



A. Summary – Air Samples

Pre and in-treatment air samples results are given below.

Sample Date	Treatment	Number of samples	Location	Average (cfu/m ³)	Range	Standard Deviation	% Reduction
07/02/20	Pre	11	1 st Floor	491	367/633	84.2	-
04/05/21	In			24	0/67	20.6	95.1
07/02/20	Pre	10	1 st Floor Gaming	590	533/700	55.9	-
04/05/21	In			13	0/33	16.3	97.8
07/02/20	Pre	2	1 st Floor Poker	567	567/567	0.0	-
04/05/21	In			33	0/67	33.3	94.2
07/02/20	Pre	14	2 nd Floor	433	300/633	90.9	-
04/05/21	In			24	0/67	19.6	94.5
07/02/20	Pre	3	2 nd Floor Events	311	267/333	31.4	-
04/05/21	In			44	33/67	19.6	85.9
07/02/20	Pre	2	2 nd Floor Training	333	300/367	33.3	-
04/05/21	In			17	0/33	16.7	94.9
07/02/20	Pre	4	Exterior	3,042	2,800/3,200	147.9	-
04/05/21	In			2,567	2,333/2,700	143.4	15.6

Sampling

All air samples were taken via the MB-1 air sampler, 30 liters per sample throughout the various locations given above. Results normalized to colony forming units per cubic meter of air (cfu/m³). Calculation: CFU/m³ = 1,000 × n_c / v_s where n_c is the corrected number of colonies counted and v_s is the sample volume in liters

Given below are airborne organisms found during the **pre-treatment** sampling, excluding outside samples.

Species	Raw Count	Species	Raw Count
<i>Aspergillus fumigatus</i>	5,100	<i>Ulocladium chartarum</i>	1,680
<i>Penicillium purpurogenum</i>	4,240	<i>Cladosporium sphaerospermum</i>	1,275
<i>Penicillium brevicompactum</i>	3,550	<i>Absidia spp</i>	1,020
<i>Penicillium, aspergillus types</i>	2,320	<i>Firmicutes spp</i>	915

Noted below are airborne organisms found during the **in-treatment** sampling, excluding outside samples.

Species	Raw Count	Species	Raw Count
<i>Aspergillus fumigatus</i>	435	<i>Ulocladium chartarum</i>	< 5
<i>Penicillium purpurogenum</i>	283	<i>Cladosporium sphaerospermum</i>	< 5
<i>Penicillium brevicompactum</i>	160	<i>Absidia spp</i>	< 5
<i>Penicillium, aspergillus types</i>	90	<i>Firmicutes spp</i>	< 5

07/02/2020 - Pre-treatment samples from the various locations ranged from **267 to 700 cfu/m³** which is > 300 cfu/m³ and is **not acceptable**, needs corrective action.

04/05/2021 - **In-treatment** results show a **85.9% to 97.8% reduction** from the pre-treatment and now are < 100 cfu/m³ which is considered **clean and acceptable**.

Observations

The exterior air samples ranged from 2,333 to 3,200 cfu/m³ and reveals that most of the bioburden is attributed to the outside air.

- The air treatment system is having a noticeable impact on reducing the bioburden.



Target Air Quality

Air quality scale for workplaces, public buildings, schools, and homes are as follows:

- $< 100 \text{ cfu/m}^3$ is considered **clean and acceptable**.
- 100 to 300 cfu/m^3 is **marginal**.
- $> 300 \text{ cfu/m}^3$ is **not acceptable** and needs corrective action.

In most cases, air quality $< 100 \text{ cfu/m}^3$ has shown a decrease in the overall bioburden and odors.

Predominant Microorganisms

Although the predominant organisms noted in this report are fungi, previous testing results show bacteria, viruses and protozoa are eliminated as effectively as fungi. The oxidizing molecules generated are effective on gram +, gram - bacteria, protozoa, spores and viruses.

B. Summary – Surface Contact Swabs

All surface contact swab samples were taken with a Romer Sponge Handle Sampling System or equivalent. Swab dimensions are $10 \text{ cm} \times 10 \text{ cm} = 100 \text{ cm}^2$ (4" x 4") and normalized to CFU/cm^2 . Calculation: $\text{CFU/cm}^2 = n_c / s_s$. Where n_c is the number of colonies counted and s_s is the surface sample in square centimeters, our standard is $10 \text{ cm} \times 10 \text{ cm} = 100 \text{ cm}^2$.

Pre and In-treatment surface (swab) samples results are given below.

Sample Date	Treatment	Number of samples	Location	Average (cfu/cm ²)	Range	Standard Deviation	% Reduction
07/02/20	Pre	4	2 nd Floor	19.8	12.0/32.0	7.6	-
04/05/21	In			1.9	1.1/3.0	0.7	90.4
07/02/20	Pre	5	1 st Floor	17.8	10.0/26.0	6.4	-
04/05/21	In			1.9	1.0/3.8	1.0	89.3
07/02/20	Pre	5	1 st Floor Gaming	17.5	10.5/33.0	9.1	-
04/05/21	In			1.7	1.0/3.1	0.9	90.3
07/02/20	Pre	1	Negative Control	0	0/0	-	-
04/05/21	In			0	0/0	-	-

07/02/20 - Pre-treatment contact swab results from the various locations are $> 10 \text{ cfu/cm}^2$ which is considered not acceptable and needs corrective action.

04/05/21 - In-treatment contact swab results reveal a **90.4%**, **89.3%** and **90.3% reduction** on the **2nd Floor**, **1st Floor** and **1st Floor Gaming Room**, respectively from the pre-treatment samples at the same locations. These three areas are now $< 5 \text{ cfu/cm}^2$ and considered **clean and acceptable**.

Target Contact Surface Quality

Contact surface quality scale for workplaces, public buildings, schools, and homes are as follows:

- $< 5 \text{ cfu/cm}^2$ is considered **clean and acceptable**.
- 5 to 10 cfu/cm^2 is considered **marginal**.
- $> 10 \text{ cfu/cm}^2$ is considered **not acceptable** and needs corrective action.

In most cases, surface swabs $< 5 \text{ cfu/cm}^2$ has shown a decrease in the overall bioburden and odors.

Please contact me if there are questions or if further information is needed.

Respectfully submitted,

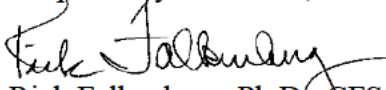

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Table #1
 ██████████ Casino – ██████████
 04/05/21 In-treatment Air Sample Results - CFU/m³

04/05/2021 In-treatment - ██████████ Casino								
Plate Lot No	Air Sample Location	Air Sample Location	Liters of Air	Raw Count	Corrected Count	CFU/m ³		
1127	Ctrl	Unopened	0	0	0	0		
1235	20	1st Floor	30	0	0	0		
1243	21		30	1	1	33		
1251	22		30	2	2	67		
1259	23		30	1	1	33		
1267	24		30	0	0	0		
1275	25		30	1	1	33		
1362	26		30	1	1	33		
1367	27		30	1	1	33		
1370	28		30	0	0	0		
1378	29		30	0	0	0	Avg 24 High 67	
1386	30		30	1	1	33	Low 0 SD 20.6	
1394	31		30	0	0	0		
1402	32		30	0	0	0		
1410	33	1st Floor - Gaming	30	1	1	33		
1418	34		30	0	0	0		
1426	35		30	1	1	33		
1434	36		30	0	0	0		
1375	37		30	1	1	33		
1383	38		30	0	0	0		
1391	39		30	0	0	0	Avg 13 High 33	
1399	40		30	1	1	33	Low 0 SD 16.3	
1407	41		1st Floor - Poker	30	0	0	0	Avg 33 High 67
1415	42			30	2	2	67	Low 0 SD 33.3
1167	1	2nd Floor	30	1	1	33		
1175	2		30	1	1	33		
1183	3		30	0	0	0		
1191	4		30	1	1	33		
1199	5		30	2	2	67		
1443	6		30	0	0	0		
1451	7		30	1	1	33		
1459	8		30	0	0	0		
1467	9		30	1	1	33		
1475	10		30	0	0	0		
1483	11		30	1	1	33		
1491	12		30	1	1	33		
1499	13		30	0	0	0	Avg 24 High 67	
1507	14		30	1	1	33	Low 0 SD 19.6	
1515	15		2nd Floor - Event	30	1	1	33	
1203	16	30		1	1	33	Avg 44 High 67	
1211	17	30		2	2	67	Low 33 SD 15.7	
1219	18	2nd Floor - Training	30	1	1	33	Avg 17 High 33	
1227	19		30	0	0	0	Low 0 SD 16.7	
1135	1	Exterior	30	60	70	2,333		
1143	2	Exterior	30	65	77	2,567		
1151	3	Exterior	30	68	81	2,700	Avg 2,567 High 2,700	
1159	4	Exterior	30	67	80	2,667	Low 2,333 SD 143.4	

Total Adjusted Raw Count 29
 Total CFU/m³ 967



Table #1, continued
 ██████████ Casino – ██████████
 07/02/20 Pre-treatment Air Sample Results - CFU/m³

07/02/2020 Pre-treatment - ██████████ Casino						
Plate Lot No.	Air Sample Location	Air Sample Location	Lines of Air	Raw Count	Corrected Count	CFU/m ³
1730	Ctrl	Unopened	0	0	0	0
2095	20	1st Floor	30	11	11	367
2071	21		30	12	12	400
2087	22		30	14	14	467
2079	23		30	12	12	400
2047	24		30	15	16	533
2055	25		30	13	13	433
2063	26		30	14	14	467
2031	27		30	18	19	633
2039	28		30	16	17	567
2023	29		30	15	16	533
3875	30		30	17	18	600
						Avg 491 High 633 Low 367 SD 84.2
3879	31	1st Floor - Gaming	30	15	16	533
3867	32		30	16	17	567
3871	33		30	19	20	667
3863	34		30	16	17	567
3859	35		30	20	21	700
3855	36		30	18	19	633
3851	37		30	16	17	567
3847	38		30	15	16	533
3843	39		30	17	18	600
1738	40		30	15	16	533
						Avg 590 High 700 Low 533 SD 55.9
1746	41	1st Floor - Poker	30	16	17	567
1754	42		30	16	17	567
						Avg 567 High 567 Low 567 SD 0.0
4073	1	2nd Floor	30	9	9	300
4077	2		30	11	11	367
4081	3		30	15	16	533
4069	4		30	12	12	400
4065	5		30	14	14	467
4057	6		30	13	13	433
4053	7		30	11	11	367
3869	8		30	10	10	333
4049	9		30	15	16	533
4045	10		30	18	19	633
3873	11		30	12	12	400
3877	12		30	15	16	533
						Avg 433 High 633 Low 300 SD 90.9
3855	13	2nd Floor - Event	30	11	11	367
3861	14		30	12	12	400
3857	15		30	10	10	333
						Avg 311 High 333 Low 267 SD 31.4
3849	17	2nd Floor - Training	30	8	8	267
3845	18		30	9	9	300
3841	19		30	11	11	367
						Avg 333 High 367 Low 300 SD 33.3
4061	1	Exterior	30	75	92	3,067
1714	2	Exterior	30	70	84	2,800
1706	3	Exterior	30	76	93	3,100
1722	4	Exterior	30	78	96	3,200
						Avg 3,042 High 3,200 Low 2,800 SD 147.9

Total Adjusted Raw Count **603**
 Total CFU/m³ **20,100**



Table #2
 ██████████ Casino – ██████████
 04/05/21 In-treatment Surface Sample Results – CFU/cm²

04/05/2021 In-treatment - ██████████ Casino					
Room	Swab Number	Surface Swab Sample Location	10x10x10 cm	Raw Count	CFU/cm ²
N/A	CTRL	Swab not removed from container	0	0	0
Surface	1	2nd Floor - Green Rail Rt of stage	10x10x10	114	1.1
Surface	2	2nd Floor - Cashier Touch pad left most kiosk/stand	10x10x10	143	1.4
Surface	3	2nd Floor - Crash bar exit 5-6 Rt side door	10x10x10	190	1.9
Surface	4	2nd Floor - Men's room door pad outside Legal/compliance	10x10x10	304	3.0
Surface	5	1st Floor - Inside door handle - middle	10x10x10	200	2.0
Surface	6	1st Floor - Left edge bar	10x10x10	95	1.0
Surface	7	1st Floor - screen on computer front of rest - Rt	10x10x10	114	1.1
Surface	8	1st Floor - L Shaped desk in warehouse	10x10x10	124	1.2
Surface	9	1st Floor - Silver Rt Tank in warehouse (left tank logo)	10x10x10	378	3.8
Surface	10	1st Floor - Kronos time clock	10x10x10	247	2.5
Surface	11	1st Floor - ATM screen	10x10x10	314	3.1
Surface	12	1st Floor - counter #3087	10x10x10	143	1.4
Surface	13	1st Floor - Front counter #5727 @ oval bar	10x10x10	100	1.0
Surface	14	1st Floor - Side of AF04 "win-win"	10x10x10	110	1.1

Avg 1.9 Max 3.0
 Min 1.1 SD 0.72

Avg 1.9 Max 3.8
 Min 1.0 SD 0.98

Avg 1.7 Max 3.1
 Min 1.0 SD 0.86

Total Adjusted Raw Count 2,576
 Total CFU/cm² 26

Table #2, continued
 ██████████ Casino – ██████████
 07/02/20 Pre-treatment Surface Sample Results – CFU/cm²

07/02/2020 Pre-treatment - ██████████ Casino					
Room	Swab Number	Surface Swab Sample Location	10x10x10 cm	Raw Count	CFU/cm ²
N/A	CTRL	Swab not removed from container	0	0	0
Surface	1	2nd Floor - Green Rail Rt of stage	10x10x10	1,200	12.0
Surface	2	2nd Floor - Cashier Touch pad left most kiosk/stand	10x10x10	1,500	15.0
Surface	3	2nd Floor - Crash bar exit 5-6 Rt side door	10x10x10	2,000	20.0
Surface	4	2nd Floor - Men's room door pad outside Legal/compliance	10x10x10	3,200	32.0
Surface	5	1st Floor - Inside door handle - middle	10x10x10	2,100	21.0
Surface	6	1st Floor - Left edge bar	10x10x10	1,000	10.0
Surface	7	1st Floor - screen on computer front of rest - Rt	10x10x10	1,200	12.0
Surface	8	1st Floor - L Shaped desk in warehouse	10x10x10	1,300	13.0
Surface	9	1st Floor - Silver Rt Tank in warehouse (left tank logo)	10x10x10	2,500	25.0
Surface	10	1st Floor - Kronos time clock	10x10x10	2,600	26.0
Surface	11	1st Floor - ATM screen	10x10x10	3,300	33.0
Surface	12	1st Floor - counter #3087	10x10x10	1,500	15.0
Surface	13	1st Floor - Front counter #5727 @ oval bar	10x10x10	1,050	10.5
Surface	14	1st Floor - Side of AF04 "win-win"	10x10x10	1,150	11.5

Avg 19.8 Max 32.0
 Min 12.0 SD 7.63

Avg 17.8 Max 26.0
 Min 10.0 SD 6.41

Avg 17.5 Max 33.0
 Min 10.5 SD 9.10

Total Adjusted Raw Count 25,600
 Total CFU/cm² 256



Table #3
██████████ Casino – ██████████
04/05/21 In-treatment Air Sample Pictures

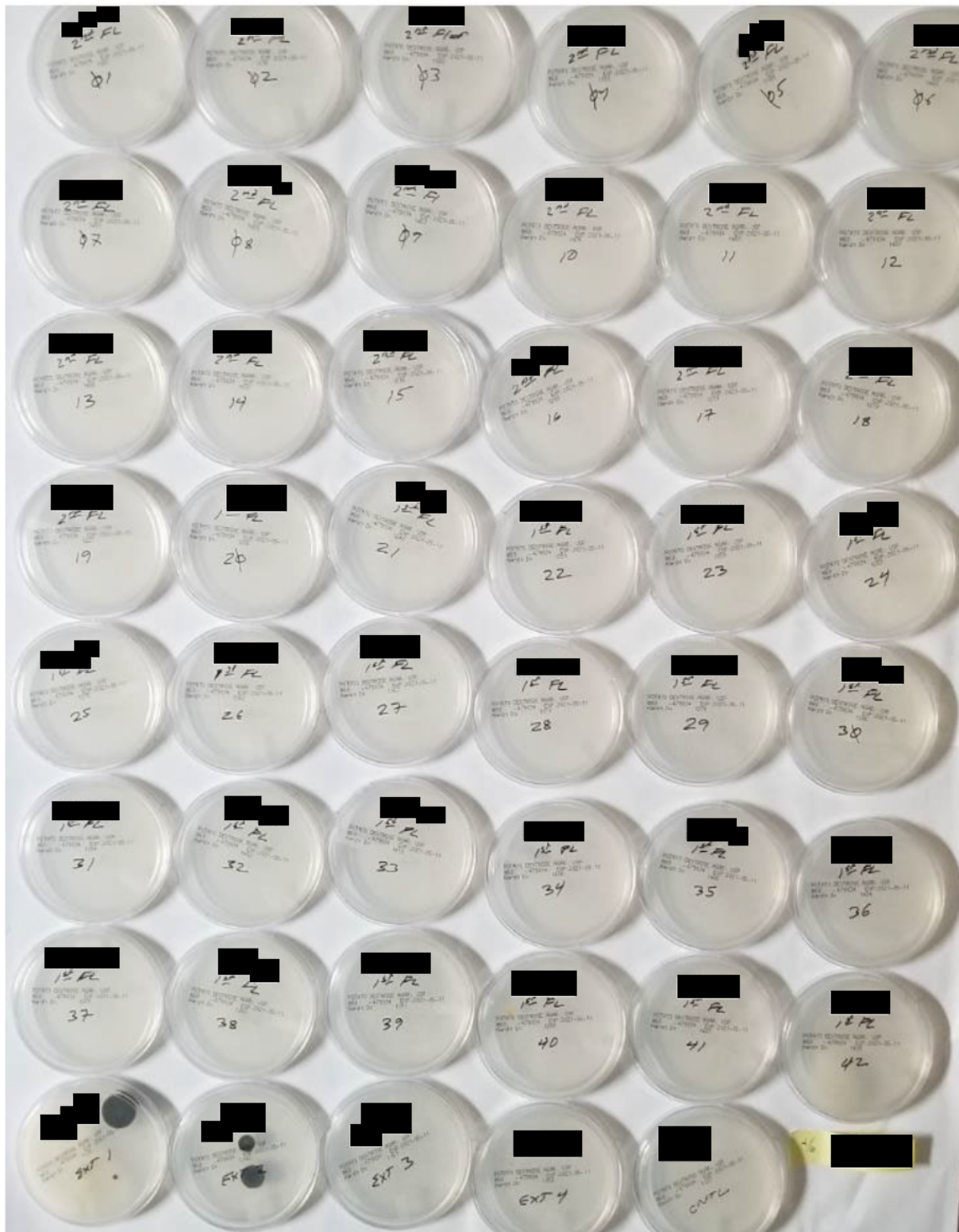




Table #3, continued
██████████ Casino – ██████████
07/02/20 - Pre-treatment Air Sample Pictures

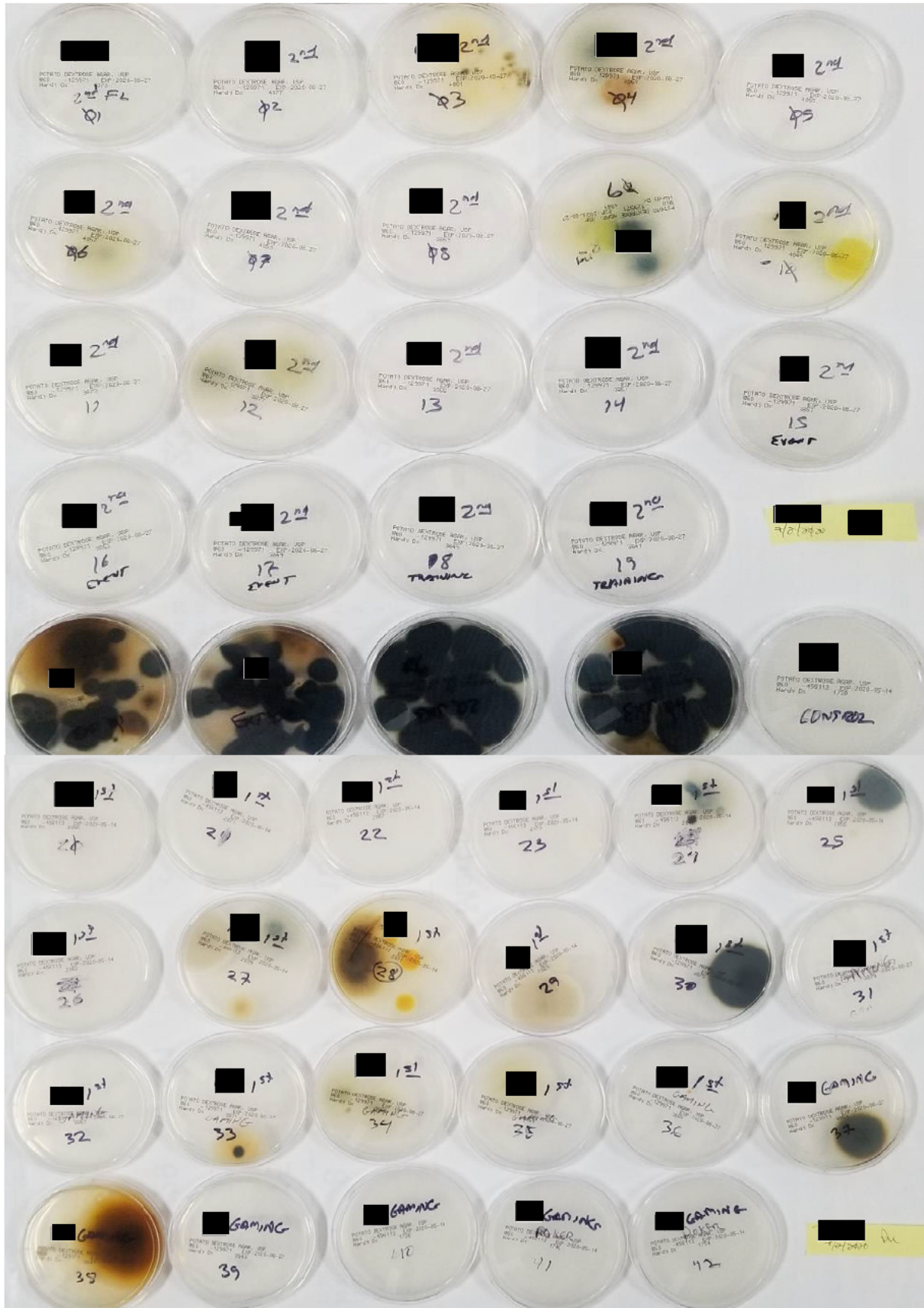




Table #4
 ██████████ Casino – ██████████
 07/02/20 and 04/05/21 Pre and In-treatment Air and Surface Swab Locations

