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February 28, 2007

Signature on File

TO: Ms. Maria Bach, Principal
Challenger Elementary School

FROM: Aston A. Henry, Jr., Supervisor
Risk Management Department

SUBJECT: Indoor Air Quality (IAQ) Assessment
Portable 74 and 141

On February 20, 2007 I conducted an assessment of Portable 74 and 141 at **Challenger Elementary School**. This evaluation included observations of the flooring system, ceiling tiles, false ceiling plenum, environmental surfaces, interior and exterior walls, and the accessible ventilation equipment. Additionally, environmental parameter measurements were taken to include temperature, relative humidity, and carbon dioxide. The detailed findings, along with the recommended corrective action can be found on the attached IAQ Assessment Worksheets.

The IAQ assessment did identify one or more existing conditions impacting IAQ and has generated appropriate work orders to correct deficiencies in systems and maintenance that could contribute to decreased indoor air quality. At the time of the assessment, these concerns were not an immediate health or safety concern to building occupants. However, due to individual sensitivities and predisposing health factors, it is possible that some building occupants may elicit a health response to agents and / or conditions identified during the evaluation. Therefore, to further improve IAQ, prevent development of future IAQ-related problems, and to reduce the potential for IAQ-related complaints by building occupants, the IAQ Assessment Team recommends appropriate follow up of each item identified and listed in the attached evaluation.

Should any questions arise, or if the current concerns continue after the attached recommendations have been addressed, please feel free to contact me at 754-321-3200.

cc: Dr. Harry LaCava, Area Superintendent
Willie Dudley, Area Director
Jeffrey S. Moquin, Director, Risk Management
Dr. Cheryl Cendan, Principal, Millennium Middle School
Charles Ricks, Project Manager, Facilities and Construction Management
Gary Itzkowitz, Broward Teachers Union
Mark Dorsett, Manager 1, Physical Plant Operations Division, Zone 1
Roy Norton, Manager Custodial/Grounds, Physical Plant Operations Division
Robert Krickovich, Coordinator, LEA, Facilities and Construction Management

AAH/tc
Enc.

IAQ Assessment

Location Number
 Evaluation Requested
 Evaluation Date

Challenger Elementary School

Time of Day

Outdoor Conditions Temperature Relative Humidity Ambient CO2

Fish	Temperature	Range	Relative Humidity	Range	CO2	Range	# Occupants
<input type="text" value="P-74"/>	<input type="text" value="66.6"/>	<input type="text" value="72 - 78"/>	<input type="text" value="39.9"/>	<input type="text" value="30% - 60%"/>	<input type="text" value="3687"/>	<input type="text" value="Max 700 > Ambient"/>	<input type="text" value="24"/>
Noticeable Odor	<input type="text" value="Yes"/>		Visible water damage / staining?		Visible microbial growth?		Amount of material affected
Ceiling Type	<input type="text" value="Gypsum Board"/>		<input type="text" value="No"/>		<input type="text" value="No"/>		<input type="text" value="None"/>
Wall Type	<input type="text" value="Gypsum Board"/>		<input type="text" value="Yes"/>		<input type="text" value="No"/>		<input type="text" value="East and West wall"/>
Flooring	<input type="text" value="Tile"/>		<input type="text" value="No"/>		<input type="text" value="No"/>		<input type="text" value="None"/>

	Clean	Minor Dust / Debris	Needs Cleaning	Corrective Action Required
Ceiling	<input type="text" value="Yes"/>	<input type="text" value="No"/>	<input type="text" value="No"/>	<input type="text"/>
Walls	<input type="text" value="No"/>	<input type="text" value="Yes"/>	<input type="text" value="Yes"/>	<input type="text" value="Repair/replace wall material"/>
Flooring	<input type="text" value="Yes"/>	<input type="text" value="No"/>	<input type="text" value="No"/>	<input type="text"/>
HVAC Supply Grills	<input type="text" value="No"/>	<input type="text" value="Yes"/>	<input type="text" value="Yes"/>	<input type="text" value="Clean with Wexcide disinfectant"/>
HVAC Return Grills	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text" value="N/A"/>
Ceiling at Supply Grills	<input type="text" value="Yes"/>	<input type="text" value="No"/>	<input type="text" value="No"/>	<input type="text"/>
Surfaces in Room	<input type="text" value="Yes"/>	<input type="text" value="No"/>	<input type="text" value="No"/>	<input type="text"/>

Observations

Findings:

- Heavy dust and debris on A/C filters in both stand alone units
- Elevated moisture content in the entire East and West walls
- Dust and debris on HVAC supply grills
- Temperature was low and CO2 level was elevated at the time of the assessment
- Hole in ceiling

-Recommendations:

Site Based Maintenance:

- Remove and replace A/C filters in both stand alone units. Ensure that filters are changed regularly.
- Clean HVAC supply grills with Wexcide disinfectant solution
- Continue to monitor this location for any signs of microbial growth as well as dust and debris accumulation and clean as appropriate

Physical Plant Operations:

- Evaluate cause of elevated moisture content in the entire East and West walls and repair as appropriate. Remove and replace wall material as appropriate.
- Evaluate HVAC for proper operation and adjust to increase temperature and lower CO2 level
- Repair hole in ceiling

IAQ Assessment

Location Number
 Evaluation Requested
 Evaluation Date

Challenger Elementary School

Time of Day

Outdoor Conditions Temperature Relative Humidity Ambient CO2

Fish	Temperature	Range	Relative Humidity	Range	CO2	Range	# Occupants
<input type="text" value="P-141"/>	<input type="text" value="71.8"/>	<input type="text" value="72 - 78"/>	<input type="text" value="43.7"/>	<input type="text" value="30% - 60%"/>	<input type="text" value="3005"/>	<input type="text" value="Max 700 > Ambient"/>	<input type="text" value="21"/>
Noticeable Odor	<input type="text" value="Yes"/>		Visible water damage / staining?		Visible microbial growth?		Amount of material affected
Ceiling Type	<input type="text" value="2 x 4 Lay In"/>		<input type="text" value="No"/>		<input type="text" value="No"/>		<input type="text" value="None"/>
Wall Type	<input type="text" value="Drywall"/>		<input type="text" value="No"/>		<input type="text" value="No"/>		<input type="text" value="None"/>
Flooring	<input type="text" value="Tile"/>		<input type="text" value="No"/>		<input type="text" value="No"/>		<input type="text" value="None"/>

	Clean	Minor Dust / Debris	Needs Cleaning	Corrective Action Required
Ceiling	<input type="text" value="Yes"/>	<input type="text" value="No"/>	<input type="text" value="No"/>	<input type="text"/>
Walls	<input type="text" value="Yes"/>	<input type="text" value="No"/>	<input type="text" value="No"/>	<input type="text"/>
Flooring	<input type="text" value="Yes"/>	<input type="text" value="No"/>	<input type="text" value="No"/>	<input type="text"/>
HVAC Supply Grills	<input type="text" value="No"/>	<input type="text" value="Yes"/>	<input type="text" value="Yes"/>	<input type="text" value="Clean with Wexcide disinfectant"/>
HVAC Return Grills	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text" value="N/A"/>
Ceiling at Supply Grills	<input type="text" value="Yes"/>	<input type="text" value="No"/>	<input type="text" value="No"/>	<input type="text"/>
Surfaces in Room	<input type="text" value="Yes"/>	<input type="text" value="No"/>	<input type="text" value="No"/>	<input type="text"/>

Observations

Findings:

- There is a foul odor that appears to be coming from underneath the portable. Teacher thinks that cats may be living under the portable. Lattice is not completely installed around the portable.
- Heavy dust and debris on A/C filters in both stand alone units
- Dust and debris on HVAC supply grills
- CO2 level was elevated at the time of the assessment

-Recommendations:

Site Based Maintenance:

- Remove and replace A/C filters in both stand alone units. Ensure that filters are changed regularly.
- Clean HVAC supply grills with Wexcide disinfectant solution
- Continue to monitor this location for any signs of microbial growth as well as dust and debris accumulation and clean as appropriate

Physical Plant Operations:

- Inspect underneath the portable for rodents/animals. Finish installation of lattice to prevent rodents/animals from living underneath the portable.
- Evaluate HVAC for proper operation and adjust to lower CO2 level