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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 202, 206, 225, 234, 251 and 252

On March 15 and 28, 2007 various members of the IAQ Assessment Team conducted an assessment of FISH 202, 206, 225, 234, 251 and 252 at **TSSC - ETS**. 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: 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 As	sessment	Location Number	
	TSSC	Building - ETS		Evaluation Requested	March 19, 2007
Time of Day 3:	15 pm			Evaluation Date	March 28, 2007
Outdoor Conditions	Temperatur	e 81.3	Relative Humidity	54.2 Ambie	ent CO2 417
Fish Tempe	erature Range	Relative Humidity	Range	CO2 Rai	nge # Occupants
202 7	4.2 72 - 78	44.1	30% - 60%	1094 Max 700	> Ambient
Noticeable Odor	No	Visible water damage / staining	Visible micro g? growth?	obial Amount of ma affected	
Ceiling Type	2 x 4 Lay In	No	No		None
Wall Type	Drywall	No	No		None
Flooring	Carpet	Yes	Yes	En	tire Carpet
	Clean Minor / De		J	Corrective Action R	equired
Ceiling	Yes	o No			
Walls	Yes	o No			
Flooring	No	Yes	Ren	nove carpet and repla	ce with tile
HVAC Supply Grills	Yes	o No			
HVAC Return Grills	Yes	o No			
Ceiling at Supply Grills	Yes	o No			
Surfaces in Room	No	s Yes		Clean as appropr	iate

Findings:

- Heavy dust on carpet in corners and under desks. Carpet is heavily stained, rippled and torn.

- Live plants with visible microbial growth

- Minor dust on elevated surfaces

-Recommendations:

Site Based Maintenance:

- Expedite carpet replacement. Recommend removing carpet and replacing with tile.

- Remove live plants
- Clean elevated surfaces throughout

- Continue to monitor this location for any signs of microbial growth as well as dust and debris accumulation and clean as appropriate

		IAQ As	sessment	Location Number	
	TSSC	Building - ETS		Evaluation Requested	March 19, 2007
Time of Day 3:	15 pm			Evaluation Date	March 28, 2007
Outdoor Conditions	Temperature	81.3	Relative Humidity	54.2 Ambie	ent CO2 417
Fish Tempe	erature Range	Relative Humidity	Range	CO2 Rar	nge # Occupants
206 7	4.6 72 - 78	45	30% - 60%	1129 Max 700	> Ambient
Noticeable Odor	No	Visible water damage / staining	Visible micro growth?	bial Amount of ma affected	terial
Ceiling Type	2 x 4 Lay In	No	No		None
Wall Type	Drywall	No	No		None
Flooring	Carpet	Yes	Yes	En	tire Carpet
Ceiling	Clean Minor I / Deb Yes No	ris Cleaning		Corrective Action Re	equired
Walls	Yes	No			
Flooring	No	Yes	Ren	nove carpet and repla	ce with tile
HVAC Supply Grills	Yes	No			
HVAC Return Grills	Yes	No			
Ceiling at Supply Grills	Yes	No			
Surfaces in Room	No	Yes		Clean as appropri	ate

Findings:

- Heavy dust on carpet in corners and under desks. Carpet is heavily stained, rippled and torn.

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-Recommendations:

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- Expedite carpet replacement. Recommend removing carpet and replacing with tile.

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			IAQ As	sessment	Location N	umber		
		TSSC Buildi	ng - ETS		Evaluation F	Requested	March	6, 2007
Time of Day	1:30 pm				Evalu	ation Date	March	15, 2007
Outdoor Condi	itions Ten	perature 8	31.6	Relative Humidity	51.2	Ambie	nt CO2	555
Fish	Temperature	Range Rela	tive Humidity	Range	CO2	Ran	ige #	Occupants
225	75.8 7	2 - 78	45.7	30% - 60%	1163	Max 700	> Ambien	t 14
Noticeable Od	lor No		/isible water age / staining	Visible micro g? growth?	obial Arr	ount of ma affected	terial	
Ceiling Type	2 x 4 Lay	In	Νο	No			None	
Wall Type	Drywall		No	No			None	
Flooring	Carpet		Yes	Yes		Ent	tire Carpet	
	Clean	Minor Dust / Debris	Needs Cleaning		Corrective	Action Re	equired	
Ceiling	Yes	No	No					
Walls	Yes	No	No					
Flooring	No	Yes	Yes	Ren	nove carpet	and replace	ce with tile	•
HVAC Supply	Grills Yes	No	No					
HVAC Return	Grills Yes	No	No					
Ceiling at Sup Grills	ply Yes	No	No					
Surfaces in Ro	oom No	Yes	Yes		Clean a	s appropri	ate	

Findings: (Open Area with cubicles)

- Heavy dust on carpet in corners and under desks. Carpet is heavily stained, rippled and torn.

- Live plants with visible microbial growth
- HVAC supply grill was blocked with crumpled paper
- Minor dust on elevated surfaces
- Excessive storage in office area boxes, papers, etc.

-Recommendations:

Site Based Maintenance:

- Expedite carpet replacement. Recommend removing carpet and replacing with tile.

- Remove live plants
- Remove paper from HVAC supply grill
- Clean elevated surfaces throughout
- Remove excess items boxes, papers, etc. from office areas

- Continue to monitor this location for any signs of microbial growth as well as dust and debris accumulation and clean as appropriate

			IAQ As	sessment	Location Nu	umber		
		TSSC Buil	ding - ETS		Evaluation R	equested	March	6, 2007
Time of Day	1:30 pm]			Evalu	ation Date	March	15, 2007
Outdoor Cond	itions Tei	mperature	81.6	Relative Humidity	51.2	Ambie	nt CO2	555
Fish	Temperature	Range Re	lative Humidity	Range	CO2	Ran	ge #	Occupants
234	74	72 - 78	43.8	30% - 60%	1706	Max 700	> Ambien	t 20
Noticeable Oc	dor No] da	Visible water mage / staining	Visible micro growth?	/ / / /	ount of mat affected	terial	
Ceiling Type	2 x 4 Lay	/ In	No	No			None	
Wall Type	Drywa	ll	No	No			None	
Flooring	Carpe	t	Yes	Yes		Ent	ire Carpet	
	Clean	Minor Dust / Debris	Needs Cleaning		Corrective	Action Re	equired	
Ceiling	Yes	No	No					
Walls	Yes	No	No					
Flooring	No	Yes	Yes	Ren	nove carpet	and replace	ce with tile	•
HVAC Supply	Grills Yes	No	No					
HVAC Return	Grills Yes	No	No					
Ceiling at Sup Grills	ply Yes	No	No					
Surfaces in R	oom No	Yes	Yes		Clean as	s appropria	ate	

Findings: (Open Area with cubicles)

- Heavy dust on carpet in corners and under desks. Carpet is heavily stained, rippled and torn.

- Live plants with visible microbial growth
- Minor dust on elevated surfaces
- Excessive storage in office area boxes, papers, etc.
- CO2 level was slightly elevated

-Recommendations:

Site Based Maintenance:

- Expedite carpet replacement. Recommend removing carpet and replacing with tile.

- Remove live plants
- Clean elevated surfaces throughout
- Remove excess items boxes, papers, etc. from office areas

- 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 and repair HVAC system to lower CO2 level

			IAQ As	sessment	Locatio	on Number		
		TSSC Buildi	ng - ETS		Evaluat	ion Requested	March	6, 2007
Time of Day	2:00 pm				I	Evaluation Date	March	15, 2007
Outdoor Condi	itions Ten	nperature 8	31.6	Relative Hur	nidity 51.2	Ambie	nt CO2	555
Fish	Temperature	Range Rela	tive Humidity	Range	CO2	Ran	ige #	Occupants
251 & 252	74.7 7	/2 - 78	43.8	30% - 60%	1418	Max 700	> Ambient	10
Noticeable Od	lor No		/isible water nage / staining		microbial owth?	Amount of ma affected	terial	
Ceiling Type	2 x 4 Lay	In	Νο		No		None	
Wall Type	Drywall		No		No		None	
Flooring	Carpet		Yes		ſes	Ent	tire Carpet	
	Clean	Minor Dust / Debris	Needs Cleaning		Correc	ctive Action Re	equired	
Ceiling	Yes	Νο	No					
Walls	Yes	No	No					
Flooring	No	Yes	Yes		Remove ca	rpet and replace	ce with tile	
HVAC Supply	Grills Yes	No	No					
HVAC Return	Grills Yes	No	No					
Ceiling at Sup Grills	ply Yes	No	No					
Surfaces in Ro	oom No	Yes	Yes		Clea	an as appropri	ate	

Findings: (Open Area with cubicles)

- Heavy dust on carpet in corners and under desks. Carpet is heavily stained, rippled and torn.

- Live plants with visible microbial growth

- Visible water staining and damage under window sill (center window South wall) and signs of water intrusion at South wall corner window.

- Minor dust on elevated surfaces
- Excessive storage in office area boxes, papers, etc.

- Heavy dust build up between partitions and walls (2 inch gap)

- Non-approved cleaning chemicals

Recommendations:

Site Based Maintenance:

- Expedite carpet replacement. Recommend removing carpet and replacing with tile.

- Remove live plants

- Remove paper from HVAC supply grill

- Clean elevated surfaces throughout

- Remove excess items - boxes, papers, etc. - from office areas

- Thoroughly clean between partitions and walls

- Remove non-approved chemicals

- 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 windows for proper seal and reseal as appropriate. Repair wall material around windows as appropriate.