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August 10, 2005

TO: Ms. Gwen Batie , Principal  
**Sunland Park Elementary School**

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

SUBJECT: Indoor Air Quality (IAQ) Assessment  
FISH 118, 121, 125, 129, 129B and 130

On August 1, 2005 the IAQ Assessment Team conducted an assessment of FISH 118, 121, 125, 129, 129B and 130 at **Sunland Park Elementary School**. The evaluation consisted of a walkthrough of the identified areas to assess the current condition of the location with regard to indoor air quality. This assessment included observations of the carpet, floor tile, ceiling tile, interior walls, false ceiling plenum, and accessible ventilation equipment.

Attached are the findings of this assessment along with recommendations for further assessment, remediation, or corrective actions, if needed.

Generally, the IAQ Assessment did not identify any existing conditions significantly impacting IAQ and thereby presenting immediate health and safety concerns 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  
Kevin Sawyer, Area Director  
Jeffrey S. Moquin, Director, Risk Management  
Rodney Williams, Project Manager II, Facilities and Construction Management  
Dane Ramson, 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

Sunland Park Elementary School

Evaluation Requested

Time of Day

Evaluation Date

Outdoor Conditions      Temperature       Relative Humidity       Ambient CO2

Fish	Temperature	Range	Relative Humidity	Range	CO2	Range	# Occupants
<input type="text" value="118"/>	<input type="text" value="73.9"/>	<input type="text" value="72 - 78"/>	<input type="text" value="45.9"/>	<input type="text" value="30% - 60%"/>	<input type="text" value="726"/>	<input type="text" value="Max 700 &gt; Ambient"/>	<input type="text" value="2"/>
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="Drywall/Tackboard"/>		<input type="text" value="No"/>	<input type="text" value="No"/>	<input type="text" value="None"/>		
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="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="Yes"/>	<input type="text" value="No"/>	<input type="text" value="No"/>	<input type="text"/>
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:**  
 - Raid bug spray, 409 cleaner, Lysol disinfectant and spray wood stain found in cabinet over sink

**Recommendations:**  
**Site Based Maintenance:**  
 - Remove all non-approved chemicals from building  
 - Continue to monitor this location for any signs of microbial growth as well as dust and debris accumulation and clean as appropriate

**Project Manager:**  
 - Expedite IAQ project

# IAQ Assessment

Sunland Park Elementary School

Evaluation Requested

Time of Day

Evaluation Date

Outdoor Conditions      Temperature       Relative Humidity       Ambient CO2

Fish	Temperature	Range	Relative Humidity	Range	CO2	Range	# Occupants
<input type="text" value="121"/>	<input type="text" value="74"/>	<input type="text" value="72 - 78"/>	<input type="text" value="45.7"/>	<input type="text" value="30% - 60%"/>	<input type="text" value="752"/>	<input type="text" value="Max 700 &gt; 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="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/Tackboard"/>		<input type="text" value="Yes"/>	<input type="text" value="No"/>	<input type="text" value="Around all windows"/>		
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="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="Yes"/>	<input type="text" value="No"/>	<input type="text" value="No"/>	<input type="text"/>
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:**

- Exterior wall is severely water damaged and windows leak severely

**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

**Project Manager:**

- Expedite IAQ project to repair/replace windows and repair walls

# IAQ Assessment

Sunland Park Elementary School

Evaluation Requested

Time of Day

Evaluation Date

Outdoor Conditions      Temperature       Relative Humidity       Ambient CO2

Fish	Temperature	Range	Relative Humidity	Range	CO2	Range	# Occupants
<input type="text" value="125"/>	<input type="text" value="73.2"/>	<input type="text" value="72 - 78"/>	<input type="text" value="46.2"/>	<input type="text" value="30% - 60%"/>	<input type="text" value="739"/>	<input type="text" value="Max 700 &gt; Ambient"/>	<input type="text" value="2"/>
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="Drywall/Tackboard"/>		<input type="text" value="No"/>	<input type="text" value="No"/>	<input type="text" value="None"/>		
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="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="Yes"/>	<input type="text" value="No"/>	<input type="text" value="No"/>	<input type="text"/>
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:**  
 - Storage room (FISH 125A) has carpet that is stained, rippled and 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 Division:**  
 - Replace carpet in FISH 125A (storage room) with tile

**Project Manager:**  
 - Expedite IAQ project

# IAQ Assessment

Sunland Park Elementary School

Evaluation Requested July 29, 2005

Time of Day 12:40 pm

Evaluation Date August 1, 2005

Outdoor Conditions      Temperature 90.4      Relative Humidity 70.2      Ambient CO2 565

Fish	Temperature	Range	Relative Humidity	Range	CO2	Range	# Occupants
<span style="border: 1px solid black; padding: 2px;">129</span>	<span style="border: 1px solid black; padding: 2px;">73.7</span>	<span style="border: 1px solid black; padding: 2px;">72 - 78</span>	<span style="border: 1px solid black; padding: 2px;">66</span>	<span style="border: 1px solid black; padding: 2px;">30% - 60%</span>	<span style="border: 1px solid black; padding: 2px;">641</span>	<span style="border: 1px solid black; padding: 2px;">Max 700 &gt; Ambient</span>	<span style="border: 1px solid black; padding: 2px;">2</span>
Noticeable Odor		Visible water damage / staining?		Visible microbial growth?		Amount of material affected	
<span style="border: 1px solid black; padding: 2px;">No</span>		<span style="border: 1px solid black; padding: 2px;">Yes</span>		<span style="border: 1px solid black; padding: 2px;">No</span>		<span style="border: 1px solid black; padding: 2px;">At fire sprinkler over emergency exit</span>	
Ceiling Type	<span style="border: 1px solid black; padding: 2px;">2 x 4 Lay In</span>		<span style="border: 1px solid black; padding: 2px;">Yes</span>	<span style="border: 1px solid black; padding: 2px;">No</span>		<span style="border: 1px solid black; padding: 2px;">At emergency exit doors &amp; windows</span>	
Wall Type	<span style="border: 1px solid black; padding: 2px;">Drywall/Tackboard</span>		<span style="border: 1px solid black; padding: 2px;">Yes</span>	<span style="border: 1px solid black; padding: 2px;">No</span>		<span style="border: 1px solid black; padding: 2px;">None</span>	
Flooring	<span style="border: 1px solid black; padding: 2px;">3' x 3' Vinyl</span>		<span style="border: 1px solid black; padding: 2px;">No</span>	<span style="border: 1px solid black; padding: 2px;">No</span>			

	Clean	Minor Dust / Debris	Needs Cleaning	Corrective Action Required
Ceiling	<span style="border: 1px solid black; padding: 2px;">Yes</span>	<span style="border: 1px solid black; padding: 2px;">No</span>	<span style="border: 1px solid black; padding: 2px;">No</span>	<span style="border: 1px solid black; height: 20px; width: 100%;"></span>
Walls	<span style="border: 1px solid black; padding: 2px;">Yes</span>	<span style="border: 1px solid black; padding: 2px;">No</span>	<span style="border: 1px solid black; padding: 2px;">No</span>	<span style="border: 1px solid black; height: 20px; width: 100%;"></span>
Flooring	<span style="border: 1px solid black; padding: 2px;">Yes</span>	<span style="border: 1px solid black; padding: 2px;">No</span>	<span style="border: 1px solid black; padding: 2px;">No</span>	<span style="border: 1px solid black; height: 20px; width: 100%;"></span>
HVAC Supply Grills	<span style="border: 1px solid black; padding: 2px;">Yes</span>	<span style="border: 1px solid black; padding: 2px;">No</span>	<span style="border: 1px solid black; padding: 2px;">No</span>	<span style="border: 1px solid black; height: 20px; width: 100%;"></span>
HVAC Return Grills	<span style="border: 1px solid black; padding: 2px;">Yes</span>	<span style="border: 1px solid black; padding: 2px;">No</span>	<span style="border: 1px solid black; padding: 2px;">No</span>	<span style="border: 1px solid black; height: 20px; width: 100%;"></span>
Ceiling at Supply Grills	<span style="border: 1px solid black; padding: 2px;">Yes</span>	<span style="border: 1px solid black; padding: 2px;">No</span>	<span style="border: 1px solid black; padding: 2px;">No</span>	<span style="border: 1px solid black; height: 20px; width: 100%;"></span>
Surfaces in Room	<span style="border: 1px solid black; padding: 2px;">Yes</span>	<span style="border: 1px solid black; padding: 2px;">No</span>	<span style="border: 1px solid black; padding: 2px;">No</span>	<span style="border: 1px solid black; height: 20px; width: 100%;"></span>

**Observations**

**Findings:**

- Water damaged wall board at emergency exit doors and windows
- Stained ceiling tiles at fire sprinkler over emergency exit door
- All windows leak and walls around windows are water damaged
- Elevated humidity level

**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 Division:**

- Evaluate and repair leaking fire sprinkler and replace ceiling tiles as appropriate
- Evaluate and repair HVAC system to lower humidity level

**Project Manager:**

- Expedite IAQ project to repair/replace windows and repair walls

# IAQ Assessment

Sunland Park Elementary School

Evaluation Requested July 29, 2005

Time of Day 12:40 pm

Evaluation Date August 1, 2005

Outdoor Conditions      Temperature 90.4      Relative Humidity 70.2      Ambient CO2 565

Fish	Temperature	Range	Relative Humidity	Range	CO2	Range	# Occupants
<span style="border: 1px solid black; padding: 2px;">129B</span>	<span style="border: 1px solid black; padding: 2px;">71.2</span>	<span style="border: 1px solid black; padding: 2px;">72 - 78</span>	<span style="border: 1px solid black; padding: 2px;">73.2</span>	<span style="border: 1px solid black; padding: 2px;">30% - 60%</span>	<span style="border: 1px solid black; padding: 2px;">653</span>	<span style="border: 1px solid black; padding: 2px;">Max 700 &gt; Ambient</span>	<span style="border: 1px solid black; padding: 2px;">2</span>
Noticeable Odor		Visible water damage / staining?		Visible microbial growth?		Amount of material affected	
<span style="border: 1px solid black; padding: 2px;">No</span>		<span style="border: 1px solid black; padding: 2px;">Yes</span>		<span style="border: 1px solid black; padding: 2px;">No</span>		<span style="border: 1px solid black; padding: 2px;">At paint booth</span>	
Ceiling Type	<span style="border: 1px solid black; padding: 2px;">2 x 4 Lay In</span>		<span style="border: 1px solid black; padding: 2px;">Yes</span>	<span style="border: 1px solid black; padding: 2px;">No</span>	<span style="border: 1px solid black; padding: 2px;">At paint booth</span>		
Wall Type	<span style="border: 1px solid black; padding: 2px;">Drywall/Tackboard</span>		<span style="border: 1px solid black; padding: 2px;">No</span>	<span style="border: 1px solid black; padding: 2px;">No</span>	<span style="border: 1px solid black; padding: 2px;"></span>		
Flooring	<span style="border: 1px solid black; padding: 2px;">12 x 12 Vinyl</span>		<span style="border: 1px solid black; padding: 2px;">No</span>	<span style="border: 1px solid black; padding: 2px;">No</span>	<span style="border: 1px solid black; padding: 2px;">None</span>		

	Clean	Minor Dust / Debris	Needs Cleaning	Corrective Action Required
Ceiling	<span style="border: 1px solid black; padding: 2px;">Yes</span>	<span style="border: 1px solid black; padding: 2px;">No</span>	<span style="border: 1px solid black; padding: 2px;">No</span>	<span style="border: 1px solid black; padding: 2px;"></span>
Walls	<span style="border: 1px solid black; padding: 2px;">Yes</span>	<span style="border: 1px solid black; padding: 2px;">No</span>	<span style="border: 1px solid black; padding: 2px;">No</span>	<span style="border: 1px solid black; padding: 2px;"></span>
Flooring	<span style="border: 1px solid black; padding: 2px;">Yes</span>	<span style="border: 1px solid black; padding: 2px;">No</span>	<span style="border: 1px solid black; padding: 2px;">No</span>	<span style="border: 1px solid black; padding: 2px;"></span>
HVAC Supply Grills	<span style="border: 1px solid black; padding: 2px;">Yes</span>	<span style="border: 1px solid black; padding: 2px;">No</span>	<span style="border: 1px solid black; padding: 2px;">No</span>	<span style="border: 1px solid black; padding: 2px;"></span>
HVAC Return Grills	<span style="border: 1px solid black; padding: 2px;">Yes</span>	<span style="border: 1px solid black; padding: 2px;">No</span>	<span style="border: 1px solid black; padding: 2px;">No</span>	<span style="border: 1px solid black; padding: 2px;"></span>
Ceiling at Supply Grills	<span style="border: 1px solid black; padding: 2px;">Yes</span>	<span style="border: 1px solid black; padding: 2px;">No</span>	<span style="border: 1px solid black; padding: 2px;">No</span>	<span style="border: 1px solid black; padding: 2px;"></span>
Surfaces in Room	<span style="border: 1px solid black; padding: 2px;">Yes</span>	<span style="border: 1px solid black; padding: 2px;">No</span>	<span style="border: 1px solid black; padding: 2px;">No</span>	<span style="border: 1px solid black; padding: 2px;"></span>

**Observations**

**Findings:**

- Water damaged sink cabinet backsplash (90% moisture content)
- Ceiling grid is rusty
- Stained ceiling tiles at paint booth around exhaust vent
- Elevated humidity level

**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 Division:**

- Evaluate and repair/replace water damaged sink cabinet and recaulk as appropriate
- Evaluate paint booth
- Evaluate and repair roof leak around exhaust vent and check operation of back draft damper in vent
- Evaluate and repair/repaint ceiling grid
- Evaluate and repair HVAC system to lower humidity level

**Project Manager:**

- Expedite IAQ project

# IAQ Assessment

Sunland Park Elementary School

Evaluation Requested

Time of Day

Evaluation Date

Outdoor Conditions      Temperature       Relative Humidity       Ambient CO2

Fish	Temperature	Range	Relative Humidity	Range	CO2	Range	# Occupants
<input style="width: 40px;" type="text" value="130"/>	<input style="width: 40px;" type="text" value="74.9"/>	<input style="width: 40px;" type="text" value="72 - 78"/>	<input style="width: 40px;" type="text" value="64.6"/>	<input style="width: 40px;" type="text" value="30% - 60%"/>	<input style="width: 40px;" type="text" value="607"/>	<input style="width: 40px;" type="text" value="Max 700 &gt; Ambient"/>	<input style="width: 40px;" type="text" value="2"/>
Noticeable Odor		Visible water damage / staining?		Visible microbial growth?		Amount of material affected	
<input style="width: 100px;" type="text" value="No"/>		<input style="width: 100px;" type="text" value="No"/>		<input style="width: 100px;" type="text" value="No"/>		<input style="width: 100px;" type="text" value="None"/>	
Ceiling Type	<input style="width: 100px;" type="text" value="2 x 4 Lay In"/>		<input style="width: 40px;" type="text" value="No"/>	<input style="width: 40px;" type="text" value="No"/>		<input style="width: 100px;" type="text" value="None"/>	
Wall Type	<input style="width: 100px;" type="text" value="Drywall/Tackboard"/>		<input style="width: 40px;" type="text" value="Yes"/>	<input style="width: 40px;" type="text" value="No"/>		<input style="width: 100px;" type="text" value="Around all windows"/>	
Flooring	<input style="width: 100px;" type="text" value="Carpet/Wood"/>		<input style="width: 40px;" type="text" value="No"/>	<input style="width: 40px;" type="text" value="No"/>		<input style="width: 100px;" type="text" value="None"/>	

	Clean	Minor Dust / Debris	Needs Cleaning	Corrective Action Required
Ceiling	<input style="width: 40px;" type="text" value="Yes"/>	<input style="width: 40px;" type="text" value="No"/>	<input style="width: 40px;" type="text" value="No"/>	<input style="width: 100%; height: 20px;" type="text"/>
Walls	<input style="width: 40px;" type="text" value="Yes"/>	<input style="width: 40px;" type="text" value="No"/>	<input style="width: 40px;" type="text" value="No"/>	<input style="width: 100%; height: 20px;" type="text"/>
Flooring	<input style="width: 40px;" type="text" value="Yes"/>	<input style="width: 40px;" type="text" value="No"/>	<input style="width: 40px;" type="text" value="No"/>	<input style="width: 100%; height: 20px;" type="text"/>
HVAC Supply Grills	<input style="width: 40px;" type="text" value="Yes"/>	<input style="width: 40px;" type="text" value="No"/>	<input style="width: 40px;" type="text" value="No"/>	<input style="width: 100%; height: 20px;" type="text"/>
HVAC Return Grills	<input style="width: 40px;" type="text" value="Yes"/>	<input style="width: 40px;" type="text" value="No"/>	<input style="width: 40px;" type="text" value="No"/>	<input style="width: 100%; height: 20px;" type="text"/>
Ceiling at Supply Grills	<input style="width: 40px;" type="text" value="Yes"/>	<input style="width: 40px;" type="text" value="No"/>	<input style="width: 40px;" type="text" value="No"/>	<input style="width: 100%; height: 20px;" type="text"/>
Surfaces in Room	<input style="width: 40px;" type="text" value="Yes"/>	<input style="width: 40px;" type="text" value="No"/>	<input style="width: 40px;" type="text" value="No"/>	<input style="width: 100%; height: 20px;" type="text"/>

**Observations**

**Findings:**

- All windows leak and walls around windows are water damaged
- Elevated humidity level

**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 Division:**

- Evaluate and repair HVAC to lower humidity level

**Project Manager:**

- Expedite IAQ project to repair/replace windows and repair walls