

managing risk with responsibility

| Aston A. Henry, Director |
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| Risk Management Departmen |

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| November 7, 2 | 014 Signature on File | For Custodial Supervisor Use Only |
|---------------|---|---|
| TO: | Kellee Stroup, Principal Country Hills Elementary School | Custodial Issues Addressed Custodial Issues Not Addressed |
| FROM: | Dan Meyer, Project Manager Risk Management Department | |
| SUBJECT: | Indoor Air Quality (IAQ) Assessment | |

On October 28, 2014, I conducted an assessment at **Country Hills Elementary School**. Attached are findings and recommendations for further assessment, remediation, or corrective actions needed.

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.

Please ensure that your Head Facilities Serviceperson receives a copy of this correspondence so that the recommendations requiring their attention can be addressed. In an attempt to separate IAQ issues from general maintenance items, the attached assessment may contain direction for site based staff to generate a work order through COMPASS. Within two weeks a representative from the Custodial/Grounds Department will conduct a follow-up visit to ensure that all site based custodial issues have been appropriately addressed.

Should any questions arise, or if the current concerns continue after the attached recommendations have been addressed, please feel free to contact us at 754-321-1907.

cc: Shelley Meloni, Executive Director, Facilities & Construction Mark Dorsett, Manager, Zone 1, Physical Plant Operations Division Roy Norton, Manager, Custodial/Grounds, Physical Plant Operations Division Aston Henry, Director, Risk Management Sonja Coley, Senior Project Manager, Facilities & Construction Broward Teachers Union Federation of Public Employees

DM/tc Enc.

| | IAQ Assessr | nent | | |
|---|--|---|---|----------------|
| Country Hills | Elementary Evaluation Date | e October 28, 2014 | Time of Day | 1:30 |
| Outdoor Conditions Tempera | ture 84.6 Relative | Humidity 56.1 | Ambient CO2 | 110 |
| | | Range CO % - 60% 1850 | | ccupants 12 |
| Noticeable Odor Yes | Visible water damage / staining? | Visible microbial growth? | Amount of material affected | |
| Ceiling2 X 4WallsPlaster / DrywallFloor12" x 12" Vinyl | No No | No No No | | |
| Ceiling CleanYesWalls CleanYesFlooring CleanYesRoom Surfaces CleanYes | HVAC Supply Grills Clean Inside of Supply Duct Clean Ceiling at Supply Grills Clean | No Yes Yes | HVAC Return Grills Clean Inside of Return Duct Clean | No Yes |
| Trash RemovedYesSigns of PestsNoRoom ClutteredNo | Exhaust Fans Working Drain Traps Wet Food if Stored in Room is in Sealed Containers | N/A N/A Yes | Unapproved Chemicals / Cleaners in Room Air Fresheners in Room | No No |
| Mechanical Equipment Location Filters Installed Properly Yes Condensate Pan Clean Yes | 7 | Yes Yes | Mechanical Room Clean Inside of HVAC Unit Clean | N/A Yes |
| Fresh Air Intake Location Pollutant Sources Near Air Intake | Ducted to roof-top | ▼ ▼ | Fresh Air Intake Free of Obstruction | Yes |
| Observations | | | | |
| Microbial growth on wooden boo empty book shelves and wipe wi cleaned. Elevated CO2 levels in o | th Wexcide. Remove stuffed ar | - | | |

Corrective Actions to be Completed by Site Based Staff

| Wipe wood cabinet with Wexcide and monitor | ▼ |
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| Clean HVAC supply and return grills with Wexcide | ▼ |
| Remove stuffed animals | ▼ |
| Can be source of dust allergens | ▼ |
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Corrective Actions to be Completed by PPO

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| Repair HVAC to reduce humidity level | ▼ |
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| Repair HVAC to reduce CO2 level in classroom | ▼ |
| Clean supply drops and grill | ▼ |
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| | IAQ Assessi | ment | | |
|---|--|---|---|----------|
| Country Hills | Elementary Evaluation Dat | te October 28, 2014 | Time of Day 1:: | 30 |
| Outdoor Conditions Tempera | ature 84.6 Relative | e Humidity 56.1 | Ambient CO2 410 | D |
| | | Range CO ² % - 60% 893 | | supants |
| Noticeable Odor No | Visible water damage / staining? | Visible microbial growth? | Amount of material affected | |
| Ceiling2 X 4WallsPlaster / DrywallFloor12" x 12" Vinyl | No No No | No No | | |
| Ceiling Clean Yes Walls Clean Yes | HVAC Supply Grills Clean Inside of Supply | No | HVAC Return Grills Clean Inside of Return | No |
| Flooring CleanYesRoom SurfacesYesCleanYes | Duct Clean Ceiling at Supply Grills Clean | Yes | Duct Clean | Yes |
| Trash RemovedYesSigns of PestsNoRoom ClutteredNo | Exhaust Fans Working Drain Traps Wet Food if Stored in Room is | N/A N/A | Unapproved Chemicals / Cleaners in Room Air Fresheners in Room | No No |
| Mechanical Equipment Location | in Sealed Containers | Yes | Mechanical Room Clean | N/A |
| Filters Installed Properly Yes | | Yes | Inside of HVAC Unit Clean | Yes |
| Fresh Air Intake Location Pollutant Sources Near Air Intake | Ducted to roof-top | ▼ ▼ | Fresh Air Intake Free of Obstruction | Yes |
| Observations | | | | |
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Corrective Actions to be Completed by Site Based Staff

| Clean HVAC supply and return grills with Wexcide | ▼ |
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Corrective Actions to be Completed by PPO

| Clean supply drops and grill | ▼ |
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| | IAQ Assessr | nent | | |
|--|--|---|---|----------------|
| Country Hills | Elementary Evaluation Dat | e October 28, 2014 | Time of Day | 1:30 |
| Outdoor Conditions Tempera | ature 84.6 Relative | Humidity 56.1 | Ambient CO2 4 | 10 |
| | | Range CO ² % - 60% 986 | Range # O MAX 700 > Ambient | ccupants 22 |
| Noticeable Odor No | Visible water damage / staining? | Visible microbial growth? | Amount of material affected | |
| Ceiling2 X 4WallsPlaster / DrywallFloor12" x 12" Vinyl | Yes No | No No | 2 tiles | |
| Ceiling CleanYesWalls CleanYesFlooring CleanYesRoom SurfacesYesCleanYes | HVAC Supply Grills Clean Inside of Supply Duct Clean Ceiling at Supply Grills Clean | No Yes No | HVAC Return Grills Clean Inside of Return Duct Clean | Yes |
| Trash RemovedYesSigns of PestsNoRoom ClutteredNo | Exhaust Fans Working Drain Traps Wet Food if Stored in Room is in Sealed Containers | Yes Yes | Unapproved Chemicals / Cleaners in Room Air Fresheners in Room | No No |
| Mechanical Equipment Location Filters Installed Properly Yes Condensate Pan Clean Yes | | Yes Yes | Mechanical Room Clean Inside of HVAC Unit Clean | N/A Yes |
| Fresh Air Intake Location Pollutant Sources Near Air Intake | Ducted to roof-top No | ▼ | Fresh Air Intake Free of Obstruction | Yes |
| Observations Ceiling tiles with water stains ne needs to be cleaned w/ Wexcide containers. Ceiling tiles at suppl | . Remove stuffed animals. Rem | | | |

Corrective Actions to be Completed by Site Based Staff

| Remove and replace stained ceiling tiles | ▼ |
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| Clean ceilings around HVAC supply grills | ▼ |
| 501A - Clean HVAC supply grill with Wexcide | ▼ |
| Remove stuffed animals | ▼ |
| Can be source of dust allergens | ▼ |
| Store items in plastic containers with lids | ▼ |
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Corrective Actions to be Completed by PPO

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| | IAQ Assessr | nent | | |
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| Country Hil | Is Elementary Evaluation Date | e October 28, 2014 | Time of Day | :30 |
| Outdoor Conditions Tempe | erature 84.6 Relative | Humidity 56.1 | Ambient CO2 4 | 10 |
| | | Range CO ² % - 60% 651 | Range # Oc MAX 700 > Ambient | 2 |
| Noticeable Odor No | Visible water damage / staining? | Visible microbial growth? | Amount of material affected | |
| Ceiling 2 X 4 | Νο | No | | |
| Walls Plaster / Drywall | No | No | | |
| Floor 12" x 12" Vinyl | No | No | | |
| Ceiling Clean Yes Walls Clean Yes | HVAC Supply Grills Clean | Yes | HVAC Return Grills Clean | Yes |
| Flooring Clean Yes | Inside of Supply Duct Clean | Yes | Inside of Return Duct Clean | Yes |
| Room Surfaces | Ceiling at Supply Grills Clean | Yes | | |
| Trash Removed Yes | Exhaust Fans Working | Yes | Unapproved Chemicals / Cleaners in Room | No |
| Signs of Pests No | Drain Traps Wet | Yes | Air Fresheners | No |
| Room Cluttered Yes | Food if Stored in Room is in Sealed Containers | Yes | in Room | |
| Mechanical Equipment Location | n In classroom HVAC unit | | Mechanical Room Clean | N/A |
| Filters Installed Properly | es Filters Clean | Yes | Inside of HVAC Unit Clean | Yes |
| Condensate Pan Clean | es Cooling Coil Clean | Yes | | |
| Fresh Air Intake Location | Ducted to roof-top | ▼ | Fresh Air Intake Free of Obstruction | Yes |
| Pollutant Sources Near Air Intake | Νο | ▼ | of Obstruction | |
| Observations | | | | |
| IAQ concerns may be caused I | by all excessive items in the class | sroom. | | |
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Corrective Actions to be Completed by Site Based Staff

| Reduce clutter in room | ▼ |
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| Room too cluttered to clean properly | \bullet |
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Corrective Actions to be Completed by PPO

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