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Signature on File

TO: Mr. Israel Canales, Manager
Administrative Sites

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

SUBJECT: Indoor Air Quality (IAQ) Assessment
FISH 001, 109C, 115, 119 and 119F

On June 30, 2006 I conducted an assessment of FISH 001, 109C, 115, 119 and 119F at the **South Central Area Administrative Office**. 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: Dr. Verda Farrow, Area Superintendent
Jeffrey S. Moquin, Director, Risk Management
Henry Verdugo, Project Manager, Facilities and Construction Management
Mark Dorsett, Manager 1, Physical Plant Operations Division, Zone 1
Roy Norton, Manager Custodial/Grounds, Physical Plant Operations Division

RK/tc
Enc.

IAQ Assessment

South Central Area Office

Location Number
 Evaluation Requested
 Evaluation Date

Time of Day

Outdoor Conditions Temperature Relative Humidity Ambient CO2

Fish	Temperature	Range	Relative Humidity	Range	CO2	Range	# Occupants
<input type="text" value="001"/>	<input type="text" value="74.9"/>	<input type="text" value="72 - 78"/>	<input type="text" value="52.6"/>	<input type="text" value="30% - 60%"/>	<input type="text" value="548"/>	<input type="text" value="Max 700 > Ambient"/>	<input type="text" value="1"/>
Noticeable Odor		Visible water damage / staining?		Visible microbial growth?		Amount of material affected	
<input type="text" value="No"/>							
Ceiling Type	<input type="text" value="2 x 4 Lay In"/>	<input type="text" value="Yes"/>	<input type="text" value="Yes"/>	<input type="text" value="3 ceiling tiles"/>			
Wall Type	<input type="text" value="Drywall"/>	<input type="text" value="Yes"/>	<input type="text" value="Yes"/>	<input type="text" value="3 square feet"/>			
Flooring	<input type="text" value="Carpet"/>	<input type="text" value="Yes"/>	<input type="text" value="No"/>	<input type="text" value="48 square feet"/>			

	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 stained ceiling tiles"/>
Walls	<input type="text" value="Yes"/>	<input type="text" value="No"/>	<input type="text" value="No"/>	<input type="text" value=""/>
Flooring	<input type="text" value="No"/>	<input type="text" value="Yes"/>	<input type="text" value="Yes"/>	<input type="text" value="Replace stained carpet"/>
HVAC Supply Grills	<input type="text" value="Yes"/>	<input type="text" value="No"/>	<input type="text" value="No"/>	<input type="text" value=""/>
HVAC Return Grills	<input type="text" value="Yes"/>	<input type="text" value="No"/>	<input type="text" value="No"/>	<input type="text" value=""/>
Ceiling at Supply Grills	<input type="text" value="Yes"/>	<input type="text" value="No"/>	<input type="text" value="No"/>	<input type="text" value=""/>
Surfaces in Room	<input type="text" value="Yes"/>	<input type="text" value="No"/>	<input type="text" value="No"/>	<input type="text" value=""/>

Observations

Findings:

- Carpet at North exit door is severely stained - 6' x 8' area
- 3 stained ceiling tiles over door to FISH 110 - 1 with visible microbial growth
- Wall material to left side of door to FISH 110 is water damaged

Recommendations:

Site Based Maintenance:

- 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:

- Remove and replace carpet at North exit door - 6' x 8' area
- Evaluate and repair cause of stained ceiling tiles (over door to FISH 110) and water damaged wall material (left side of door to FISH 110). Remove and replace stained ceiling tiles and water damaged wall material as appropriate.

IAQ Assessment

South Central Area Office

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Outdoor Conditions Temperature Relative Humidity Ambient CO2

Fish	Temperature	Range	Relative Humidity	Range	CO2	Range	# Occupants
<input type="text" value="109C"/>	<input type="text" value="74.1"/>	<input type="text" value="72 - 78"/>	<input type="text" value="49.4"/>	<input type="text" value="30% - 60%"/>	<input type="text" value="581"/>	<input type="text" value="Max 700 > Ambient"/>	<input type="text" value="1"/>
Noticeable Odor		Visible water damage / staining?		Visible microbial growth?		Amount of material affected	
<input type="text" value="No"/>		<input type="text" value="No"/>		<input type="text" value="No"/>		<input type="text" value="None"/>	
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="Tackboard/Drywall"/>		<input type="text" value="No"/>	<input type="text" value="No"/>	<input type="text" value="None"/>		
Flooring	<input type="text" value="Carpet"/>		<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="Yes"/>	<input type="text" value="No"/>	<input type="text" value="No"/>	<input type="text"/>
HVAC Return Grills	<input type="text" value="No"/>	<input type="text" value="Yes"/>	<input type="text" value="Yes"/>	<input type="text" value="Dust and debris on inside of return box"/>
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:

- Dust and debris on inside of HVAC return box
- Wood shingles on the outside of the room have fungus and ferns growing

Recommendations:

Site Based Maintenance:

- 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:

- Clean inside of HVAC return box
- Clean fungus and ferns from exterior wood shingles and treat shingles to prevent future growth

IAQ Assessment

Location Number
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South Central Area Office

Time of Day

Outdoor Conditions Temperature Relative Humidity Ambient CO2

Fish	Temperature	Range	Relative Humidity	Range	CO2	Range	# Occupants
<input type="text" value="115"/>	<input type="text" value="72.6"/>	<input type="text" value="72 - 78"/>	<input type="text" value="57.6"/>	<input type="text" value="30% - 60%"/>	<input type="text" value="506"/>	<input type="text" value="Max 700 > Ambient"/>	<input type="text" value="2"/>
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="Yes"/>		<input type="text" value="Yes"/>		<input type="text" value="See Below"/>
Flooring	<input type="text" value="Carpet"/>		<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="Clean as appropriate"/>
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="Yes"/>	<input type="text" value="No"/>	<input type="text" value="No"/>	<input type="text"/>
HVAC Return Grills	<input type="text" value="No"/>	<input type="text" value="Yes"/>	<input type="text" value="Yes"/>	<input type="text" value="Dust and debris on inside of return box"/>
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:

- 1 HVAC supply grill is blocked with cardboard
- Dust and debris on inside of HVAC return box
- Dust and debris on all wall surfaces
- East wall on South side of door has visible microbial growth over desks
- West wall over and to the right of the door to FISH 115A has visible microbial growth
- FISH 115A - ceiling tile at heat detector has visible microbial growth

Recommendations:

Site Based Maintenance:

- Remove cardboard from HVAC supply grill
- 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:

- Clean inside of HVAC return box
- Clean walls as appropriate with Wexcide disinfectant solution to remove dust and debris and microbial growth and repaint walls
- Evaluate and repair cause of stained ceiling tile at heat detector in FISH 115A. Remove and replace stained ceiling tile as appropriate.

IAQ Assessment

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Time of Day

Outdoor Conditions Temperature Relative Humidity Ambient CO2

Fish	Temperature	Range	Relative Humidity	Range	CO2	Range	# Occupants
<input type="text" value="119/119F"/>	<input type="text" value="71.3"/>	<input type="text" value="72 - 78"/>	<input type="text" value="55.3"/>	<input type="text" value="30% - 60%"/>	<input type="text" value="558"/>	<input type="text" value="Max 700 > Ambient"/>	<input type="text" value="1"/>
Noticeable Odor	<input type="text" value="No"/>	Visible water damage / staining?	<input type="text" value="No"/>	Visible microbial growth?	<input type="text" value="No"/>	Amount of material affected	<input type="text" value="None"/>
Ceiling Type	<input type="text" value="4 x 4 Tiles"/>		<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="Carpet"/>		<input type="text" value="Yes"/>		<input type="text" value="No"/>		<input type="text" value="Minor staining"/>

	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="No"/>	<input type="text" value="Yes"/>	<input type="text" value="Yes"/>	<input type="text" value="Clean and sanitize"/>
HVAC Supply Grills	<input type="text" value="Yes"/>	<input type="text" value="No"/>	<input type="text" value="No"/>	<input type="text"/>
HVAC Return Grills	<input type="text" value="No"/>	<input type="text" value="Yes"/>	<input type="text" value="Yes"/>	<input type="text" value="Dust and debris on inside of return box"/>
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:

- Dust and debris on A/C filter inside return box and not sized properly
- Dust and debris on inside of HVAC return box
- FISH 123 - Air Handler Room - Drain pan is holding water and there is heavy slime build up. HFSP stated that pan has overflowed twice this week.
- FISH 117 - Air Handler Room - Drain pan is holding water and there is heavy slime build up. Heavy dust build up in return duct and on walls in air handler room.

Recommendations:

Site Based Maintenance:

- Remove dirty A/C filter and replace with proper sized filter
- 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:

- Clean inside of HVAC return box
- Clean condensate drain and pan in FISH 123 (AHU)
- Clean condensate drain and pan in FISH 117 and clean return duct and walls as appropriate