

# managing risk with responsibility

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

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| September 2 | 4, 2014    | Signature on File                                | For Custodial Supervisor Use Only                            |
|-------------|------------|--|--|
| TO:         |            | aolo, Principal<br><b>High School</b>            | Custodial Issues Addressed<br>Custodial Issues Not Addressed |
| FROM:       |            | ckovich, Coordinator I, LEA<br>gement Department |  |
| SUBJECT:    | Indoor Air | Quality (IAQ) Assessment                         |  |

On September 24, 2014, I conducted an assessment at **Plantation High 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 Assess   | ment                                 |   |            |
|---|--|--------------------------------------|---|------------|
| Plan  | tation High Evaluation Dat   | September 24, 2014                   | Time of Day   | 7:30       |
| Outdoor Conditions Temperat   | ture 75.9 Relative   | e Humidity 95.0                      | Ambient CO2 5   | 89         |
|   |  | Range CO <sup>2</sup><br>% - 60% 842 |   | 20         |
| Noticeable Odor No  | Visible water damage /<br>staining?  | Visible microbial growth?            | Amount of<br>material affected  |            |
| Ceiling2' X 4' Lay inWallsPlaster/HomasoteFloor12" x 12" Vinyl                              | Yes<br>No<br>No  | No<br>No<br>No                       | 4 stained tiles   |            |
| Ceiling Clean Yes<br>Walls Clean Yes<br>Flooring Clean Yes                                  | HVAC Supply<br>Grills Clean<br>Inside of Supply<br>Duct Clean                                | Yes                                  | HVAC Return<br>Grills Clean<br>Inside of Return<br>Duct Clean           | Yes<br>Yes |
| Room Surfaces Yes<br>Clean  | Ceiling at Supply<br>Grills Clean  | Yes                                  |   |            |
| Trash RemovedYesSigns of PestsNoRoom ClutteredNo  | Exhaust Fans Working<br>Drain Traps Wet<br>Food if Stored in Room is<br>in Sealed Containers | N/A<br>Yes<br>N/A                    | Unapproved Chemicals /<br>Cleaners in Room<br>Air Fresheners<br>in Room | No<br>No   |
| Mechanical Equipment Location<br>Filters Installed Properly Yes<br>Condensate Pan Clean Yes | -  | Yes<br>Yes                           | Mechanical Room Clean<br>Inside of HVAC Unit Clean                      | Yes<br>Yes |
| Pollutant Sources Near Air  | Outside of Room<br>None  | ▼<br>▼                               | Fresh Air Intake Free of Obstruction                                    | Yes        |
| Observations<br>Art Room - 4 stained ceiling tiles  | - Paint stains, dirt, dust, debri  | s under sink cabinets                |   |            |
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| Clean debris from under sink cabinet | ▼ |
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| Evaluate and repair cause of stained ceiling tile | ▼ |
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|   | IAQ Assess   | ment  |   |
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| Plar  | ntation High Evaluation Date   | te September 24, 2014                             | Time of Day 7:30  |
| Outdoor Conditions Tempera  | ture 75.9 Relative   | e Humidity 95.0                                   | Ambient CO2 589   |
|   |  | Range         CO <sup>2</sup> % - 60%         625 |   |
| Noticeable Odor No  | Visible water damage /<br>staining?                                  | Visible microbial growth?                         | Amount of<br>material affected  |
| Ceiling2' X 4' Lay inWallsPlaster/HomasoteFloor12" x 12" Vinyl    | Yes<br>No<br>No  | No<br>No  | 3 stained ceiling tiles   |
| Ceiling Clean Yes<br>Walls Clean Yes<br>Flooring Clean Yes        | HVAC Supply<br>Grills Clean<br>Inside of Supply<br>Duct Clean        | Yes   | HVAC Return<br>Grills Clean Yes<br>Inside of Return<br>Duct Clean Yes |
| Room Surfaces Yes<br>Clean  | Ceiling at Supply<br>Grills Clean                                    | Yes   |   |
| Trash Removed Yes   | Exhaust Fans Working   | N/A   | Unapproved Chemicals /<br>Cleaners in Room No                         |
| Signs of Pests No<br>Room Cluttered No                            | Drain Traps Wet<br>Food if Stored in Room is<br>in Sealed Containers | Yes<br>N/A  | Air Fresheners No<br>in Room  |
| Mechanical Equipment Location                                     | FISH 231E / 233E   |   | Mechanical Room Clean Yes   |
| Filters Installed ProperlyYesCondensate Pan CleanYes              | _  | Yes   | Inside of HVAC Unit Clean Yes   |
| Fresh Air Intake Location<br>Pollutant Sources Near Air<br>Intake | Outside of Room<br>None  | ▼<br>▼  | Fresh Air Intake Free Yes<br>of Obstruction                           |
| Observations<br>Art Room - 3 stained ceiling tiles                | - Paint stains, dirt, dust, debri                                    | s under sink cabinets                             |   |
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| Clean debris from under sink cabinet | ▼ |
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| Evaluate and repair cause of stained ceiling tile | ▼ |
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|   | IAQ Assessi  | ment  |   |            |
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| Plar  | tation High Evaluation Dat   | September 24, 2014                                | Time of Day   | 7:30       |
| Outdoor Conditions Tempera  | ture 75.9 Relative   | e Humidity 95.0                                   | Ambient CO2 5   | 89         |
|   |  | Range         CO <sup>2</sup> % - 60%         620 | Range # Oo<br>MAX 700 ><br>Ambient                                      | 2          |
| Noticeable Odor No  | Visible water damage /<br>staining?  | Visible microbial growth?                         | Amount of<br>material affected  |            |
| Ceiling2' X 4' Lay inWallsPlaster/HomasoteFloor12" x 12" Vinyl                              | Yes<br>Yes<br>No   | No<br>No  | 20 stained ceiling til<br>west wall damaged tack                        |            |
| Ceiling Clean Yes<br>Walls Clean Yes<br>Flooring Clean Yes<br>Room Surfaces Yes<br>Clean    | HVAC Supply<br>Grills Clean<br>Inside of Supply<br>Duct Clean<br>Ceiling at Supply<br>Grills Clean | Yes<br>Yes  | HVAC Return<br>Grills Clean<br>Inside of Return<br>Duct Clean           | Yes<br>Yes |
| Trash RemovedYesSigns of PestsNoRoom ClutteredNo  | Exhaust Fans Working<br>Drain Traps Wet<br>Food if Stored in Room is<br>in Sealed Containers       | N/A<br>Yes<br>N/A                                 | Unapproved Chemicals /<br>Cleaners in Room<br>Air Fresheners<br>in Room | No<br>No   |
| Mechanical Equipment Location<br>Filters Installed Properly Yes<br>Condensate Pan Clean Yes | -  | Yes<br>Yes  | Mechanical Room Clean<br>Inside of HVAC Unit Clean                      | Yes<br>Yes |
| Fresh Air Intake Location<br>Pollutant Sources Near Air<br>Intake                           | Outside of Room<br>None  | <ul><li>▼</li></ul>                               | Fresh Air Intake Free<br>of Obstruction                                 | Yes        |
| Observations<br>Art Room - 20 stained ceiling tile  | s - Paint stains, dirt, dust, deb  | ris under sink cabinets                           | -   |            |

| Clean debris from under sink cabinet | ▼ |
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| Evaluate and repair cause of stained ceiling tile | ▼ |
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|   | IAQ Assess   | ment  |   |               |
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| Pla   | ntation High Evaluation Dat  | te September 24, 2014                             | ] Time of Day   | 7:30          |
| Outdoor Conditions Tempera  | ature 75.9 Relative  | e Humidity 95.0                                   | Ambient CO2 5   | 89            |
|   |  | Range         CO <sup>2</sup> % - 60%         742 | Range # Oo<br>MAX 700 ><br>Ambient                                      | ccupants<br>4 |
| Noticeable OdorNoCeiling2' X 4' Lay inWallsPlaster / Ceramic TileFloor12" x 12" Vinyl                                     | Visible water damage /<br>staining?<br>Yes<br>No   | Visible microbial<br>growth?<br>No<br>No          | Amount of<br>material affected<br>1 tile                                |               |
| Ceiling Clean     Yes       Walls Clean     Yes       Flooring Clean     No       Room Surfaces     No       Clean     No | NO<br>HVAC Supply<br>Grills Clean<br>Inside of Supply<br>Duct Clean<br>Ceiling at Supply<br>Grills Clean | No<br>Yes<br>No                                   | HVAC Return<br>Grills Clean<br>Inside of Return<br>Duct Clean           | Yes           |
| Trash RemovedYesSigns of PestsNoRoom ClutteredNo  | Exhaust Fans Working<br>Drain Traps Wet<br>Food if Stored in Room is<br>in Sealed Containers             | N/A<br>N/A  | Unapproved Chemicals /<br>Cleaners in Room<br>Air Fresheners<br>in Room | No<br>No      |
| Mechanical Equipment Location<br>Filters Installed Properly Yes<br>Condensate Pan Clean No                                | _  | Yes I<br>Yes                                      | Mechanical Room Clean<br>nside of HVAC Unit Clean                       | Yes<br>Yes    |
| Fresh Air Intake Location<br>Pollutant Sources Near Air<br>Intake   | Outside of Room<br>None  | ▼   | Fresh Air Intake Free<br>of Obstruction                                 | Yes           |
| Observations<br>Cafeteria - One stained ceiling t<br>supply grills - tables and floors                                    |  | dust and debris on HV                             | AC supply grills and ceili  | ng at         |

Corrective Actions to be Completed by Site Based Staff

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| Evaluate and repair cause of stained ceiling tile | ▼ |
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| Repair HVAC to reduce humidity level              | ▼ |
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|  | IAQ Assessr   | nent  |   |                       |
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| Planta   | ation High Evaluation Dat                                     | e September 24, 2014                              | Time of Day                                     | 7:30                  |
| Outdoor Conditions Temperate   | ure 75.9 Relative   | Humidity 95.0                                     | Ambient CO2 5                                   | 89                    |
| Fish         Temperature         Ran           283         74.1         72 -   |   | Range         CO <sup>2</sup> % - 60%         604 |   | <b>ccupants</b><br>10 |
| Noticeable Odor No   | Visible water damage /<br>staining?                           | Visible microbial growth?                         | Amount of<br>material affected                  |                       |
| CeilingPlasterWallsCeramic TileFloorTerrazo  | Yes<br>No<br>No   | No<br>No  | 50 square feet                                  |                       |
| Ceiling Clean Yes<br>Walls Clean Yes<br>Flooring Clean Yes   | HVAC Supply<br>Grills Clean<br>Inside of Supply<br>Duct Clean | N/a<br>N/A  | HVAC Return<br>Grills Clean<br>Inside of Return | N/a                   |
| Flooring Clean   Yes     Room Surfaces   Yes     Clean   | Ceiling at Supply<br>Grills Clean                             | N/a   | Duct Clean                                      |                       |
| Trash Removed Yes Signs of Pests No  | Exhaust Fans Working<br>Drain Traps Wet                       | Yes   | Unapproved Chemicals /<br>Cleaners in Room      | No                    |
| Room Cluttered No  | Food if Stored in Room is<br>in Sealed Containers             | Yes   | Air Fresheners<br>in Room                       | No                    |
| Mechanical Equipment Location  | NONE  |   | Mechanical Room Clean                           |                       |
| Filters Installed Properly   | Filters Clean<br>Cooling Coil Clean                           |   | Inside of HVAC Unit Clean                       |                       |
| Fresh Air Intake Location  | Roof top  | ▼<br>▼  | Fresh Air Intake Free of Obstruction            |                       |
| Observations<br>Kitchen - No air conditioning - wa<br>(286) above is leaking into kitcher<br>work dripping condensation on flo<br>kitchen ceiling space. | n ceiling - condensate pan lea                                | king - air conditioning                           | duct insulation damaged                         | - duct                |

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| Repair/Replace condensate pan in FISH 286         | ▼ |
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| Repair/Replace duct insulation in FISH 286        | ▼ |
| Remove and replace damaged plaster ceiling in 283 | ▼ |
| FISH 283  | ▼ |
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