

**SPORE SAMPLING REPORT
FOR
GLENWOOD MIDDLE SCHOOL
2680 ROUTE 97
GLENWOOD, MD 21738**

PREPARED FOR:

**HOWARD COUNTY PUBLIC SCHOOL SYSTEM
10910 ROUTE 108
ELLICOTT CITY, MD 21043**

PREPARED BY:



**ARIA ENVIRONMENTAL, INC.
PO BOX 286
WOODBINE, MD 21797**

OCTOBER 8, 2015

150876

**SPORE TRAP SAMPLING REPORT
FOR GLENWOOD MIDDLE SCHOOL
SEPTEMBER 30, 2015**

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**SPORE TRAP SAMPLING REPORT
FOR GLENWOOD MIDDLE SCHOOL
SEPTEMBER 30, 2015**

EXECUTIVE SUMMARY

Aria Environmental, Inc. (AE) was contracted by Howard County Public School System to perform spore trap sampling at the Glenwood Middle School at the end of August 2015 due to air quality concerns expressed by staff and parents and to monitor the school after a recent heating, ventilation and air-conditioning (HVAC) system upgrade. AE made measurements for temperature, humidity, carbon monoxide, carbon dioxide and particulate matter and collected microbial spore trap sampling for fungal spore identification and counting on September 30, 2015 as part of a series of spore sampling events that will occur in the first month of the 2015 - 2016 school year and less frequently throughout the school year. This report presents the results of air sampling made on September 30, 2015.

**Spore Trap Sampling Report
For Glenwood Middle School
September 30, 2015**

I. BACKGROUND

Representatives from Aria Environmental, Inc. (AE) visited Glenwood Middle School on September 30, 2015 to perform air monitoring in response to an ongoing indoor air quality complaint at the school. Measurements for temperature, humidity, carbon monoxide, carbon dioxide and particulate matter and microbial spore trap sampling were collected from classrooms 2, 4, 12, 20, 27, 28, the Tech Ed Classroom (39) and Tech Ed Lab (40) and portable classrooms 61, 70 and 71. Outdoor air samples were also collected for comparison purposes in one courtyard and outside near portable classroom 61. This monitoring was performed in response to employee and parental complaints and as a follow up to HVAC improvements.

There was no visible evidence of mold growth nor observed odors consistent with mildew in the classrooms sampled. Weather on the day of monitoring was overcast and damp. It had rained all day the day before this sampling event.

II. OBSERVATIONS AND MEASUREMENTS

A. Observations and Measurements on September 30, 2015

Industry guidelines or standards for seasonal temperature and humidity ranges for thermal comfort are established by the American Society for Heating, Refrigerating and Air Conditioning Engineers (ASHRAE) standard 55-2013. These ranges are presented in Table 1. The U.S. Environmental Protection Agency (EPA) recommends maintaining indoor relative humidity below 60% and ideally between 30 and 50%. The room air temperature measured between 3:08 PM and 4:30 PM ranged from 71.1 to 74.1° F with an average of 73.1° F. The indoor relative humidity ranged from 49.5 to 73.0 percent. The temperature and relative humidity measurements are considered acceptable for summer thermal comfort in all rooms except the Tech Ed classroom and lab where humidity was over 60%, portable classrooms 61 and 70 where temperature was low and humidity was above 60% and portable classroom 71 where the temperature was below 72.5° F. The outside temperature at 4:46 PM was 70.0° F and the outdoor relative humidity was 70.5% outside near Portable Classroom 61, and the outside temperature at 4:43 PM was 71.9° F and the relative humidity was 66.7% in the courtyard outside classroom 28. No windows or doors were observed to be open during the monitoring period. Results of temperature, relative humidity, carbon dioxide and carbon monoxide monitoring are presented in Table 2.

Table 1- Acceptable Ranges of Temperature and Relative Humidity in Summer and Winter^a

Relative Humidity	Winter Temperature	Summer Temperature
30%	68.5°F – 76.0°F	74.0°F – 80°F
40%	68.5°F - 75.5°F	73.5°F – 79.5°F
50%	68.5°F - 74.5°F	73.0°F – 79.0°F
60%	68.0°F - 74.0°F	72.5°F – 78.0°F

^aadapted from ASHRAE Standard 55-2013

Carbon dioxide and carbon monoxide measurements are used to assess ventilation system performance. The exhaled breath of building occupants is the main indoor source of carbon dioxide; therefore, the build-up of carbon dioxide indicates inadequate ventilation. Air monitoring was performed after school hours when the rooms were mostly unoccupied. Carbon dioxide concentrations ranged from 405 to 736 ppm indoors. The concentration of concern for

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Carbon dioxide is set by ASHRAE standard 62.1–2013 as 700 ppm above outdoor air. On the day of monitoring, the outdoor air concentration of carbon dioxide ranged from 387 to 388 ppm. Carbon dioxide concentrations were within the comfort parameters established by ASHRAE in all areas monitored.

Carbon monoxide is mainly attributed to incomplete combustion. Concentrations of CO ranged from 0.0 to 0.5 ppm indoors and the outdoor concentrations ranged from 0.3 to 0.4 ppm in the two outdoor locations measured. CO concentrations were below the ASHRAE concentration of concern of 9 ppm.

Particulate matter or PM is the term for a mixture of solid particles and liquid droplets found in the air. It does not distinguish between the types of particles in the air (e.g., pollen, skin cells, mold spores, soil, etc.). Particulate matter includes "inhalable coarse particles," with diameters larger than 2.5 micrometers and smaller than 10 micrometers (PM 10) and "fine particles," with diameters that are 2.5 micrometers and smaller (PM 2.5). Particle loads expected to be a part of the school environment include carpet and clothing fiber, soil tracked from outside, paper dust, chalk dust, and dust and fibers from building materials. ASHRAE Standard 62.1–2013 suggests target indoor concentrations for PM 2.5 and PM 10 of 15 $\mu\text{g}/\text{m}^3$ and 50 $\mu\text{g}/\text{m}^3$, respectively. These concentrations are taken from the EPA's National Ambient Air Quality Standards (NAAQS) based on annual arithmetic means deemed acceptable for outdoor air quality. Occupational standards and guidelines for particles are nearly an order of magnitude higher than concentrations typically found in non-occupational settings and are not appropriate for comparison.

Particle measurements were taken with an Aerocet 531 particulate monitor. The particle monitor takes a two minute averaged sample of particle concentrations in 5 size fractions (PM 1, PM 2.5, PM 7, PM 10 and total suspended particles (TSP)). Results of particulate monitoring, presented in Table 2, revealed that PM 2.5 and PM 10 particle concentrations were well below the ASHRAE target concentrations in all areas monitored.

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**Table 2: Particle, Temperature, Relative Humidity, Carbon Dioxide and Carbon Monoxide
Measurements Collected on September 30, 2015 at Glenwood Middle School**

Location	Time	PM1 ($\mu\text{g}/\text{m}^3$)	PM2.5 ($\mu\text{g}/\text{m}^3$)	PM7 ($\mu\text{g}/\text{m}^3$)	PM10 ($\mu\text{g}/\text{m}^3$)	TSP ($\mu\text{g}/\text{m}^3$)	Temp (°F)	Rh (%)	CO (ppm)	CO ₂ (ppm)
CR 02	3:46 PM	0	0	1	1	3	73.6	52.7	0.4	474
CR 04	3:49 PM	0	0	0	0	2	73.7	51.2	0.4	460
CR 12	3:59 PM	0	0	0	1	2	73.5	50.9	0.3	462
CR 20	4:03 PM	0	0	0	0	0	73.6	50.7	0.3	405
CR 27	4:13 PM	0	0	0	0	0	73.3	50.7	0.3	449
CR 28	4:15 PM	0	0	0	0	1	73.4	49.5	0.3	435
Tech Ed Class (39)	4:27 PM	0	0	0	1	1	74.1	60.9	0.2	418
Tech Ed Lab (40)	4:30 PM	0	0	0	0	0	74.1	62.7	0.2	406
PCR 61	4:49 PM	0	0	1	2	3	71.7	73.0	0	439
PCR 70	4:59 PM	0	0	2	3	4	71.1	61.3	0.1	736
PCR 71	5:15 PM	0	0	2	3	5	71.8	57.4	0.5	616
Out 2 CY	4:43 PM	0	0	2	2	3	71.9	66.7	0.3	388
Out 1	4:46 PM	0	0	1	2	3	70.0	70.5	0.4	387

CR = Classroom; PCR = Portable Classroom; Bold type indicates measurements above the guidelines

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B. Air Monitoring for Fungal Identification and Counting on September 30, 2015

In the absence of visual sources of mold amplification and growth in the classrooms, non-viable spore trap samples were collected from eight classrooms within the main school building (Classrooms 2, 4, 12, 20, 27, 28 and Tech Ed classroom (39) and lab (40)), three portable classrooms (portable classrooms 61, 70 and 71) and two outdoor locations to determine whether there was a difference between mold spore loads inside the building versus outside.

The spore trap samples were collected using AllergenCo-D cassettes attached to a Buck BioAire™ sampling pump calibrated to 15 liter per minute (LPM) air flow. The samples were collected for a period of ten minutes, the time period recommended for spore trap sampling in a clean indoor environment. The spore trap samples were submitted to Aerobiology Laboratory for analysis. The sample results are reported as the spores per cubic meter of air (spores per m³) of hyphal fragments and total fungal spores. Depending upon the morphology of the spores, they were counted by their unique genus or were grouped into spores exhibiting common characteristics (e.g., *Penicillium*/*Aspergillus* group). Tables 3 and 4 present the results of the spore trap samples collected at Glenwood Middle School on September 30, 2015.

Indoor spore counts ranged from 1,267 to 12,767 total spores per cubic meter of air (m³) in the main school building and from 7,253 to 11,365 in the portable classrooms on September 30, 2015. All indoor samples had total spore counts lower than the outdoor samples which ranged from 55,396 to 69,421 spores per m³. *Stachybotrys* and *Zygomycetes* spores were found in the Portable Classroom 61 and 70 samples, respectively at 7 and 13 spores per m³, but these spores were not found in the outdoor samples. *Pithomyces* spores were higher than the outdoor samples (0 - 7 spores per m³) in Portable Classroom 71 sample (13 spores per m³). All other spore types detected indoors were lower than the outdoor samples. Windows were not open during sampling.

No secondary colonizers including *Chaetomium* or *Stachybotrys* were detected in the indoor air samples except for the 7 spores per m³ found in the Portable Classroom 61 sample. This spore concentration is equivalent to one spore counted in the sample. Hyphal elements were detected in three of the eight main building classrooms and in all three portable classrooms. Indoor samples ranged from 7 to 27 hyphal elements per m³, and all detected indoor hyphal elements were lower than the outdoor sample hyphal element counts ranging from 20 to 67 elements per m³. Variations in outdoor spore concentrations are a function of diurnal rhythms of spore release, weather-related factors (e.g., wind, rain, snow cover, temperature), and physical spatial factors. Certificates of analysis are included as Attachment B.

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Table 3: Results of Spore Trap Sampling in Selected Classrooms in Glenwood Middle School on September 30, 2015

Location	Outside near Room 61 (Out 1)	Outside in Courtyard (Out 2)	Room 2 (GM 02)	Room 4 (GM 04)	Room 12 (GM 12)	Room 20 (GM 20)	Room 27 (GM 27)	Room 28 (GM 28)	Tech Ed Class (GM 39)	Tech Ed Lab (GM 40)
Spore Type	Spores/ m³	Spores/ m³	Spores/ m³	Spores/ m³	Spores/ m³	Spores/ m³	Spores/ m³	Spores/ m³	Spores/ m³	Spores/ m³
Alternaria	33	27	-	-	-	-	-	-	-	-
Ascospores	1,467	1387	27	13	40	20	67	40	93	140
Basidiospores	41,453	40,171	1,213	1,173	1,360	1,200	1,387	1,173	4,640	8,000
Brown unidentified	33	-	-	-	-	-	-	-	-	-
Cercospora	-	100	-	-	-	-	-	-	-	7
Cladosporium	25,641	13,206	133	53	200	147	333	113	2,133	4,587
Curvularia	7	-	-	-	-	-	-	-	-	-
Dipolcladiella	-	7	-	-	-	-	-	-	7	-
Drechslera/Bipolaris group	13	7	-	-	-	-	-	-	-	-
Epicoccum	33	33	-	-	-	-	-	-	-	-
Fusicladium	-	7	-	-	-	-	-	-	-	-
Helicosporium/ Helicomycetes	7	-	-	-	-	-	-	-	-	-
Hyphal Elements	20	67	7	-	13	-	-	-	13	-
Penicillium/ Aspergillus	613	293	80	27	413	7	40	20	47	27
Pestalotiopsis	7	-	-	-	-	-	-	-	-	-
Pithomyces	-	7	7	-	-	-	-	-	-	7
Pyricularia	27	33	-	-	-	-	-	-	-	-
Rusts	13	7	-	-	-	-	-	-	-	-
Smuts, Periconia, myxomycetes	47	47	-	-	7	7	-	-	-	-
Stachybotrys	-	-	-	-	-	-	-	-	-	-
Unknown	7	-	-	-	-	-	-	7	-	-
Zygophiala	-	-	-	-	-	-	-	-	-	-
Total Fungi	69,421	55,396	1,467	1,267	2,033	1,380	1,827	1,353	6,933	12,767

Bold numbers represent spore concentrations above the outdoor counts. Dashes designate none detected.

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September 30, 2015**

**Table 4: Results of Spore Trap Sampling in Portable Classrooms
at Glenwood Middle School on September 30, 2015**

Location	Outside near Room 61 (Out 1)	Outside in Courtyard (Out 2)	Room 61 (GM 61)	Room 70 (GM 70)	Room 71 (GM 71)
Spore Type	Spores/ m ³	Spores/ m ³	Spores/ m ³	Spores/ m ³	Spores/ m ³
<i>Alternaria</i>	33	27	-	-	-
Ascospores	1,467	1,387	240	347	347
Basidiospores	41,453	40,171	6,080	9,585	6,187
Brown unidentified	33	-	-	-	-
<i>Cercospora</i>	-	100	7	-	-
<i>Cladosporium</i>	25,641	13,206	800	1,120	1,013
<i>Curvularia</i>	7	-	-	-	7
<i>Dipolcladiella</i>	-	7	-	-	-
<i>Drechslera/Bipolaris</i> group	13	7	-	-	-
<i>Epicoccum</i>	33	33	-	-	7
<i>Fusicladium</i>	-	7	-	-	-
<i>Helicosporium/Helicomyces</i>	7	-	-	-	-
Hypheal Elements	20	67	7	27	27
<i>Penicillium/Aspergillus</i>	613	293	100	247	380
<i>Pestalotiopsis</i>	7	-	-	-	-
<i>Pithomyces</i>	-	7	-	-	13
<i>Pyricularia</i>	27	33	13	-	7
Rusts	13	7	-	-	-
Smuts, <i>Periconia</i> , myxomycetes	47	47	-	27	7
<i>Stachybotrys</i>	-	-	7	-	-
Unknown	7	-	-	-	7
<i>Zygophiala</i>	-	-	-	13	-
Total Fungi	69,421	55,396	7,253	11,365	8,000

Bold numbers represent spore concentrations above the outdoor counts. Dashes designate none detected.

**Spore Sampling Report
For Glenwood Middle School
September 30, 2015**

III. CONCLUSIONS AND RECOMMENDATIONS

Aria Environmental, Inc. (AE) was contracted by Howard County Public School System to perform spore trap sampling at the Glenwood Middle School at the end of August 2015 due to air quality concerns expressed by staff and parents and to monitor the school after a recent heating, ventilation and air-conditioning (HVAC) system upgrade. AE made measurements for temperature, humidity, carbon monoxide, carbon dioxide and particulate matter and collected microbial spore trap samples on September 30, 2015.

Thermal comfort parameters of temperature and humidity were measured and found to be mostly within the comfort ranges established by ASHRAE with a few exceptions slightly outside the comfort ranges. Carbon dioxide, carbon monoxide and particulate matter measurements were within acceptable ranges for good indoor air quality in all areas.

Indoor spore counts ranged from 1,267 to 12,767 total spores per cubic meter of air (m³) in the main school building classrooms and from 7,253 to 11,365 in the portable classrooms on September 30, 2015. All indoor samples had total spore counts lower than the outdoor samples which ranged from 55,396 to 69,421 spores per m³.

Stachybotrys and Zygothiala spores were found in the Portable Classroom 61 and 70 samples, respectively at 7 and 13 spores per m³, but these spores were not found in the outdoor samples. Pithomyces spores were higher than the outdoor samples (0 - 7 spores per m³) in Portable Classroom 71 sample (13 spores per m³). Indoor hyphal elements ranged from 7 to 27 elements per m³. All indoor hyphal element counts were lower than the outdoor samples ranging from 20 to 67 elements per m³. Windows were not open during sampling.

Table 5 presents a summary of spore sampling results to date in the 2015 - 2016 school year. The indoor and outdoor ranges demonstrate the variable nature of spore counts.

Table 5 – Summary of Spore Sampling Results to Date at GMS in the 2015-2016 School Year

Date	Indoor Spore Count Range Spores per m³	Outdoor Spore Count Range Spores per m³
August 25, 2015	1,787 to 8,807	34,001 to 37,316
August 27, 2015	400 to 747	9,433 to 10,960
September 2, 2015	1,860 to 7,960	33,294 to 37,306
September 9, 2015	1,053 to 3,173	21,890 to 31,876
September 16, 2015	447 to 3,493	17,543 to 20,287
September 24, 2015	273 to 2,480	24,680 to 25,020
September 30, 2015	1,267 to 12,767	55,396 to 69,421

Spore measurements collected in classrooms were generally acceptable compared to outdoor samples with outdoor total spore counts approximately 12 times higher than the indoor counts on average. Indoor sample total spore counts and individual spore counts were all lower than the outdoor sample counts with a few exceptions described above. Follow up air sampling is scheduled for October 7, 2015 and will be performed regularly in order to monitor changes in conditions affected by seasonal variations and the new HVAC system.

IV. LIMITATIONS

This report has been prepared for the exclusive use of the Howard County Public School System and/or their agents. This service has been performed in accordance with generally accepted

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environmental practices. No other warranty, expressed or implied, is made. Our conclusions and recommendations are based, in part, upon information provided to us by others and our site observations. We have not verified the completeness or accuracy of the information provided to us by others, unless otherwise noted. Our observations and recommendations are based upon conditions readily visible at the site at the time of our site visit, and upon current industry standards. Destructive sampling was not performed as part of this survey. No observations were made behind solid walls, ceilings or in pipe chases that weren't already openly visible.

By virtue of providing the services described in this report, the preparer does not assume the responsibility of the person(s) in charge of the site, or otherwise undertake responsibility for reporting to any local, state, or federal public agencies any conditions at the site that may present a potential danger to public health, safety, or the environment. It is the Client's responsibility to notify the appropriate local, state, or federal public agencies as required by law, or otherwise to disclose, in a timely manner, any information that may be necessary to prevent any danger to public health, safety, or the environment. Under this scope of services, the preparer assumes no responsibility regarding response actions (e.g. abatement, removal, etc.) initiated as a result of these findings. Response actions are the sole responsibility of the Client and should be conducted in accordance with local, state, and/or federal requirements, and should be performed by appropriately licensed personnel as warranted.

Attachment A:

Building Layout and Sample Location Plan for September 30, 2015

Spore sampling locations for September 30, 2015



Attachment B:

**Report of Analysis and Chain of Custody Forms
September 30, 2015**

Aria Environmental
 P.O. Box 286
 Woodbine, Maryland 21797
 Attn: Julie Barth
 Project: **J15-876 GMS Glenwood MS**
 Condition of Sample(s) Upon Receipt: Acceptable

 Date Collected: 09/30/2015
 Date Received: 10/02/2015
 Date Analyzed: 10/07/2015
 Date Reported: 10/05/2015
 Project ID: 15025074

1054 Spore Trap Analysis: SOP 3.8

Client Sample Number	GM-02				Out 2 CY			
Sample Location	Classroom 7				Outside Courtyard			
Sample Volume (L)	150				150			
Lab Sample Number	15025074-001				15025074-013			
Spore Identification	Raw Ct	spr/m ³	% Ttl	In/Out	Raw Ct	spr/m ³	% Ttl	In/Out
Alternaria	-	-	-	-	4	27	<1	-
ascospores	4	27	2	1/52	52	1387	3	-
basidiospores	182	1213	83	1/33	94	40171	73	-
Cercospora	-	-	-	-	15	100	<1	-
Cladosporium	20	133	9	1/99	62	13206	24	-
Diplocladia	-	-	-	-	1	7	<1	-
Drechslera/Bipolaris group	-	-	-	-	1	7	<1	-
Epicoccum	-	-	-	-	5	33	<1	-
Fusicladium	-	-	-	-	1	7	<1	-
hyphal elements	1	7	<1	1/10	10	67	<1	-
Penicillium/Aspergillus group	12	80	5	1/4	44	293	1	-
Pithomyces	1	7	<1	1/1	1	7	<1	-
Pyricularia	-	-	-	-	5	33	<1	-
Rusts	-	-	-	-	1	7	<1	-
Smuts,Periconia,Myxomycetes	-	-	-	-	7	47	<1	-
	Debris Rating 2				Debris Rating 2			
Analytical Sensitivity	Analytical Sensitivity: 7 spr/m³				Analytical Sensitivity: 7 spr/m³			
Comments								
Total *See Footnotes	220	1467	~100%	1/38	303	55396	~100%	-

Aria Environmental
 P.O. Box 286
 Woodbine, Maryland 21797
 Attn: Julie Barth
 Project: **J15-876 GMS Glenwood MS**
 Condition of Sample(s) Upon Receipt: Acceptable

 Date Collected: 09/30/2015
 Date Received: 10/02/2015
 Date Analyzed: 10/07/2015
 Date Reported: 10/05/2015
 Project ID: 15025074
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Client Sample Number	GM-04				Out 2 CY			
Sample Location	Classroom 10				Outside Courtyard			
Sample Volume (L)	150				150			
Lab Sample Number	15025074-002				15025074-013			
Spore Identification	Raw Ct	spr/m ³	% Ttl	In/Out	Raw Ct	spr/m ³	% Ttl	In/Out
Alternaria	-	-	-	-	4	27	<1	-
ascospores	2	13	1	1/104	52	1387	3	-
basidiospores	176	1173	93	1/34	94	40171	73	-
Cercospora	-	-	-	-	15	100	<1	-
Cladosporium	8	53	4	1/248	62	13206	24	-
Diplocladiella	-	-	-	-	1	7	<1	-
Drechslera/Bipolaris group	-	-	-	-	1	7	<1	-
Epicoccum	-	-	-	-	5	33	<1	-
Fusicladium	-	-	-	-	1	7	<1	-
hyphal elements	-	-	-	-	10	67	<1	-
Penicillium/Aspergillus group	4	27	2	1/11	44	293	1	-
Pithomyces	-	-	-	-	1	7	<1	-
Pyricularia	-	-	-	-	5	33	<1	-
Rusts	-	-	-	-	1	7	<1	-
Smuts,Periconia,Myxomycetes	-	-	-	-	7	47	<1	-
	Debris Rating 2				Debris Rating 2			
Analytical Sensitivity	Analytical Sensitivity: 7 spr/m³				Analytical Sensitivity: 7 spr/m³			
Comments								
Total *See Footnotes	190	1267	~100%	1/44	303	55396	~100%	-

Aria Environmental
P.O. Box 286
Woodbine, Maryland 21797
Attn: Julie Barth
Project: **J15-876 GMS Glenwood MS**
Condition of Sample(s) Upon Receipt: Acceptable

Date Collected: 09/30/2015
Date Received: 10/02/2015
Date Analyzed: 10/07/2015
Date Reported: 10/05/2015
Project ID: 15025074

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Client Sample Number	GM-12				Out 2 CY			
Sample Location	Classroom 15				Outside Courtyard			
Sample Volume (L)	150				150			
Lab Sample Number	15025074-003				15025074-013			
Spore Identification	Raw Ct	spr/m ³	% Ttl	In/Out	Raw Ct	spr/m ³	% Ttl	In/Out
Alternaria	-	-	-	-	4	27	<1	-
ascospores	6	40	2	1/35	52	1387	3	-
basidiospores	51	1360	67	1/30	94	40171	73	-
Cercospora	-	-	-	-	15	100	<1	-
Cladosporium	30	200	10	1/66	62	13206	24	-
Diplocladiella	-	-	-	-	1	7	<1	-
Drechslera/Bipolaris group	-	-	-	-	1	7	<1	-
Epicoccum	-	-	-	-	5	33	<1	-
Fusicladium	-	-	-	-	1	7	<1	-
hyphal elements	2	13	1	1/5	10	67	<1	-
Penicillium/Aspergillus group	62	413	20	1/1	44	293	1	-
Pithomyces	-	-	-	-	1	7	<1	-
Pyricularia	-	-	-	-	5	33	<1	-
Rusts	-	-	-	-	1	7	<1	-
Smuts,Periconia,Myxomycetes	1	7	<1	1/7	7	47	<1	-
	Debris Rating 3				Debris Rating 2			
Analytical Sensitivity	Analytical Sensitivity: 7 spr/m³				Analytical Sensitivity: 7 spr/m³			
Comments								
Total *See Footnotes	152	2033	~100%	1/27	303	55396	~100%	-

Aria Environmental
 P.O. Box 286
 Woodbine, Maryland 21797
 Attn: Julie Barth
 Project: **J15-876 GMS Glenwood MS**
 Condition of Sample(s) Upon Receipt: Acceptable

 Date Collected: 09/30/2015
 Date Received: 10/02/2015
 Date Analyzed: 10/07/2015
 Date Reported: 10/05/2015
 Project ID: 15025074
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Client Sample Number	GM-20				Out 2 CY			
Sample Location	Classroom 21				Outside Courtyard			
Sample Volume (L)	150				150			
Lab Sample Number	15025074-004				15025074-013			
Spore Identification	Raw Ct	spr/m ³	% Ttl	In/Out	Raw Ct	spr/m ³	% Ttl	In/Out
Alternaria	-	-	-	-	4	27	<1	-
ascospores	3	20	1	1/69	52	1387	3	-
basidiospores	45	1200	87	1/33	94	40171	73	-
Cercospora	-	-	-	-	15	100	<1	-
Cladosporium	22	147	11	1/90	62	13206	24	-
Diplocladiella	-	-	-	-	1	7	<1	-
Drechslera/Bipolaris group	-	-	-	-	1	7	<1	-
Epicoccum	-	-	-	-	5	33	<1	-
Fusicladium	-	-	-	-	1	7	<1	-
hyphal elements	-	-	-	-	10	67	<1	-
Penicillium/Aspergillus group	1	7	<1	1/44	44	293	1	-
Pithomyces	-	-	-	-	1	7	<1	-
Pyricularia	-	-	-	-	5	33	<1	-
Rusts	-	-	-	-	1	7	<1	-
Smuts,Periconia,Myxomycetes	1	7	<1	1/7	7	47	<1	-
	Debris Rating 2				Debris Rating 2			
Analytical Sensitivity	Analytical Sensitivity: 7 spr/m³				Analytical Sensitivity: 7 spr/m³			
Comments								
Total *See Footnotes	72	1380	~100%	1/40	303	55396	~100%	-

Aria Environmental
P.O. Box 286
Woodbine, Maryland 21797
Attn: Julie Barth
Project: **J15-876 GMS Glenwood MS**
Condition of Sample(s) Upon Receipt: Acceptable

Date Collected: 09/30/2015
Date Received: 10/02/2015
Date Analyzed: 10/07/2015
Date Reported: 10/05/2015
Project ID: 15025074

Client Sample Number	GM-27				Out 2 CY			
Sample Location	Classroom 22				Outside Courtyard			
Sample Volume (L)	150				150			
Lab Sample Number	15025074-005				15025074-013			
Spore Identification	Raw Ct	spr/m ³	% Ttl	In/Out	Raw Ct	spr/m ³	% Ttl	In/Out
Alternaria	-	-	-	-	4	27	<1	-
ascospores	10	67	4	1/21	52	1387	3	-
basidiospores	52	1387	76	1/29	94	40171	73	-
Cercospora	-	-	-	-	15	100	<1	-
Cladosporium	50	333	18	1/40	62	13206	24	-
Diplocladiella	-	-	-	-	1	7	<1	-
Drechslera/Bipolaris group	-	-	-	-	1	7	<1	-
Epicoccum	-	-	-	-	5	33	<1	-
Fusicladium	-	-	-	-	1	7	<1	-
hyphal elements	-	-	-	-	10	67	<1	-
Penicillium/Aspergillus group	6	40	2	1/7	44	293	1	-
Pithomyces	-	-	-	-	1	7	<1	-
Pyricularia	-	-	-	-	5	33	<1	-
Rusts	-	-	-	-	1	7	<1	-
Smuts,Periconia,Myxomycetes	-	-	-	-	7	47	<1	-
	Debris Rating 2				Debris Rating 2			
Analytical Sensitivity	Analytical Sensitivity: 7 spr/m³				Analytical Sensitivity: 7 spr/m³			
Comments								
Total *See Footnotes	118	1827	~100%	1/30	303	55396	~100%	-

Aria Environmental
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Condition of Sample(s) Upon Receipt: Acceptable

Date Collected: 09/30/2015
Date Received: 10/02/2015
Date Analyzed: 10/07/2015
Date Reported: 10/05/2015
Project ID: 15025074

Client Sample Number	GM-28				Out 2 CY			
Sample Location	Classroom 25				Outside Courtyard			
Sample Volume (L)	150				150			
Lab Sample Number	15025074-006				15025074-013			
Spore Identification	Raw Ct	spr/m ³	% Ttl	In/Out	Raw Ct	spr/m ³	% Ttl	In/Out
Alternaria	-	-	-	-	4	27	<1	-
ascospores	6	40	3	1/35	52	1387	3	-
basidiospores	44	1173	87	1/34	94	40171	73	-
Cercospora	-	-	-	-	15	100	<1	-
Cladosporium	17	113	8	1/117	62	13206	24	-
Diplocladiella	-	-	-	-	1	7	<1	-
Drechslera/Bipolaris group	-	-	-	-	1	7	<1	-
Epicoccum	-	-	-	-	5	33	<1	-
Fusicladium	-	-	-	-	1	7	<1	-
hyphal elements	-	-	-	-	10	67	<1	-
Penicillium/Aspergillus group	3	20	1	1/15	44	293	1	-
Pithomyces	-	-	-	-	1	7	<1	-
Pyricularia	-	-	-	-	5	33	<1	-
Rusts	-	-	-	-	1	7	<1	-
Smuts,Periconia,Myxomycetes	-	-	-	-	7	47	<1	-
Unknown	1	7	<1	-	-	-	-	-
	Debris Rating 2				Debris Rating 2			
Analytical Sensitivity	Analytical Sensitivity: 7 spr/m³				Analytical Sensitivity: 7 spr/m³			
Comments								
Total *See Footnotes	71	1353	~100%	1/41	303	55396	~100%	-

Aria Environmental
 P.O. Box 286
 Woodbine, Maryland 21797
 Attn: Julie Barth
 Project: **J15-876 GMS Glenwood MS**
 Condition of Sample(s) Upon Receipt: Acceptable

 Date Collected: 09/30/2015
 Date Received: 10/02/2015
 Date Analyzed: 10/07/2015
 Date Reported: 10/05/2015
 Project ID: 15025074
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Client Sample Number	GM-39				Out 2 CY			
Sample Location	Tech Ed Classroom				Outside Courtyard			
Sample Volume (L)	150				150			
Lab Sample Number	15025074-007				15025074-013			
Spore Identification	Raw Ct	spr/m ³	% Ttl	In/Out	Raw Ct	spr/m ³	% Ttl	In/Out
Alternaria	-	-	-	-	4	27	<1	-
ascospores	14	93	1	1/15	52	1387	3	-
basidiospores	87	4640	67	1/9	94	40171	73	-
Cercospora	-	-	-	-	15	100	<1	-
Cladosporium	40	2133	31	1/6	62	13206	24	-
Diplocladiella	1	7	<1	1/1	1	7	<1	-
Drechslera/Bipolaris group	-	-	-	-	1	7	<1	-
Epicoccum	-	-	-	-	5	33	<1	-
Fusicladium	-	-	-	-	1	7	<1	-
hyphal elements	2	13	<1	1/5	10	67	<1	-
Penicillium/Aspergillus group	7	47	1	1/6	44	293	1	-
Pithomyces	-	-	-	-	1	7	<1	-
Pyricularia	-	-	-	-	5	33	<1	-
Rusts	-	-	-	-	1	7	<1	-
Smuts,Periconia,Myxomycetes	-	-	-	-	7	47	<1	-
	Debris Rating 2				Debris Rating 2			
Analytical Sensitivity	Analytical Sensitivity: 7 spr/m³				Analytical Sensitivity: 7 spr/m³			
Comments								
Total *See Footnotes	151	6933	~100%	1/8	303	55396	~100%	-

Aria Environmental
 P.O. Box 286
 Woodbine, Maryland 21797
 Attn: Julie Barth
 Project: **J15-876 GMS Glenwood MS**
 Condition of Sample(s) Upon Receipt: Acceptable

 Date Collected: 09/30/2015
 Date Received: 10/02/2015
 Date Analyzed: 10/07/2015
 Date Reported: 10/05/2015
 Project ID: 15025074

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Client Sample Number	GM-40				Out 2 CY			
Sample Location	Tech Ed Lab 40				Outside Courtyard			
Sample Volume (L)	150				150			
Lab Sample Number	15025074-008				15025074-013			
Spore Identification	Raw Ct	spr/m ³	% Ttl	In/Out	Raw Ct	spr/m ³	% Ttl	In/Out
Alternaria	-	-	-	-	4	27	<1	-
ascospores	21	140	1	1/10	52	1387	3	-
basidiospores	75	8000	63	1/5	94	40171	73	-
Cercospora	1	7	<1	1/15	15	100	<1	-
Cladosporium	43	4587	36	1/3	62	13206	24	-
Diplocladiella	-	-	-	-	1	7	<1	-
Drechslera/Bipolaris group	-	-	-	-	1	7	<1	-
Epicoccum	-	-	-	-	5	33	<1	-
Fusicladium	-	-	-	-	1	7	<1	-
hyphal elements	-	-	-	-	10	67	<1	-
Penicillium/Aspergillus group	4	27	<1	1/11	44	293	1	-
Pithomyces	1	7	<1	1/1	1	7	<1	-
Pyricularia	-	-	-	-	5	33	<1	-
Rusts	-	-	-	-	1	7	<1	-
Smuts,Periconia,Myxomycetes	-	-	-	-	7	47	<1	-
	Debris Rating 2				Debris Rating 2			
Analytical Sensitivity	Analytical Sensitivity: 7 spr/m³				Analytical Sensitivity: 7 spr/m³			
Comments								
Total *See Footnotes	145	12767	~100%	1/4	303	55396	~100%	-

Aria Environmental
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 Condition of Sample(s) Upon Receipt: Acceptable

 Date Collected: 09/30/2015
 Date Received: 10/02/2015
 Date Analyzed: 10/07/2015
 Date Reported: 10/05/2015
 Project ID: 15025074
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Client Sample Number	GM-61				Out 2 CY			
Sample Location	Portable Classroom 61				Outside Courtyard			
Sample Volume (L)	150				150			
Lab Sample Number	15025074-009				15025074-013			
Spore Identification	Raw Ct	spr/m ³	% Ttl	In/Out	Raw Ct	spr/m ³	% Ttl	In/Out
Alternaria	-	-	-	-	4	27	<1	-
ascospores	9	240	3	1/6	52	1387	3	-
basidiospores	57	6080	84	1/7	94	40171	73	-
Cercospora	1	7	<1	1/15	15	100	<1	-
Cladosporium	30	800	11	1/17	62	13206	24	-
Diplocladiella	-	-	-	-	1	7	<1	-
Drechslera/Bipolaris group	-	-	-	-	1	7	<1	-
Epicoccum	-	-	-	-	5	33	<1	-
Fusicladium	-	-	-	-	1	7	<1	-
hyphal elements	1	7	<1	1/10	10	67	<1	-
Penicillium/Aspergillus group	15	100	1	1/3	44	293	1	-
Pithomyces	-	-	-	-	1	7	<1	-
Pyricularia	2	13	<1	1/3	5	33	<1	-
Rusts	-	-	-	-	1	7	<1	-
Smuts,Periconia,Myxomycetes	-	-	-	-	7	47	<1	-
Stachybotrys	1	7	<1	-	-	-	-	-
	Debris Rating 2				Debris Rating 2			
Analytical Sensitivity	Analytical Sensitivity: 7 spr/m³				Analytical Sensitivity: 7 spr/m³			
Comments								
Total *See Footnotes	116	7253	~100%	1/8	303	55396	~100%	-

Aria Environmental
P.O. Box 286
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Project: **J15-876 GMS Glenwood MS**
Condition of Sample(s) Upon Receipt: Acceptable

Date Collected: 09/30/2015
Date Received: 10/02/2015
Date Analyzed: 10/07/2015
Date Reported: 10/05/2015
Project ID: 15025074

Client Sample Number	GM-70				Out 2 CY			
Sample Location	Portable Classroom 70				Outside Courtyard			
Sample Volume (L)	150				150			
Lab Sample Number	15025074-010				15025074-013			
Spore Identification	Raw Ct	spr/m ³	% Ttl	In/Out	Raw Ct	spr/m ³	% Ttl	In/Out
Alternaria	-	-	-	-	4	27	<1	-
ascospores	13	347	3	1/4	52	1387	3	-
basidiospores	45	9585	84	1/4	94	40171	73	-
Cercospora	-	-	-	-	15	100	<1	-
Cladosporium	42	1120	10	1/12	62	13206	24	-
Diplocladiella	-	-	-	-	1	7	<1	-
Drechslera/Bipolaris group	-	-	-	-	1	7	<1	-
Epicoccum	-	-	-	-	5	33	<1	-
Fusicladium	-	-	-	-	1	7	<1	-
hyphal elements	4	27	<1	1/3	10	67	<1	-
Penicillium/Aspergillus group	37	247	2	1/1	44	293	1	-
Pithomyces	-	-	-	-	1	7	<1	-
Pyricularia	-	-	-	-	5	33	<1	-
Rusts	-	-	-	-	1	7	<1	-
Smuts,Periconia,Myxomycetes	4	27	<1	1/2	7	47	<1	-
Zygothiala	2	13	<1	-	-	-	-	-
	Debris Rating 3				Debris Rating 2			
Analytical Sensitivity	Analytical Sensitivity: 7 spr/m³				Analytical Sensitivity: 7 spr/m³			
Comments								
Total *See Footnotes	147	11365	~100%	1/5	303	55396	~100%	-

Aria Environmental
 P.O. Box 286
 Woodbine, Maryland 21797
 Attn: Julie Barth
 Project: **J15-876 GMS Glenwood MS**
 Condition of Sample(s) Upon Receipt: Acceptable

 Date Collected: 09/30/2015
 Date Received: 10/02/2015
 Date Analyzed: 10/07/2015
 Date Reported: 10/05/2015
 Project ID: 15025074
 Page 11 of 13

Client Sample Number	GM-71				Out 2 CY			
Sample Location	Portable Classroom 71				Outside Courtyard			
Sample Volume (L)	150				150			
Lab Sample Number	15025074-011				15025074-013			
Spore Identification	Raw Ct	spr/m ³	% Ttl	In/Out	Raw Ct	spr/m ³	% Ttl	In/Out
Alternaria	-	-	-	-	4	27	<1	-
ascospores	13	347	4	1/4	52	1387	3	-
basidiospores	58	6187	77	1/6	94	40171	73	-
Cercospora	-	-	-	-	15	100	<1	-
Cladosporium	38	1013	13	1/13	62	13206	24	-
Curvularia	1	7	<1	-	-	-	-	-
Diplocladiella	-	-	-	-	1	7	<1	-
Drechslera/Bipolaris group	-	-	-	-	1	7	<1	-
Epicoccum	1	7	<1	1/5	5	33	<1	-
Fusicladium	-	-	-	-	1	7	<1	-
hyphal elements	4	27	<1	1/3	10	67	<1	-
Penicillium/Aspergillus group	57	380	5	1/1	44	293	1	-
Pithomyces	2	13	<1	2/1	1	7	<1	-
Pyricularia	1	7	<1	1/5	5	33	<1	-
Rusts	-	-	-	-	1	7	<1	-
Smuts,Periconia,Myxomycetes	1	7	<1	1/7	7	47	<1	-
Unknown	1	7	<1	-	-	-	-	-
	Debris Rating 3				Debris Rating 2			
Analytical Sensitivity	Analytical Sensitivity: 7 spr/m³				Analytical Sensitivity: 7 spr/m³			
Comments								
Total *See Footnotes	177	8000	~100%	1/7	303	55396	~100%	-

Aria Environmental
P.O. Box 286
Woodbine, Maryland 21797
Attn: Julie Barth
Project: **J15-876 GMS Glenwood MS**
Condition of Sample(s) Upon Receipt: Acceptable

Date Collected: 09/30/2015
Date Received: 10/02/2015
Date Analyzed: 10/07/2015
Date Reported: 10/05/2015
Project ID: 15025074
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Client Sample Number	Out 1				Out 2 CY			
Sample Location	Outside Near PCR 61				Outside Courtyard			
Sample Volume (L)	150				150			
Lab Sample Number	15025074-012				15025074-013			
Spore Identification	Raw Ct	spr/m ³	% Ttl	In/Out	Raw Ct	spr/m ³	% Ttl	In/Out
Alternaria	5	33	<1	1/1	4	27	<1	-
ascospores	55	1467	2	1/1	52	1387	3	-
basidiospores	97	41453	60	1/1	94	40171	73	-
brown unidentified	5	33	<1	-	-	-	-	-
Cercospora	-	-	-	-	15	100	<1	-
Cladosporium	60	25641	37	2/1	62	13206	24	-
Curvularia	1	7	<1	-	-	-	-	-
Diplocladiella	-	-	-	-	1	7	<1	-
Drechslera/Bipolaris group	2	13	<1	2/1	1	7	<1	-
Epicoccum	5	33	<1	1/1	5	33	<1	-
Fusicladium	-	-	-	-	1	7	<1	-
Helicosporium/Helicomyces	1	7	<1	-	-	-	-	-
hyphal elements	3	20	<1	1/3	10	67	<1	-
Penicillium/Aspergillus group	92	613	1	2/1	44	293	1	-
Pestalotiopsis	1	7	<1	-	-	-	-	-
Pithomyces	-	-	-	-	1	7	<1	-
Pyricularia	4	27	<1	1/1	5	33	<1	-
Rusts	2	13	<1	2/1	1	7	<1	-
Smuts,Periconia,Myxomycetes	7	47	<1	1/1	7	47	<1	-
Unknown	1	7	<1	-	-	-	-	-
	Debris Rating 2				Debris Rating 2			
Analytical Sensitivity	Analytical Sensitivity: 7 spr/m³				Analytical Sensitivity: 7 spr/m³			
Comments								
Total *See Footnotes	341	69421	~100%	1/1	303	55396	~100%	-

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Date Collected: 09/30/2015
Date Received: 10/02/2015
Date Analyzed: 10/07/2015
Date Reported: 10/05/2015
Project ID: 15025074
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Footnotes and Additional Report Information

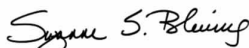
Debris Rating Table

1	Minimal (<5%) particulate present	Reported values are minimally affected by particulate load.
2	5% to 25% of the trace occluded with particulate	Negative bias is expected. The degree of bias increases directly with the percent of the trace that is occluded.
3	26% to 75% of the trace occluded with particulate	Negative bias is expected. The degree of bias increases directly with the percent of the trace that is occluded.
4	75% to 90% of the trace occluded with particulate	Negative bias is expected. The degree of bias increases directly with the percent of the trace that is occluded.
5	Greater than 90% of the trace occluded with particulate	Quantification not possible due to large negative bias. A new sample should be collected at a shorter time interval or other measures taken to reduce particulate load.

1. Penicillium/Aspergillus group spores are characterized by their small size, round to ovoid shape, being unicellular, and usually colorless to lightly pigmented. There are numerous genera of fungi whose spore morphology is similar to that of the Penicillium/Aspergillus type. Two common examples would be Paecilomyces and Acremonium. Although the majority of spores placed in this group are Penicillium, Aspergillus, or a combination of both. Keep in mind that these are not the only two possibilities.
2. Ascospores are sexually produced fungal spores formed within an ascus. An ascus is a sac-like structure designed to discharge the ascospores into the environment, e.g. Ascobolus.
3. Basidiospores are typically blown indoors from outdoors and rarely have an indoor source. However, in certain situations a high basidiospore count indoors may be indicative of a wood decay problem or wet soil.
4. The Smut, Periconia, Myxomycete group is composed of three different groups whose spores have similar morphologies. Smuts are plant pathogens, Periconia is a relatively uncommon mold indoors, and Myxomycetes are not fungi but slime molds. Although these organisms do not typically proliferate indoors, their spores are potentially allergenic.
5. The colorless group contains colorless spores which were unidentifiable to a specific genus. Examples of this group include Acremonium, Aphanocladium, Beauveria, Chrysosporium, Engyodontium microconidia, yeast, some arthrospores, as well as many others.
6. Hyphae are the vegetative mode of fungi. Hyphal elements are fragments of individual Hyphae. They can break apart and become airborne much like spores and are potentially allergenic. A mass of hyphal elements is termed the mycelium. Hyphae in high concentration may be indicative of colonization.
7. Dash (-) in this report, under raw count column means 'not detected (ND)'; otherwise 'not applicable' (NA).
8. The positive-hole correction factor is a statistical tool which calculates a probable count from the raw count, taking into consideration that multiple particles can impact on the same hole; for this reason the sum of the calculated counts may be less than the positive hole corrected total.
9. Due to rounding totals may not equal 100%.
10. Minimum Reporting Limits (MRL) for BULKs, DUSTS, SWABS, and WATER samples are a calculation based on the sample size and the dilution plate on which the organism was counted. Results are a compilation of counts taken from multiple dilutions and multiple medias. This means that every genus of fungi or bacteria recovered can be counted on the plate on which it is best represented.
11. If the final quantitative result is corrected for contamination based on the blank, the blank correction is stated in the sample comments section of the report.
12. Analysis conducted on non-viable spore traps is completed using Indoor Environmental Standards Organization (IESO) Standard 2210.
13. The results in this report are related to this project and these samples only.
14. For samples with an air volume of < 100L, the number of significant figures in the result should be considered (2) two. For samples with air volumes between 100-999L, the number of significant figures in the result should be considered (3) three. For example, a sample with a result of 55,443 spr/m³ from a 75L sample using significant figures should be considered 55,000. The same result of 55,443 from a 150L sample using significant figures should be considered 55,400 spr/m³.
15. If the In/Out ratio is greater than 100 times it is indicated >100/1, rather than showing the real value.

Terminology Used in Direct Exam Reporting

Conidiophores are a type of modified hyphae from which spores are born. When seen on a surface sample in moderate to numerous concentrations they may be indicative of fungal growth.



Suzanne S. Blevins, B.S., SM (ASCP)
Laboratory Director

15 025074
 15029074



NVLAP Lab Code 200860-0 (CO)
 NVLAP Lab Code 200829-0 (VA)
 NVLAP Lab Code 500097-0 (AZ)

LAB #192683 (CO)
 LAB #102977 (GA)
 LAB #163063 (VA)
 LAB #210229 (AZ)

Aerobiology Client Aria Environmental, Inc.		Collected By/Date: 09/30/15		Relinquished By/Date: 10/01/15	
Field Contact Julie Barth	Reporting Address PO Box 286, Woodbine, MD 21797		Relinquished By/Date: 10/01/15		Received By/Date: <i>10/2/2015</i>
Billing Address SAME	Phone/Fax 410-549-5774/410-549-4488		Sampler Type Andersen SAS	Sample Aire AeroTrap	Other AllergencoD BioCulture
Reporting Email (s) jbarth@ariaenviro.com	Project Name: Glenwood MS		PO#/Job#: J15-876 GMS		
Routine <input checked="" type="radio"/> 24 Hour <input type="radio"/> Same Day <input type="radio"/> 4 Hour <input type="radio"/> 2 Hour <input type="radio"/>	5 Day (Asbestos Only)		Notes:		
SAMPLING LOCATION ZIP CODE 21738		CC Info:			

Sample No.	Test Code	Sample Location	Total Volume/Area
1 GM-02	1054	Classroom 7	150 L
2 GM-04	1054	Classroom 10	150 L
3 GM-12	1054	Classroom 15	150 L
4 GM-20	1054	Classroom 21	150 L
5 GM-27	1054	Classroom 22	150 L
6 GM-28	1054	Classroom 25	150 L
7 GM-39	1054	Tech Ed Classroom	150 L
8 GM-40	1054	Tech Ed Lab 40	150 L
9 GM-61	1054	Portable Classroom 61	150 L
10 GM-70	1054	Portable Classroom 70	150 L
11 GM-71	1054	Portable Classroom 71	150 L
12 Out 1	1054	Outside near PCR 61	150 L
13 Out 2 CY	1054	Outside Courtyard	150 L
14			

1054	Direct, Non-viable Spore Trap	1015	Culture - WATER Legionella
1051	Direct, Qualitative- Swab/Tape	1017	Culture - SWAB Legionella
1050	Direct, Qualitative- Bulk	1010	WATER - Potable - E. coli/total coliforms
1005	AIR Culture - Bacterial Count w/ ID's	1012	SWAB - E. coli/total coliforms
1030	AIR Culture - Fungal Count w/ ID's	1028	Sewage Screen (E. coli/Enterococcus/fecal coliforms)
1006	SWAB Culture - Bacterial Count w/ ID's	2056	Heterotrophic Plate Count
1031	SWAB Culture - Fungal Count w/ ID's	3001	ASBESTOS - Point count
1008	BULK Culture - Bacterial Count w/ ID's	3002	ASBESTOS - PLM Analysis
1033	BULK Culture - Fungal Count w/ ID's	3003	ASBESTOS - Particle characterization
1007	WATER Culture - Bacterial Count w/ID's	3004	ASBESTOS - PCM Analysis

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