



Environmental Consultants and Engineers

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February 12, 2026

Prince Georges County
Environmental Safety Office
13306 Old Marlboro Pike
Upper Marlboro, MD 20772
Attention: Mr. Alex Baylor

RE: Indoor Air Quality Inspection Report – Melwood Elementary School

Global Project Number: 26-007

Dear Mr. Baylor,

On January 13, 2026, Global, Inc. (GLOBAL) conducted an Indoor Air Quality (IAQ) Inspection at the Melwood Elementary School located at 7100 Woodyard Rd, Upper Marlboro, MD 20772 in response to an odor concern. A follow up IAQ inspection was performed on January 23, 2026.

Methodology

The IAQ evaluation included a visual assessment, measurement of comfort parameters (temperature, humidity, carbon dioxide, and carbon monoxide) and respirable particulate matter (PM2.5µm and PM10µm size classes).

During the visual assessment of the above locations, GLOBAL documented odor concerns, any areas with suspected mold growth, water intrusions, and wet conditions that have the potential to lead to mold growth.

Real-time measurements of comfort parameters (i.e., temperature, relative humidity, carbon monoxide, and carbon dioxide) and respirable particulate matter in air (PM2.5µm and PM10µm size classes) were obtained using calibrated portable digital instruments. The measurements were compared with relevant industry standards and guidelines summarized below.

IAQ Parameter	T (°F)	RH (%)	CO2 (ppm)	CO (ppm)	PM 2.5 (ug/m3) *	PM 10 (ug/m3) **
Industry Standards	ASHRAE 68-79°F	ASHRAE <65%	ASHRAE < 700 + Indoor Reading	NAAQS <9	NAAQS 9	NAAQS 150

*PM2.5 – Primary standard annual mean averaged over 3 years

**PM10 - Primary & Secondary Standard (24 Hours)



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Observations

The observations in each office suite inspected are summarized in **Table 1** below. Relevant photos are provided in **Attachment I**.

Table 1: Summary of Findings on January 13, 2026

Location	HVAC Type	Status of Odor	Status of IAQ Parameter Measurements
Multi-purpose Room	2 VRF Units and 4 wall-mounted Split Units	Slight musty and food-related odor	PM2.5 concentration was elevated
Boiler Room (Adjacent to MP Room)	N/A	Slight musty/chemical and food-related odor	PM2.5 concentration was elevated
Kitchen	N/A	Food-related odor	PM2.5 concentration was elevated
Classroom 24 (Art Room)	1 VRF Unit	Slight odor of paint	PM2.5 concentration was elevated
Classroom 21	1 VRF Unit	Slight Musty Odor	No issues
Classroom 18	3 VRF Units	Slight mixed odor	PM2.5 concentration was elevated
Classroom 16	3 VRF Units	No odor detected	PM2.5 concentration was elevated
Classroom 11	1 VRF Unit and 1 portable HVAC	No odor detected	PM2.5 concentration was elevated
Classroom 26	Individual Rooftop HVAC	No odor detected	No Issues
Classroom 29	Individual Rooftop HVAC	No odor detected	No Issues
Classroom 109	3 VRF Units	No odor detected	PM2.5 concentration was elevated
Principal's Office	1 VRF Unit	No odor detected	No Issues

Note: VRF – Variable Refrigerant Flow Unit

Table 2: Summary of Findings on January 23, 2026

Location	HVAC Type	Status of Odor	Status of IAQ Parameter Measurements
Multi-purpose Room	2 VRF Units and 4 wall-mounted Split Units; 1 air purifier in operation	Slight food-related odor	PM2.5 concentration was elevated (but lower than measurement on 1/13/2026)



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Boiler Room (Adjacent to MP Room)	N/A	Slight musty/ chemical and food- related odor	PM2.5 concentration was elevated
Kitchen	N/A	Food-related odor	PM2.5 concentration was elevated
Classroom 24 (Art Room)	1 VRF Unit and 1 Air Purifier in operation	No odor detected	No issues
Classroom 21	1 VRF Unit and 1 air purifier placed but not in operation	Slight Musty Odor	PM2.5 concentration was elevated
Classroom 18	3 VRF Units and 1 air purifier in operation	Slight odor	No issues
Classroom 16	3 VRF Units and 1 air purifier placed but not in operation	No odor detected	PM2.5 concentration was elevated
Classroom 11	1 VRF Unit and 1 portable HVAC; and 1 air purifier in operation	No odor detected	No issues
Classroom 26	Individual Rooftop HVAC	No odor detected	No Issues
Classroom 29	Individual Rooftop HVAC	No odor detected	No Issues
Classroom 109	3 VRF Units and 1 air purifier in operation	No odor detected	No issues
Principal's Office	1 VRF Unit	No odor detected	No Issues

Note: VRF – Variable Refrigerant Flow Unit

Conclusions and Recommendations

The odor and elevated particle matter (under 2.5um size class) during the initial inspection on January 13, 2026 was mainly in locations which were serviced with VRF HVAC units. Based on the IAQ parameter measurements obtained on January 23, 2026, the classrooms where air purifiers were placed and in operation did not show elevated levels of respirable particulate matter under PM2.5um.

Based on the observations made, we wish to propose the following measures:



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- The VRF HVAC units need to be inspected for proper functionality by the contractor that installed these units.
- The filters of VRF HVAC units need to be cleaned.
- The stained ceiling tiles in some locations need to be replaced.

It has been our pleasure to conduct these IAQ Screening services for the Prince Georges County Public School system. If you have any questions, please feel free to contact us.

Regards,

Channa Bambaradeniya, Ph.D., CIH, CSP, CHMM
Certified Industrial Hygienist
Global, Inc.
Mobile: 443-691-0455



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ATTACHMENT I
Field Observations – January 13, 2026



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Melwood Elementary School (IAQ Assessment - 1/13/2026)

Location / Room No	Observation / IAQ Readings					
Multipurpose Room	T (°F)	RH %	CO PPM	CO ₂ PPM	PM 2.5 (ug/m3)	PM 10 (ug/m3)
	80.4	36.1	0	681	20	7
	The space is served by two (2) VRF systems, four (4) wall-mounted split HVAC units, and one (1) exhaust system. At the time of inspection, some VRF units were not operating properly.					
	Several supply and return air vents exhibited visible dust accumulation and appear to require cleaning. Three (3) ceiling tiles showed visible staining consistent with past or intermittent moisture intrusion. One MERV 13 air purifier was observed operating in the room. A slight musty odor, along with chemical- and food-related odors, was noted at the time of inspection. No visible mold growth was observed on accessible surfaces.					
Boiler Room	T	RH %	CO	CO ₂	PM 2.5	PM 10
	75.5	36.9	0	770	22	5
	The boiler room was assessed as part of the IAQ evaluation due to its proximity to occupied spaces. Conditions observed within the boiler room suggest it may be contributing to elevated particulate levels noted in adjacent areas, including the multipurpose room.					
	A similar background odor to that observed in the multipurpose room was noted. No visible mold growth was observed on accessible surfaces at the time of inspection					



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Kitchen	T (°F)	RH %	CO PPM	CO ₂ PPM	PM 2.5 (ug/m3)	PM 10 (ug/m3)
	75.7	36.6	0	656	18	3
	The kitchen area was evaluated and exhibited food-related odors, which are typical of this type of space. A similar background odor to that observed in the multipurpose room and boiler room was also noted. No visible mold growth was observed on accessible surfaces at the time of inspection.					

Location / Room No	Observation / IAQ Readings					
Classroom 24 (Art Room)	T (°F)	RH %	CO PPM	CO ₂ PPM	PM 2.5 (ug/m3)	PM 10 (ug/m3)
	74.3	36.2	0	742	18	5
	The Art Room has floor tile flooring and a suspended ceiling system. 1 VRF unit. Art-related materials such as paints were present. An air purifier was present but unplugged at the time of inspection.					
Classroom 21	T (°F)	RH %	CO PPM	CO ₂ PPM	PM 2.5 (ug/m3)	PM 10 (ug/m3)
	74.4	36.3	0	513	5	0
	Room 21 is served by one (1) VRF unit and a unit vent providing heat. The room has floor tile flooring and a suspended ceiling and was vacant at the time of inspection. One ceiling tile exhibited staining consistent with past moisture exposure. No visible mold growth was					



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	observed. A background odor similar to nearby rooms was noted.					
Classroom 18	T (°F)	RH %	CO PPM	CO ₂ PPM	PM 2.5 (ug/m3)	PM 10 (ug/m3)
	73.5	36.2	0	642	23	2
	Room 18 is served by three (3) VRF units and one (1) unit vent providing heat. An air purifier was observed operating. The room has floor tile flooring and a suspended ceiling. No visible mold growth was observed. A mixed background odor was noted.					

Location / Room No	Observation / IAQ Readings					
Classroom 16	T (°F)	RH %	CO PPM	CO ₂ PPM	PM 2.5 (ug/m3)	PM 10 (ug/m3)
	74.8	35.5	0	528	15	0
	Room 16 is served by three (3) VRF units and includes one (1) unit vent. Applied antimicrobial coating was noted above the ceiling. The room has gypsum board construction and a suspended (drop) ceiling system. One ceiling tile exhibited staining consistent with past moisture exposure. Low moisture was noted on the gypsum board (7%-9%). HVAC filters showed light dust accumulation. No visible mold growth was observed.					
Classroom 11	T (°F)	RH %	CO PPM	CO ₂ PPM	PM 2.5 (ug/m3)	PM 10 (ug/m3)
	74.3	36.1	0	521	15	6
	Room 11 was observed with a window open at the time of inspection. The room is served by one (1) portable air conditioning unit, one (1) VRF unit, and a unit vent. The					



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	room has floor tile flooring and a suspended (drop) ceiling. No visible mold growth or stained ceiling tiles were observed.					
Classroom 26	T (°F)	RH %	CO PPM	CO ₂ PPM	PM 2.5 (ug/m3)	PM 10 (ug/m3)
	73.9	34.9	0	842	4.0	0
	Room 26 is served by an individual rooftop HVAC unit and does not utilize a VRF system. No visible mold growth, staining, or noticeable odors were observed.					
Location / Room No	Observation / IAQ Readings					
Classroom 29	T (°F)	RH %	CO PPM	CO ₂ PPM	PM 2.5 (ug/m3)	PM 10 (ug/m3)
	72.5	35.5	0	881	2.1	0
	Room 29 was observed without a VRF system operating at the time of inspection. No noticeable odors or visible mold growth or staining were observed.					
Classroom 109	T (°F)	RH %	CO PPM	CO ₂ PPM	PM 2.5 (ug/m3)	PM 10 (ug/m3)
	72.1	35.9	0	478	20	3
	Room 109 is served by three (3) VRF units. No visible mold growth, ceiling tile staining, or noticeable odors were observed.					
	T (°F)	RH %	CO PPM	CO ₂ PPM	PM 2.5 (ug/m3)	PM 10 (ug/m3)



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Principal Office	73.7	35.7	0	877	8	2
	The Principal's Office is served by one (1) VRF unit and one (1) unit vent. One ceiling tile exhibited staining; the tile was dry at the time of inspection. No noticeable odors or visible mold growth were observed.					



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ATTACHMENT II
Field Observations – January 23, 2026

Melwood Elementary School (IAQ Assessment - 1/23/2026)

Location / Room No	Observation / IAQ Readings
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Multipurpose Room	T (°F)	RH %	CO PPM	CO ₂ PPM	PM 2.5 (ug/m3)	PM 10 (ug/m3)
	74.1	31.8	0	750	14	5
	The space is served by two (2) VRF systems, four (4) wall-mounted split HVAC units, and one (1) exhaust system. Several supply and return air vents exhibited visible dust accumulation and appear to require cleaning. Three (3) ceiling tiles showed visible staining consistent with past or intermittent moisture intrusion. One MERV 13 air purifier was observed operating in the room. A slight food odor was noted at the time of inspection. No visible mold growth was observed on the accessible surfaces. - Students were present in the cafeteria at the time of the inspection. Observational conditions were consistent with those documented during the Pre-Inspection.					
Boiler Room	T (°F)	RH %	CO PPM	CO ₂ PPM	PM 2.5 (ug/m3)	PM 10 (ug/m3)
	74.8	31.6	0	584	25	7
	The boiler room was assessed as part of the IAQ evaluation due to its proximity to occupied spaces. Conditions observed within the boiler room suggest it may be contributing to elevated particulate levels noted in adjacent areas, including the multipurpose room. No visible mold growth was observed on accessible surfaces at the time of inspection					



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	Observational conditions were consistent with those documented during the Pre-Inspection.					
Kitchen	T (°F)	RH %	CO PPM	CO ₂ PPM	PM 2.5 (ug/m3)	PM 10 (ug/m3)
	74.1	31.1	0	608	15	9
	The kitchen area was evaluated and exhibited food-related odors, which are typical of this type of space. A similar background odor to that observed in the multipurpose room. No visible mold growth was observed on accessible surfaces at the time of inspection. Observational conditions were consistent with those documented during the Pre-Inspection.					

Location / Room No	Observation / IAQ Readings					
Classroom 24 (Art Room)	T (°F)	RH %	CO PPM	CO ₂ PPM	PM 2.5 (ug/m3)	PM 10 (ug/m3)
	69	33.5	0	553	6	0
	The Art Room has floor tile flooring and a suspended ceiling system. Art-related materials, such as paintings, were present. - One Air Purifier was observed operating at the time of the inspection (post-inspection) Observational conditions were consistent with those documented during the Pre-Inspection.					



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Classroom 21	T (°F)	RH %	CO PPM	CO ₂ PPM	PM 2.5 (ug/m3)	PM 10 (ug/m3)
	73	32.9	0	563	18	4
	Room 21 is served by one (1) VRF unit and a unit vent providing heat. At the time of inspection, the room was empty, featuring tiled floors and a suspended ceiling.					
	One ceiling tile exhibited staining consistent with past moisture exposure. No visible mold growth was observed. - An air purifier was present in the classroom but was not in operation at the time of inspection. (Post-Inspection) Observational conditions were consistent with those documented during the Pre-Inspection.					
Classroom 18	T (°F)	RH %	CO PPM	CO ₂ PPM	PM 2.5 (ug/m3)	PM 10 (ug/m3)
	74.1	32.1	0	774	7	4
	Room 18 is served by three (3) VRF units and one (1) unit vent providing heat. An air purifier was observed operating. The room has floor tile flooring and a suspended ceiling.					
	No visible mold growth was observed. A slight mixed background odor was noted. - One Air Purifier was observed operating at the time of the inspection (post-inspection) Observational conditions were consistent with those documented during the Pre-Inspection.					

Location / Room No	Observation / IAQ Readings					
Classroom 16	T (°F)	RH %	CO PPM	CO ₂ PPM	PM 2.5 (ug/m3)	PM 10 (ug/m3)
	73.9	32.3	0	555	16	5
	Room 16 is served by three (3) VRF units and includes one (1) unit vent. An applied antimicrobial coating was noted above the ceiling. The room has gypsum board construction and a suspended (drop) ceiling system. One ceiling tile exhibited staining consistent with past moisture exposure. Low Moisture was noted on the gypsum board (7%-9%). HVAC filters showed light dust accumulation. No visible mold growth was observed. - An air purifier was present in the classroom but was not in operation at the time of inspection. (Post-Inspection) Observational conditions were consistent with those documented during the Pre-Inspection.					
Classroom 11	T (°F)	RH %	CO PPM	CO ₂ PPM	PM 2.5 (ug/m3)	PM 10 (ug/m3)
	73.9	31.8	0	553	6	4
	The room is served by one (1) portable air conditioning unit, one (1) VRF unit, and a unit vent. The room has floor tile flooring and a suspended (drop) ceiling. No visible mold growth or stained ceiling tiles were observed. - One Air Purifier was observed operating at the time of the inspection. (Post-Inspection)					



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	Observational conditions were consistent with those documented during the Pre-Inspection.					
Classroom 26	T (°F)	RH %	CO PPM	CO ₂ PPM	PM 2.5 (ug/m3)	PM 10 (ug/m3)
	72.5	31.3	0	1079	4	0
	An individual rooftop HVAC unit serves room 26 and does not utilize a VRF system. No visible mold growth, staining, or noticeable odors were observed.					
	Observational conditions were consistent with those documented during the Pre-Inspection.					

Location / Room No	Observation / IAQ Readings					
Classroom 29	T (°F)	RH %	CO PPM	CO ₂ PPM	PM 2.5 (ug/m3)	PM 10 (ug/m3)
	71.7	32	0	990	3	3
	Room 29 was observed without a VRF system operating at the time of inspection. No noticeable odors or visible mold growth or staining was observed.					
	Observational conditions were consistent with those documented during the Pre-Inspection.					
Classroom 109	T (°F)	RH %	CO PPM	CO ₂ PPM	PM 2.5 (ug/m3)	PM 10 (ug/m3)
	72.6	32.3	0	509	6	3
	Room 109 is served by three (3) VRF units. No visible mold growth, ceiling tile staining, or noticeable odors were observed.					



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	- One Air Purifier was observed operating at the time of the inspection. (Post-Inspection) Observational conditions were consistent with those documented during the Pre-Inspection.					
Principal Office	T (°F)	RH %	CO PPM	CO ₂ PPM	PM 2.5 (ug/m3)	PM 10 (ug/m3)
	73.4	31.9	0	972	7	3
	The Principal's Office is served by one (1) VRF unit and one (1) unit vent. One ceiling tile exhibited staining; the tile was dry at the time of inspection. No noticeable odors or visible mold growth were observed. Observational conditions were consistent with those documented during the Pre-Inspection.					