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July 31, 2006

Signature on File

TO: Ms. Davida Johnson, Principal
A.C. Perry Elementary School

FROM: Robert J. Krickovich, Coordinator, LEA
Facilities and Construction Management, Environmental Division

SUBJECT: Indoor Air Quality (IAQ) Assessment
Portable 1109PHC and 1115PK

On July 6, 2006 Richard Rosa conducted an assessment of Portable 1109PHC and 1115PK at **A.C. Perry 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 754-321-1638.

cc: Sam Gregg, Area Superintendent
Pat Dixon, Area Director
Jeffrey S. Moquin, Director, Risk Management
Rey Olivera, Project Manager, Facilities and Construction Management
Steve Feldman, Broward Teachers Union
Mark Dorsett, Manager 1, Physical Plant Operations Division, Zone 1
Roy Norton, Manager Custodial/Grounds, Physical Plant Operations Division

RK/tc
Enc.

IAQ Assessment

Location Number 1631
 Evaluation Requested July 5, 2006
 Evaluation Date July 6, 2006

A.C. Perry Elementary School

Time of Day 9:15 am

Outdoor Conditions Temperature 82.9 Relative Humidity 85 Ambient CO2 419

Fish	Temperature	Range	Relative Humidity	Range	CO2	Range	# Occupants
P-1109PHC	85.2	72 - 78	55.3	30% - 60%	507	Max 700 > Ambient	2
Noticeable Odor	No		Visible water damage / staining?	Visible microbial growth?	Amount of material affected		
Ceiling Type	Homosote		Yes	Yes	10 Square Feet		
Wall Type	Homosote		Yes	No	4 Square Feet		
Flooring	12 x 12 Vinyl		No	No	None		

	Clean	Minor Dust / Debris	Needs Cleaning	Corrective Action Required
Ceiling	No	Yes	Yes	Replace ceiling material as appropriate
Walls	No	Yes	Yes	Repair/replace as appropriate
Flooring	Yes	No	No	
HVAC Supply Grills	No	Yes	Yes	Clean with Wexcide disinfectant
HVAC Return Grills	No	Yes	Yes	Clean with Wexcide disinfectant
Ceiling at Supply Grills	No	Yes	Yes	Replace ceiling material as appropriate
Surfaces in Room	No	Yes	Yes	Clean as appropriate

Observations

Findings:

- A/C units were off during the assessment
- Visible microbial growth and water damage on 10 square foot of ceiling material above HVAC return grill
- Elevated moisture content on ceiling around HVAC supply diffusers
- Elevated moisture content and visible water damage on wall above HVAC return grill (4 square feet)
- Dust and debris on HVAC supply and return grills
- Dust build up on environmental surfaces (HFSP advised that room had not yet had summer cleaning)

Recommendations:

Site Based Maintenance:

- Ensure that A/C units are on
- Clean HVAC supply and return grills with Wexcide disinfectant solution
- Thoroughly clean environmental surfaces throughout the room
- 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 duct work for cause of microbial growth and elevated moisture content on walls and ceiling. Condensation may be forming and pooling above the ceiling. Repair/replace damaged ceiling and wall material as appropriate.

IAQ Assessment

Location Number
 Evaluation Requested
 Evaluation Date

A.C. Perry 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-1115PK"/>	<input type="text" value="82"/>	<input type="text" value="72 - 78"/>	<input type="text" value="59"/>	<input type="text" value="30% - 60%"/>	<input type="text" value="454"/>	<input type="text" value="Max 700 > Ambient"/>	<input type="text" value="2"/>
Noticeable Odor	<input type="text" value="No"/>		Visible water damage / staining?		Visible microbial growth?		Amount of material affected
Ceiling Type	<input type="text" value="Homosote"/>		<input type="text" value="Yes"/>		<input type="text" value="Yes"/>		<input type="text" value="10 Square Feet"/>
Wall Type	<input type="text" value="Homosote"/>		<input type="text" value="Yes"/>		<input type="text" value="Yes"/>		<input type="text" value="1 Square Foot"/>
Flooring	<input type="text" value="12 x 12 Vinyl"/>		<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="No"/>	<input type="text" value="Yes"/>	<input type="text" value="Yes"/>	<input type="text" value="Replace ceiling material as appropriate"/>
Walls	<input type="text" value="No"/>	<input type="text" value="Yes"/>	<input type="text" value="Yes"/>	<input type="text" value="Repair/replace as appropriate"/>
Flooring	<input type="text" value="Yes"/>	<input type="text" value="No"/>	<input type="text" value="No"/>	<input type="text" value=""/>
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" value="No"/>	<input type="text" value="Yes"/>	<input type="text" value="Yes"/>	<input type="text" value="Clean with Wexcide disinfectant"/>
Ceiling at Supply Grills	<input type="text" value="No"/>	<input type="text" value="Yes"/>	<input type="text" value="Yes"/>	<input type="text" value="Replace ceiling material as appropriate"/>
Surfaces in Room	<input type="text" value="No"/>	<input type="text" value="Yes"/>	<input type="text" value="Yes"/>	<input type="text" value="Clean as appropriate"/>

Observations

- Findings:**
- A/C units were off during the assessment. HFSP advised that the room is very cold. Thermostat was set to 65 degrees.
 - Visible microbial growth and water damage on 10 square foot of ceiling material around HVAC supply grills
 - Elevated moisture content on ceiling around HVAC supply diffusers
 - Elevated moisture content and visible water damage on walls at windows
 - Elevated moisture content and visible water damage on 10 window sills. Wood sills are severely damaged.
 - Dust and debris on HVAC supply and return grills
 - Dust build up on environmental surfaces (HFSP advised that room had not yet had summer cleaning)

Recommendations:

Site Based Maintenance:

- Ensure that A/C units are on and thermostat is set to 72-78 degrees. Initiate a work order to have a tamper proof thermostat guard installed.
- Clean HVAC supply and return grills with Wexcide disinfectant solution
- Thoroughly clean environmental surfaces throughout the room
- 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 duct work for cause of microbial growth and elevated moisture content on walls and ceiling. Condensation may be forming and pooling above the ceiling. Repair/replace damaged ceiling and wall material as appropriate.
- Evaluate cause of elevated moisture content of window sills and repair. Replace window sills as appropriate.