Solutions, Inc.
 C/O: Ms. Victoria Shepersky
 Re: 362890; West Tualatin View ES

Date of Sampling: 10-17-2019
 Date of Receipt: 10-18-2019
 Date of Report: 10-18-2019

SPORE TRAP REPORT: NON-VIABLE METHODOLOGY

Location:	29149537: Main Hall at A116, A114, A112 + A110				29149542: A-Hall at Staff Rm				29149580: A-Hall at A120				29149560: A120			
Comments (see below)	None				None				None				None			
Lab ID-Version‡:	10835479-1				10835480-1				10835481-1				10835482-1			
Analysis Date:	10/18/2019				10/18/2019				10/18/2019				10/18/2019			
Sample volume (liters)	75				75				75				75			
Background debris (1-4+)††	1+				1+				< 1+				1+			
	raw ct.	Count/m3	DL/m3*	%	raw ct.	Count/m3	DL/m3*	%	raw ct.	Count/m3	DL/m3*	%	raw ct.	Count/m3	DL/m3*	%
Hyphal fragments																
Pollen																
§ TOTAL FUNGAL SPORES	73	970	n/a	100	18	240	n/a	100	61	810	n/a	100	48	640	n/a	100
Ascospores	13	170	13	18	1	13	13	6	16	210	13	26	6	80	13	13
Basidiospores	52	690	13	71	16	210	13	89	45	600	13	74	41	550	13	85
Chaetomium																
Cladosporium	2	27	13	3												
Epicoccum													1	13	13	2
Penicillium/Aspergillus types	6	80	13	8	1	13	13	6								
Rusts																
Smuts, Periconia, Myxomycetes																
Stachybotrys																
Stemphylium																
Torula																
Ulocladium																

Comments:

Spore types listed without a count or data entry were not detected during the course of the analysis for the respective sample, indicating a raw count of <1 spore.

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§ Total Fungal Spores has been rounded to two significant figures to reflect analytical precision.

Client: TRC Solutions, Inc.
 C/O: Ms. Victoria Shepersky
 Re: 362890; West Tualatin View ES

Date of Sampling: 10-17-2019
 Date of Receipt: 10-18-2019
 Date of Report: 10-18-2019

SPORE TRAP REPORT: NON-VIABLE METHODOLOGY

Location:	29149520: A118				29149545: Counselors Office				29149646: LL10 Music				29149624: Outside Air West			
Comments (see below)	None				None				None				None			
Lab ID-Version‡:	10835483-1				10835484-1				10835485-1				10835486-1			
Analysis Date:	10/18/2019				10/18/2019				10/18/2019				10/18/2019			
Sample volume (liters)	75				75				75				75			
Background debris (1-4+)††	1+				2+				2+				1+			
	raw ct.	Count/m3	DL/m3*	%	raw ct.	Count/m3	DL/m3*	%	raw ct.	Count/m3	DL/m3*	%	raw ct.	Count/m3	DL/m3*	%
Hyphal fragments									2	27	13	n/a				
Pollen																
§ TOTAL FUNGAL SPORES	178	15,000	n/a	100	8	110	n/a	100	40	530	n/a	100	193	33,000	n/a	100
Ascospores	38	510	13	3	1	13	13	13	6	80	13	15	77	4,100	53	12
Basidiospores	103	14,000	130	93	5	67	13	63	12	160	13	30	108	29,000	270	87
Chaetomium																
Cladosporium	7	93	13	1	1	13	13	13	1	13	13	3	7	93	13	< 1
Epicoccum																
Penicillium/Aspergillus types	30	400	13	3	1	13	13	13	21	280	13	53				
Rusts																
Smuts, Periconia, Myxomycetes													1	13	13	< 1
Stachybotrys																
Stemphylium																
Torula																
Ulocladium																
Zygomycetes																

Comments:

Spore types listed without a count or data entry were not detected during the course of the analysis for the respective sample, indicating a raw count of <1 spore.

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§ Total Fungal Spores has been rounded to two significant figures to reflect analytical precision.

Report for:

Ms. Victoria Shepersky
TRC Solutions, Inc.
4105 SE International Way, Suite 505
Milwaukie, OR 97222

Regarding: Project: 362890; West Tualatin View
EML ID: 2280931

Approved by:



Technical Manager
Justin Ford

Dates of Analysis:

Spore trap analysis: 10-22-2019

Service SOPs: Spore trap analysis (EM-MY-S-1038)
AIHA-LAP, LLC accredited service, Lab ID #178599

All samples were received in acceptable condition unless noted in the Report Comments portion in the body of the report. Due to the nature of the analyses performed, field blank correction of results is not applied. The results relate only to the samples as received. Sample air volume is supplied by the client.

Eurofins EMLab P&K ("the Company") shall have no liability to the client or the client's customer with respect to decisions or recommendations made, actions taken or courses of conduct implemented by either the client or the client's customer as a result of or based upon the Test Results. In no event shall the Company be liable to the client with respect to the Test Results except for the Company's own willful misconduct or gross negligence nor shall the Company be liable for incidental or consequential damages or lost profits or revenues to the fullest extent such liability may be disclaimed by law, even if the Company has been advised of the possibility of such damages, lost profits or lost revenues. In no event shall the Company's liability with respect to the Test Results exceed the amount paid to the Company by the client therefor.

Eurofins EMLab P&K's LabServe® reporting system includes automated fail-safes to ensure that all AIHA-LAP, LLC quality requirements are met and notifications are added to reports when any quality steps remain pending.

Client: TRC Solutions, Inc.
 C/O: Ms. Victoria Shepersky
 Re: 362890; West Tualatin View

Date of Sampling: 10-21-2019
 Date of Receipt: 10-22-2019
 Date of Report: 10-22-2019

SPORE TRAP REPORT: NON-VIABLE METHODOLOGY

Location:	29149972: Outside Air West				29149999: A118				29149956: Music room (LL10)				29149997: Gymnasium SE			
Comments (see below)	None				None				None				None			
Lab ID-Version‡:	10845678-1				10845679-1				10845680-1				10845681-1			
Analysis Date:	10/22/2019				10/22/2019				10/22/2019				10/22/2019			
Sample volume (liters)	75				75				75				75			
Background debris (1-4+)††	1+				2+				2+				2+			
	raw ct.	Count/m3	DL/m3*	%	raw ct.	Count/m3	DL/m3*	%	raw ct.	Count/m3	DL/m3*	%	raw ct.	Count/m3	DL/m3*	%
Hyphal fragments																
Pollen																
§ TOTAL FUNGAL SPORES	652	8,700	n/a	100	9	120	n/a	100	1	13	n/a	100	6	80	n/a	100
Ascospores	251	3,300	13	38	1	13	13	11								
Basidiospores	388	5,200	13	60	6	80	13	67					5	67	13	83
Chaetomium																
Cladosporium	2	27	13	< 1												
Oidium																
Other brown					1	13	13	11								
Penicillium/Aspergillus types	11	150	13	2	1	13	13	11	1	13	13	100	1	13	13	17
Smuts, Periconia, Myxomycetes																
Stachybotrys																
Stemphylium																
Torula																
Ulocladium																
Zygomycetes																

Comments:

Spore types listed without a count or data entry were not detected during the course of the analysis for the respective sample, indicating a raw count of <1 spore.

The analytical sensitivity/limit of detection is the Count/m³ divided by the raw count, expressed in Count/m³.

*The detection limit/limit of detection (DL) per cubic meter (m³) has been rounded to two significant figures to reflect analytical precision.

††Background debris indicates the amount of non-biological particulate matter present on the trace (dust in the air) and the resulting visibility for the analyst. It is rated from 1+ (low) to 4+ (high). Counts from areas with 4+ background debris should be regarded as minimal counts and may be higher than reported. It is important to account for samples volumes when evaluating dust levels.

‡ A "Version" indicated by "-x" after the Lab ID# with a value greater than 1 indicates a sample with amended data. The revision number is reflected by the value of "x".

§ Total Fungal Spores has been rounded to two significant figures to reflect analytical precision.

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 C/O: Ms. Victoria Shepersky
 Re: 362890; West Tualatin View

Date of Sampling: 10-21-2019
 Date of Receipt: 10-22-2019
 Date of Report: 10-22-2019

SPORE TRAP REPORT: NON-VIABLE METHODOLOGY

Location:	29149969: Gymnasium NW				29149971: Stage				29149977: A Hall Stairwell				29149974: Technology Room South			
Comments (see below)	None				None				None				None			
Lab ID-Version‡:	10845682-1				10845683-1				10845684-1				10845685-1			
Analysis Date:	10/22/2019				10/22/2019				10/22/2019				10/22/2019			
Sample volume (liters)	75				75				75				75			
Background debris (1-4+)††	3+				3+				3+				2+			
	raw ct.	Count/m3	DL/m3*	%	raw ct.	Count/m3	DL/m3*	%	raw ct.	Count/m3	DL/m3*	%	raw ct.	Count/m3	DL/m3*	%
Hyphal fragments	1	13	13	n/a	1	13	13	n/a					1	13	13	n/a
Pollen					1	13	13	n/a								
§ TOTAL FUNGAL SPORES	15	200	n/a	100	19	250	n/a	100	32	430	n/a	100	28	370	n/a	100
Ascospores	3	40	13	20									4	53	13	14
Basidiospores	5	67	13	33	8	110	13	42	24	320	13	75	14	190	13	50
Chaetomium																
Cladosporium	2	27	13	13	4	53	13	21	1	13	13	3	2	27	13	7
Oidium																
Other brown	1	13	13	7												
Penicillium/Aspergillus types	4	53	13	27	7	93	13	37	7	93	13	22	8	110	13	29
Smuts, Periconia, Myxomycetes																
Stachybotrys																
Stemphylium																
Torula																
Ulocladium																
Zygomycetes																

Comments:

Spore types listed without a count or data entry were not detected during the course of the analysis for the respective sample, indicating a raw count of <1 spore.

The analytical sensitivity/limit of detection is the Count/m³ divided by the raw count, expressed in Count/m³.

*The detection limit/limit of detection (DL) per cubic meter (m³) has been rounded to two significant figures to reflect analytical precision.

††Background debris indicates the amount of non-biological particulate matter present on the trace (dust in the air) and the resulting visibility for the analyst. It is rated from 1+ (low) to 4+ (high). Counts from areas with 4+ background debris should be regarded as minimal counts and may be higher than reported. It is important to account for samples volumes when evaluating dust levels.

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Client: TRC Solutions, Inc.
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Date of Sampling: 10-21-2019
 Date of Receipt: 10-22-2019
 Date of Report: 10-22-2019

SPORE TRAP REPORT: NON-VIABLE METHODOLOGY

Location:	29149976: Technology Room North				29149982: Outside Air North			
Comments (see below)	None				None			
Lab ID-Version‡:	10845686-1				10845687-1			
Analysis Date:	10/22/2019				10/22/2019			
Sample volume (liters)	75				75			
Background debris (1-4+)††	3+				2+			
	raw ct.	Count/m3	DL/m3*	%	raw ct.	Count/m3	DL/m3*	%
Hyphal fragments					1	13	13	n/a
Pollen					5	67	13	n/a
§ TOTAL FUNGAL SPORES	28	370	n/a	100	403	5,400	n/a	100
Ascospores	1	13	13	4	244	3,300	13	61
Basidiospores	8	110	13	29	120	1,600	13	30
Chaetomium								
Cladosporium	3	40	13	11	21	280	13	5
Oidium					1	13	13	< 1
Other brown	1	13	13	4				
Penicillium/Aspergillus types	15	200	13	54	17	230	13	4
Smuts, Periconia, Myxomycetes								
Stachybotrys								
Stemphylium								
Torula								
Ulocladium								
Zygomycetes								

Comments:

Spore types listed without a count or data entry were not detected during the course of the analysis for the respective sample, indicating a raw count of <1 spore.

The analytical sensitivity/limit of detection is the Count/m³ divided by the raw count, expressed in Count/m³.

*The detection limit/limit of detection (DL) per cubic meter (m³) has been rounded to two significant figures to reflect analytical precision.

††Background debris indicates the amount of non-biological particulate matter present on the trace (dust in the air) and the resulting visibility for the analyst. It is rated from 1+ (low) to 4+ (high). Counts from areas with 4+ background debris should be regarded as minimal counts and may be higher than reported. It is important to account for samples volumes when evaluating dust levels.

‡ A "Version" indicated by "-x" after the Lab ID# with a value greater than 1 indicates a sample with amended data. The revision number is reflected by the value of "x".

§ Total Fungal Spores has been rounded to two significant figures to reflect analytical precision.

Client: TRC Solutions, Inc.
C/O: Ms. Victoria Shepersky
Re: 362890; West Tualatin View

Date of Sampling: 10-21-2019
Date of Receipt: 10-22-2019
Date of Report: 10-22-2019

MoldRANGE™, Local Climate; Extended Outdoor Comparison
Outdoor Location: 29149972, Outside Air West

Fungi Identified	Outdoor data	Typical Outdoor Data for: October in Oregon† EMLab Local Climate code¹						Typical Outdoor Data for: The entire year in Oregon† EMLab Local Climate code¹					
		A Annual Temp, B Elev., B Rain, B Temp. Range (n‡=171)						A Annual Temp, B Elev., B Rain, B Temp. Range (n‡=2055)					
Project zip code 97225	spores/m3	very low	low	med	high	very high	freq %	very low	low	med	high	very high	freq %
Generally able to grow indoors*													
Alternaria	-	13	13	19	53	80	30	13	13	13	53	67	19
Bipolaris/Drechslera group	-	-	-	-	-	-	4	10	13	13	27	50	2
Chaetomium	-	-	-	-	-	-	5	12	13	13	13	31	5
Cladosporium	27	320	480	1,400	3,300	5,600	99	53	110	430	1,600	3,100	87
Curvularia	-	-	-	-	-	-	2	13	13	13	13	13	1
Nigrospora	-	-	-	-	-	-	3	7	13	13	27	53	2
Other brown	-	13	13	27	53	91	38	13	13	13	53	67	25
Penicillium/Aspergillus types	150	160	290	560	1,800	2,400	98	53	110	320	800	1,500	90
Stachybotrys	-	-	-	-	-	-	1	7	13	13	110	1,000	< 1
Torula	-	-	-	-	-	-	5	13	13	13	40	60	6
Seldom found growing indoors**													
Ascospores	3,300	110	320	1,300	3,700	6,400	98	80	160	530	1,900	3,500	93
Basidiospores	5,200	650	1,700	5,800	13,000	18,000	> 99	200	370	1,400	4,700	8,500	98
Oidium	-	13	13	27	53	110	25	13	13	27	67	130	19
Rusts	-	13	13	13	40	67	36	13	13	20	53	93	22
Smuts, Periconia, Myxomycetes	-	13	13	53	130	260	67	13	13	40	110	220	52
§ TOTAL SPORES/m3	8,700												

¹EMLab Local Climate codes are a climate classification scheme for statewide geographic areas. The MoldRANGE™ Local Climate report uses the sampling location zip code to identify the EMLab Local Climate code in that area. Using information available from the NOAA weather database, the EMLab Local Climate code sharpens the precision of the MoldRANGE™ reporting system, providing more reliable estimates of the range and average concentrations of the different airborne fungal spore types for each region. Additional information on the EMLab Local Climate code system can be found on the last page of this report.

†The Typical Outdoor Data represents the typical outdoor spore levels across the state for the time period and EMLab Local Climate code indicated. The last column represents the frequency of occurrence. The very low, low, med, high, and very high values represent the 10, 20, 50, 80, and 90 percentile values of the spore type when it is detected. For example, if the frequency of occurrence is 63% and the low value is 53, it would mean that the given spore type is detected 63% of the time and, when detected, 20% of the time it is present in levels above the detection limit and below 53 spores/m3. These values are updated periodically and if not enough data is available to make a statistically meaningful assessment, it is indicated with a dash.

‡ n is the sample size used to calculate the MoldRANGE™ Local Climate data summarized in the table.

* The spores in this category are generally capable of growing on wet building materials in addition to growing outdoors. Building related growth is dependent upon the fungal type, moisture level, type of material, and other factors. *Cladosporium* is one of the predominant spore types worldwide and is frequently present in high numbers. *Penicillium/Aspergillus* species colonize both outdoor and indoor wet surfaces rapidly and are very easily dispersed. Other genera are usually present in lesser numbers.

** These fungi are generally not found growing on wet building materials. For example, the rusts and smuts are obligate plant pathogens. However, in each group there are notable exceptions. For example, agents of wood decay are members of the basidiomycetes and high counts of a single morphological type of basidiospore on an inside sample should be considered significant.

§ Total Spores/m3 has been rounded to two significant figures to reflect analytical precision.

Client: TRC Solutions, Inc.
C/O: Ms. Victoria Shepersky
Re: 362890; West Tualatin View

Date of Sampling: 10-21-2019
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MoldRANGE™, Local Climate; Extended Outdoor Comparison
Outdoor Location: 29149982, Outside Air North

Fungi Identified	Outdoor data	Typical Outdoor Data for: October in Oregon† EMLab Local Climate code¹						Typical Outdoor Data for: The entire year in Oregon† EMLab Local Climate code¹					
		A Annual Temp, B Elev., B Rain, B Temp. Range (n‡=171)						A Annual Temp, B Elev., B Rain, B Temp. Range (n‡=2055)					
Project zip code 97225	spores/m3	very low	low	med	high	very high	freq %	very low	low	med	high	very high	freq %
Generally able to grow indoors*													
Alternaria	-	13	13	19	53	80	30	13	13	13	53	67	19
Bipolaris/Drechslera group	-	-	-	-	-	-	4	10	13	13	27	50	2
Chaetomium	-	-	-	-	-	-	5	12	13	13	13	31	5
Cladosporium	280	320	480	1,400	3,300	5,600	99	53	110	430	1,600	3,100	87
Curvularia	-	-	-	-	-	-	2	13	13	13	13	13	1
Nigrospora	-	-	-	-	-	-	3	7	13	13	27	53	2
Other brown	-	13	13	27	53	91	38	13	13	13	53	67	25
Penicillium/Aspergillus types	230	160	290	560	1,800	2,400	98	53	110	320	800	1,500	90
Stachybotrys	-	-	-	-	-	-	1	7	13	13	110	1,000	< 1
Torula	-	-	-	-	-	-	5	13	13	13	40	60	6
Seldom found growing indoors**													
Ascospores	3,300	110	320	1,300	3,700	6,400	98	80	160	530	1,900	3,500	93
Basidiospores	1,600	650	1,700	5,800	13,000	18,000	> 99	200	370	1,400	4,700	8,500	98
Oidium	13	13	13	27	53	110	25	13	13	27	67	130	19
Rusts	-	13	13	13	40	67	36	13	13	20	53	93	22
Smuts, Periconia, Myxomycetes	-	13	13	53	130	260	67	13	13	40	110	220	52
§ TOTAL SPORES/m3	5,400												

¹EMLab Local Climate codes are a climate classification scheme for statewide geographic areas. The MoldRANGE™ Local Climate report uses the sampling location zip code to identify the EMLab Local Climate code in that area. Using information available from the NOAA weather database, the EMLab Local Climate code sharpens the precision of the MoldRANGE™ reporting system, providing more reliable estimates of the range and average concentrations of the different airborne fungal spore types for each region. Additional information on the EMLab Local Climate code system can be found on the last page of this report.

†The Typical Outdoor Data represents the typical outdoor spore levels across the state for the time period and EMLab Local Climate code indicated. The last column represents the frequency of occurrence. The very low, low, med, high, and very high values represent the 10, 20, 50, 80, and 90 percentile values of the spore type when it is detected. For example, if the frequency of occurrence is 63% and the low value is 53, it would mean that the given spore type is detected 63% of the time and, when detected, 20% of the time it is present in levels above the detection limit and below 53 spores/m3. These values are updated periodically and if not enough data is available to make a statistically meaningful assessment, it is indicated with a dash.

‡ n is the sample size used to calculate the MoldRANGE™ Local Climate data summarized in the table.

* The spores in this category are generally capable of growing on wet building materials in addition to growing outdoors. Building related growth is dependent upon the fungal type, moisture level, type of material, and other factors. *Cladosporium* is one of the predominant spore types worldwide and is frequently present in high numbers. *Penicillium/Aspergillus* species colonize both outdoor and indoor wet surfaces rapidly and are very easily dispersed. Other genera are usually present in lesser numbers.

** These fungi are generally not found growing on wet building materials. For example, the rusts and smuts are obligate plant pathogens. However, in each group there are notable exceptions. For example, agents of wood decay are members of the basidiomycetes and high counts of a single morphological type of basidiospore on an inside sample should be considered significant.

§ Total Spores/m3 has been rounded to two significant figures to reflect analytical precision.

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Understanding EMLab Local Climate Codes

Outdoor airborne spore concentrations are strongly influenced by climate and weather patterns, often resulting in pronounced seasonal and diurnal cycles (Burge 1995). The seasonal climatic changes directly affect the growth cycle of plants, thereby influencing fungal growth, spore maturation, and release cycles. By evaluating outdoor spore concentrations across similar climatic zones rather than for the state as a whole, it is possible to provide a more representative estimate of typical outdoor spore levels and frequency of occurrence for different airborne fungal spore types in a given area.

The EMLab Local Climate code system is a novel and patent pending classification system that uses data from the NOAA - National Oceanic and Atmospheric Administration database to define unique climate regions by state. The following local climate variables, for each statewide zip code, are obtained from NOAA and assigned a letter code of A (above the statewide average for that variable) or B (below the statewide average for that variable):

1. Annual High Temperature
2. Elevation
3. Rainfall/Precipitation
4. Monthly Temperature Range

The result is a 4-character code assigned to each statewide zip code, referred to as the Local Climate Code. Below are some examples of decoded Local Climate Codes:

AAAA = Above avg. Annual High Temperature, Above avg. Elevation, Above avg. Rainfall/Precipitation, Above avg. Monthly Temperature Range
AABB = Above avg. Annual High Temperature, Above avg. Elevation, Below avg. Rainfall/Precipitation, Below avg. Monthly Temperature Range
BBA A = Below avg. Annual High Temperature, Below avg. Elevation, Above avg. Rainfall/Precipitation, Above avg. Monthly Temperature Range

The actual outdoor air sample data from matching local climate codes in each state are then compiled in a manner relating typical spore concentrations and frequency of occurrence.

The NOAA local climate variables were selected by mapping data points from a subset of approximately 145,000 weather and geographic database entries to over 80,000 outdoor spore trap samples with known zip codes and assessing them using orthogonal array experimental design techniques. The results were then compared to the typical ranges of spore types found when grouping zip codes using the Koppen-Geiger climatic classification system; a commonly used climatic system that provides an objective numerical definition in terms of climatic elements such as temperature, rainfall, and other seasonal characteristics. The EMLab Local Climate codes showed improved granularity and refinement of the zip code groupings, implying a better representation of the expected range of spore types to be found within an individual zip code.

The values on this report were calculated by obtaining the four variables listed above from the over 585 million data points of weather and geographic information available in the NOAA database, and determining the frequencies and percentile values of spore types by utilizing over 180,000 Eurofins EMLab P&K outdoor spore trap samples with known zip codes.

This report groups statewide zip codes in relation to these EMLab Local Climate codes and summarizes MoldRANGE™ data by month and year within each EMLab Local Climate code.

References:

Burge, Harriet, A. Bioaerosols: Boca Raton: Lewis Publishers, pp. 163-171, 1995.

Interpretation of the data contained in this report is left to the client or the persons who conducted the field work. This report is provided for informational and comparative purposes only and should not be relied upon for any other purpose. "Typical outdoor data" are based on the results of the analysis of samples delivered to and analyzed by Eurofins EMLab P&K and assumptions regarding the origins of those samples. Sampling techniques, contaminants infecting samples, unrepresentative samples and other similar or dissimilar factors may affect these results. In addition, Eurofins EMLab P&K may not have received and tested a representative number of samples for every region or time period. Eurofins EMLab P&K hereby disclaims any liability for any and all direct, indirect, punitive, incidental, special or consequential damages arising out of the use or interpretation of the data contained in, or any actions taken or omitted in reliance upon, this report.