All questions regarding the attached study should be directed to the Howard County Government's public information office at 410-313-2022.

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SKELLY AND LOY
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August 17, 2016

Howard County Department of Public Works
9250 Bendix Road
Columbia, Maryland 21045

Re: Supplemental Information for
June and July 2016
Indoor Air Quality Assessments

To Whom It May Concern:

Skelly and Loy, Inc. performed Indoor Air Quality (IAQ) Assessments at 12 different schools within the Howard County Public School System (HCPSS) and recently reported to Howard County Department of Public Works (DPW), the assessment activities, methodologies, and findings and conclusions. The Howard County DPW has asked Skelly and Loy to provide supplemental information, and we are doing so herein.

For the 12 schools assessed recently for indoor air quality within the HCPSS, as a whole and in general, the types and concentrations of airborne mold found in and outside of the schools are typical for public schools in similar geographic regions of the United States for the time of the year the assessments occurred. These types and concentrations of airborne mold spores do not normally pose a health risk.

The minor occurrences of water damage observed at some schools are typical of those found in schools in general. HCPSS is removing and replacing all identified water damaged materials. No major or widespread concerns were identified regarding the presence of indoor airborne mold spores or the causative mold growth. Overall, the observations made during the assessments indicate that the HCPSS and maintenance staff at each school is doing a good job of controlling indoor moisture and mold growth, resulting in the protection of health of students and staff. Also, the overall levels of comfort parameters at the schools assessed were in line with those typical of public schools for similar regions and time of the year. While some measured parameters did fall outside of their ideal comfort ranges, none of these occurrences result in increased health risks.

Regardless and to err on the side of caution, some follow-up recommendations are being made, including using a meter to assess the relative moisture content of some building materials, performing additional visual inspections in a few areas (including any areas exhibiting elevated moisture content), and replacing water-damaged or stained ceiling tiles previously identified. Further airborne mold sampling and analysis is not recommended at this time. To help parents, faculty, and students better understand and interpret the assessment findings, the following background information on mold is offered.

Whether real or perceived, concerns regarding building IAQ have become a common topic in recent years. Of particular interest is mold. Building occupants often ask what the results of IAQ investigations mean and how to interpret the data generated through such

investigations. Such questions arise whether the building assessed is a health care facility, an office building, a manufacturing facility, a hotel or dormitory, a place of worship, a residential home, or a school.

Mold is ubiquitous, meaning that it is commonly found throughout the natural and man-made environment. In order to grow and reproduce, mold requires three criteria to be met. These include moisture, a food source (organic matter such as paper, wood, cloth, etc.), and the "seeds" from which mold growth starts (called spores). The public should be cautioned that wet or moist building materials do not automatically result in mold growth. Airborne concentrations of mold spores can, and do, vary widely depending on geographic area, time of year (and even time of the day), time lapse since recent precipitation, wind speed and direction, and proximity to mold sources. Other factors affecting mold growth and airborne concentrations include availability of food sources, moisture content of building materials, humidity levels, and even air filtration. Concentrations of airborne mold can be higher in a person's home than at their work or school. Certain mold Genera are typically more common in the outdoor natural environment than inside the manmade environment while others are more commonly found in the manmade environment. The presence of airborne mold inside of a building does not necessarily mean there is active or past mold growth inside the building. Mold spores can enter a building through the building envelop (walls, floors, windows, piping and duct work penetrations, etc.), attached to materials and goods brought into a building, and even attached to building occupants and their clothing.

Because of the factors and difficulties in determining who may be susceptible to airborne mold exposure and what concentration of which mold Genera is unacceptable, there are currently no regulatory standards or acceptable thresholds established by any health and safety organization or body.

Most health concerns for indoor mold are a result of direct exposure with mold. During the assessments, mold growth was not observed on any portions of the school or its contents that would be accessible to students. Material identified exhibiting mold growth was typical and was limited to pipe insulation above ceilings in one school. HCPSS is in the process of replacing all such insulation.

If you have any questions regarding this project or the recommendations presented herein, please contact us. We thank Howard County for the continued opportunity to provide our environmental consulting services and look forward to assisting you in the future.

Sincerely yours,

SKELLY and LOY, Inc.

Robert D. Rowley, CIH, CSP
Director of Industrial Hygiene Services

Enclosures
cc: MBI/R10-0163.019
File: Howard_County_DPW-IAQ-Supplement_RDR (8-17-2016).docx

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August 18, 2016

Howard County Department of Public Works
9250 Bendix Road
Columbia, Maryland 21045

Re: Recommendations for
June and July 2016
Indoor Air Quality Assessments

To Whom It May Concern:

Skelly and Loy, Inc. performed Indoor Air Quality (IAQ) Assessments at 12 different schools within the Howard County Public School System and recently reported to Howard County Department of Public Works (DPW), the assessment activities, methodologies, and findings and conclusions. The Howard County DPW has asked Skelly and Loy to provide corresponding recommendations for each school, and we are doing so herein. To allow you to more easily follow the reasons for our recommendations and to justify them, we have presented the findings and conclusions below by school along with our recommendations for follow-up efforts.

TASK 01 – GLENWOOD MIDDLE SCHOOL

Findings of IAQ Assessment Performed on June 1, 2016

Regarding the visual inspection portion of the assessment, none of the ten interior assessment locations in the school exhibited past or ongoing signs of water damage or mold growth.

All parameters measured were acceptable except for temperature, which was high in one classroom.

Regarding the sampling and analysis for airborne fungal spores, ten locations had one or more mold Genera identified at a concentration in excess of its corresponding outside/ exterior concentration. By far, Penicillium/Aspergillus was the mold Genera that was identified at a higher concentration inside than out.

Recommendations

It is recommended that a follow-up investigation involving the collection of moisture meter readings of building materials in Portable Classrooms 60 and 61 and in Traditional Classrooms 40A and 40B occur. If elevated moisture levels are identified, wall and/or ceiling cavities associated with the moist materials should be opened up to the extent necessary to visually inspect and determine if hidden mold growth exists.

Findings of IAQ Assessment Performed on June 8, 2016

Regarding the visual inspection portion of the assessment, it appeared that recent drywall replacement work occurred in Portable Classroom 61 next to the door. Assessed locations and the areas between these places that were visited when walking from assessment location to assessment location had no signs of past or ongoing water leaks or fungal growth.

No areas within the school assessed exceeded the corresponding values for carbon dioxide (CO_2), temperature, or carbon monoxide (CO) concentrations. The relative humidity levels that fell outside the corresponding acceptable range (low) do not pose a health risk. The particulate concentration in all 16 interior locations assessed did not exceed the acceptable range.

Regarding the sampling and analysis for airborne fungal spores, 15 locations had one or more mold Genera identified at a concentration in excess of its corresponding outside/exterior concentration. An interior mold source(s) is likely. Some airborne concentrations appear to be marginal, while some concentrations appear to be higher than expected for a healthy indoor environment.

Recommendations

It is recommended that thorough visual inspections and moisture content assessments in and around Traditional Classrooms 40A and 40B and Portable Classrooms 60 and 61 occur. If elevated moisture levels are identified, wall and/or ceiling cavities associated with the moist materials should be opened up to the extent necessary to visually inspect and determine if hidden mold growth exists.

TASK 02 – TALBOTT SPRINGS ELEMENTARY SCHOOL

Findings of IAQ Assessment Performed on June 7, 2016

Field notes from the industrial hygienist indicated that ceiling tiles in Traditional Classrooms 47, 53, 56 and in the hallway between Traditional Classrooms 62 and 66 were stained indicating water leaks occurred above these tiles. Condensation and visible mold growth was observed on the outside of pipe insulation above Traditional Classroom 47 and above the hallway between Traditional Classrooms 62 and 66. Although not thoroughly inspected, other areas where piping above ceilings exists could also exhibit mold growth. This growth could be the source of elevated airborne mold spores identified via sample analysis.

The CO_2, temperature, and relative humidity levels that fell outside their corresponding acceptable range do not pose a health risk. The CO_2 recommended upper limit was exceeded in Portable Classrooms 138 and 189. The temperature fell outside of the recommended range in Traditional Classrooms 57 and 63 and in Portable Classroom 83. The relative humidity level fell outside (below) of the acceptable range in only one instance, this being in Portable Classroom 139. CO levels did not exceed the 9 parts per million (ppm) limit in any locations, and respirable particulates did not exceed the 0.15 milligram per cubic meter (mg/M^3) of air in any of the 20 locations assessed.

Regarding airborne mold spore sampling and analysis, with the possible exception of Penicillium/Aspergillus, mold Genera identified inside the building areas were generally less than the corresponding concentrations in the outside control samples or were found at relatively low concentrations. Penicillium/Aspergillus airborne mold spores were identified in Traditional Classrooms 39, 44, and 46 and in Portable Classroom 138 at concentrations noticeably higher than in the outside control sample. An interior source(s) of Penicillium/Aspergillus in and/or around these four classrooms is possible. An interior mold source(s) is likely, although airborne concentrations appear to be marginal in some instances and, in other instances, airborne concentrations appear to be higher than expected for a healthy indoor environment.

Recommendations

It is our understanding that pipe insulation on chiller lines identified as supporting mold growth will soon be replaced or is currently being replaced. Better insulation on the chiller lines should limit, if not eliminate, moisture condensation in the future on the lines; however, removal of the existing mold-impacted insulation should be done in a controlled manner by experienced and trained workers observing industry-accepted mold abatement techniques. Stained and water-damaged ceiling tiles should also be replaced.

TASK 03 – ST. JOHN'S ELEMENTARY SCHOOL

Findings of IAQ Assessment Performed on June 6, 2016

Regarding the visual inspection portion of the assessment, the only item of concern identified by the technician was a stained ceiling tile located in the school counselor's room.

The CO_2 and temperature levels that fell outside their corresponding acceptable range do not pose a health risk. The CO_2 recommended upper limit was exceeded in Traditional Classroom 40 and in Portable Classrooms 14, 131, and 207. The temperature fell outside of the recommended range in Traditional Classrooms 68 and 79 and in Portable Classrooms 14, 131, and 156. The relative humidity level fell within the acceptable range. CO levels did not exceed the 9 ppm limit in any locations, and respirable particulates did not exceed the 0.15 mg/M^3 of air in any of the 20 locations assessed.

Regarding airborne mold spore sampling performed on June 6, an interior source of Penicillium/Aspergillus may exist in or around Portable Classroom 171 and Traditional Classroom 91. All other airborne mold spores identified inside the buildings were either identified at relatively low levels or at levels noticeably lower than the corresponding outside control sample.

Recommendations

It is recommended that a follow-up investigative event occur, especially in and around the areas comprising Portable Classroom 171 and Traditional Classroom 91 in order to determine if elevated moisture levels exist in any of the building materials and further if mold growth is present in normally inaccessible areas (above ceilings and in wall cavities). Moisture level measurements should occur as well as a thorough visual inspection whereby normally

inaccessible areas are explored. If elevated moisture levels are identified, wall and/or ceiling cavities associated with the moist materials should be opened up to the extent necessary to visually inspect and determine if hidden mold growth exists. The identified stained ceiling tile should be replaced, and the source of moisture causing the staining should be identified and eliminated.

TASK 04 – CENTENNIAL LANE ELEMENTARY SCHOOL

Findings of IAQ Assessment Performed on June 9, 2016

Regarding the visual inspection portion of the assessment, no locations within the school were observed to have past or ongoing signs of water leaks or fungal growth, although the on-site custodian stated that stained ceiling tiles located in various portions of the school were replaced on June 4, 2016, and the teacher in Portable Classroom 149 reported that water enters in through one of the windows during rain events.

The CO_2, temperature, and relative humidity levels that fell outside their corresponding acceptable range do not pose a health risk. The CO levels which exceeded the corresponding federal acceptable ppm level could pose a health risk if this scenario repeats itself on a routine basis. Although the technician performing the assessment looked for nearby sources of CO, none was identified. Unfortunately, no valid data regarding airborne particulates were generated through this assessment event due to the Dust Trak II particulate monitor malfunctioning.

Regarding the sampling and analysis for airborne fungal spores, some locations had one or more mold Genera identified at a concentration in excess of its corresponding outside/ exterior concentration.

Recommendations

Moisture level measurements with possible intrusive investigation visual inspections should occur in Portable Classroom 149. If elevated moisture levels are identified, wall and/or ceiling cavities associated with the moist materials should be opened up to the extent necessary to visually inspect and determine if hidden mold growth exists. The source(s) of the Stachybotrys and Chaetomium airborne fungal spores should be identified and mitigated along with the corresponding source(s) of moisture. A reassessment for the presence of CO should occur in and around the cluster of Portable Classrooms to see if the elevated CO identified earlier continues to exist or if the earlier elevated readings were a result of a meter malfunction.

TASK 05 – POINTER'S RUN ELEMENTARY SCHOOL

Findings of IAQ Assessment Performed on June 9, 2016

Regarding the visual inspection portion of this assessment effort, the technician did not note any areas of past or ongoing water damage or mold growth. Additionally, no mention of such areas was conveyed to the technician during the assessment by school building occupants.

Regarding CO_2, relative humidity, temperature, CO, and respirable particulates assessment, the CO_2 concentration exceeded the threshold value of background plus 700 ppm in only one instance (Portable Classroom 3406). The temperature dipped below the lower range of 73 degrees Fahrenheit (°F) in one instance (Traditional Classroom 3310). The relative humidity level was below the lower limit of 30% in nine interior locations. CO and respirable particulate concentrations did not exceed their limits in any of the assessed locations

Regarding the airborne mold spore trap sampling and analysis performed, a review of the analytical results suggests that an interior source(s) of Penicillium/Aspergillus in Traditional Classroom 3126 may exist due to the concentrations of these mold Genera being higher inside than in the outside control sample. Other than this possible source of interior mold, all other results and comparisons were unremarkable and indicative of an absence of interior mold growth.

Recommendations

It is recommended that Traditional Classroom 3126 be reassessed, focusing on evaluating moisture content of various building materials and performing a thorough visual inspection looking for signs and symptoms of past and/or ongoing water infiltration and mold growth. Opening up the wall and/or ceiling cavities associated with any identified moist materials should occur followed by a thorough visual inspection of the cavities.

TASK 06 – MOUNT VIEW MIDDLE SCHOOL

Findings of IAQ Assessment Performed on June 13, 2016

Regarding the visual inspection performed of the areas assessed, ceiling tiles in Traditional Classrooms 21 and 24 were observed to be bowed. A teacher in Traditional Classroom 21 reported that unless she runs a dehumidifier in this room, the chalk gets moist and crumbles and that pinned up paper droops. Ceiling tiles in Traditional Classrooms 22-25 were also observed to be bowed.

Regarding the assessment of CO_2, relative humidity, temperature, CO, and respirable particulates, none of the interior areas assessed had concentrations of CO_2 that exceeded background plus 700 ppm, and only Traditional Classroom 21 and the kitchen (118) had areas that exceeded the upper limit for temperature of 79 °F. Relative humidity levels fell below the lower limit range of 30% in seven areas assessed. CO and respirable particulates were not identified in any assessed location above their upper limits of 9 ppm and 0.15 mg/M^3 of air, respectively.

Regarding the airborne mold spore sampling and analysis that was performed, generally speaking, the Genera of mold spores identified inside the building was the same as outside and at similar or lower concentrations than in the outside control samples except for Penicillium/ Aspergillus. No set or sets of results indicated that a likely source of interior airborne mold exists except possibly for Penicillium/Aspergillus.

Recommendations

A reassessment of Traditional Classrooms 21-25 should occur using a moisture meter to attempt to identify any building materials exhibiting elevated moisture content. Also, the relative humidity in these rooms should be rechecked. If building materials are identified to exhibit elevated moisture content, wall and/or ceiling cavities associated with the moist materials should be opened up to the extent necessary to visually inspect and determine if hidden mold growth exists. A thorough visual inspection of areas in these rooms not normally accessible should also occur.

TASK 07 – LAUREL WOODS ELEMENTARY SCHOOL

Findings of IAQ Assessment Performed on June 8, 2016

Regarding the visual inspection performed, the industrial hygiene technician noted that stained ceiling tile and light water spots and stains were identified in Traditional Classroom 82. Also, in the hall outside of Traditional Classroom 103, a wet pipe jacket and stained ceiling tile were observed.

The upper limit of CO_2 of background plus 700 ppm was exceeded only in Traditional Classroom 108, and the lower limit of relative humidity acceptable range was not met in five locations. The upper temperature of 79 °F was exceeded only in Traditional Classroom 108. However, all CO and respirable particulates measurements fell within acceptable limits.

Regarding the sampling and analysis for airborne mold spores in the Laurel Woods Elementary School, elevated Penicillium/Aspergillus spore counts in Portable Classroom 132 and Traditional Classroom 64 suggest that an interior source(s) of these mold Genera may exist in these two rooms.

Recommendations

It is recommended that Portable Classroom 132 and Traditional Classroom 64 be reassessed, focusing on identifying any moist building materials. This would include the use of a moisture meter to assess the moisture content of classroom building materials. If elevated moisture levels are identified, wall and/or ceiling cavities associated with the moist materials should be opened up to the extent necessary to visually inspect and determine if hidden mold growth exists. Also, it is recommended that the stained tiles in Traditional Classroom 82 and the wet pipe jacket in the hallway outside of Traditional Classroom 103 be replaced and the source of water causing the staining/moisture be identified and corrected.

TASK 08 – GLENELG HIGH SCHOOL

Findings of IAQ Assessment Performed on June 10, 2016

The visual inspection revealed no signs or indications of past or ongoing water leakage or damage or mold growth in the assessed portions of the school.

CO_2 levels in all investigated portions of the building were below the upper limit of background plus 700 ppm and CO levels were all acceptable being well below the threshold

limit of 9 ppm. Relative humidity levels were below the lower limit of 30% in all but one location (Traditional Classroom 174 at 35.7%), and the minimum temperature of 73 °F was not achieved in Traditional Classrooms 102, 174, and 304; the auditorium (300), and the media room (125). Respirable particulates were measured as acceptable (i.e. below 0.15 mg/M^3 of air) in all measured locations.

Regarding the collection and analysis of airborne mold spore samples within various portions of Glenelg High School, the elevated levels of airborne Penicillium/Aspergillus mold spores in Traditional Classroom 148 suggests that an interior source of these mold Genera may exist in and/or around this classroom. An interior source of these mold Genera may also exist in or around other classrooms with elevated levels. No other mold spore sample results indicated that significant interior sources of mold were likely present.

Recommendations

It is recommended that Traditional Classroom 148 be reassessed, focusing on identifying areas of moist building materials that may exist. This is best accomplished with the use of a moisture meter to assess the moisture content of building materials in the room. If elevated moisture levels are identified, wall and/or ceiling cavities associated with the moist materials should be opened up to the extent necessary to visually inspect and determine if hidden mold growth exists.

TASK 09 – LISBON ELEMENTARY SCHOOL

Findings of IAQ Assessment Performed on June 14, 2016

Regarding the visual inspection, the visual inspection of random interior and exterior areas revealed no signs or indications of past or ongoing water leakage or damage or mold growth.

The CO_2 levels were all exceptionally good, ranging to approximately only 100 ppm over background, indicating adequate fresh air was being introduced to all investigate portions of the building. With the exception of the gym (191) at 81.8 °F, the temperatures in all investigated portions of the school building were in the acceptable range of 73 to 79 °F. Relative humidity levels, however, were below the 30% lower threshold in all 18 interior locations. The CO levels were below the threshold limit of 9 ppm, and respirable particulates were below 0.15 mg/M^3 of air in all 18 interior locations.

Regarding the collection and analysis of airborne mold spore samples, it does not appear that elevated airborne mold spore concentrations indicative of interior mold growth exist in any investigated portion of the school.

Recommendations

It was reported that Lisbon Elementary School is scheduled to have a new roof installed during the summer of 2016, which should eliminate previously reported ongoing and future (near-term) water leaks via the roof. Other than these, no other recommendations are offered at this time.

TASK 10 – ELKRIDGE ELEMENTARY SCHOOL

Findings of IAQ Assessment Performed on June 16, 2016

Regarding the visual inspection of Elkridge Elementary School, stained ceiling tile was observed in the art room (109) and kindergarten hall, and localized staining was observed on the ceiling in Portable Classroom 110. Deterioration of the door to Portable Classroom 77 was observed and is believed to have been caused by water damage.

The CO_2, temperature, and relative humidity levels that fell outside their corresponding acceptable range do not pose a health risk. The CO_2 levels in all interior portions of the school were well below the threshold limit of background plus 700 ppm. The upper limit of the temperature range (79 °F) was exceeded in Portable Classrooms 77, 110, 155, and 159; the computer lab (56); the boiler room (128); the kitchen (123); and an open area (88); however, the lower limit of the temperature range (73 °F) was not met in Room 73. Relative humidity levels in all interior areas investigated fell within the acceptable range of 30% to 60%, and respirable particulate levels in all areas investigated were below the threshold of 0.15 mg/M^3 of air.

Regarding the airborne mold spore sampling and analysis performed at Elkridge Elementary School, elevated levels of Penicillium/Aspergillus Genera mold spores identified in Portable Classrooms 77, 110, 155, and 159; art room (109); boiler room (128); gym (102); lounge (47); and music room (114/115) suggest that an interior source(s) of these molds may exist in and around these interior areas of the school.

Recommendations

Reassessments of Portable Classrooms 77, 110, 155, and 159 as well as the art room (109), boiler room (128), music room (114/115), and lounge (47) are recommended, at which time the assessments should focus on the identification of any moisture within building materials using a moisture meter. If elevated moisture levels are identified, wall and/or ceiling cavities associated with the moist materials should be opened up to the extent necessary to visually inspect and determine if hidden mold growth exists. Stained ceilings/ceiling tiles should be replaced, and the source(s) of the water causing the staining should be identified and corrected.

TASK 11 – ROCKBURN ELEMENTARY SCHOOL

Findings of IAQ Assessment Performed on June 15, 2016

Regarding the visual inspection, the only concerns involved the art room where the inspector was told that water leaks around the door occasionally and water staining on the walls surrounding this door was observed by the inspector.

The CO_2, temperature, and relative humidity levels that fell outside their corresponding acceptable range do not pose a health risk. The CO2 concentrations were all below the threshold concentration of background concentration plus 700 ppm. The temperature was outside (below) of its corresponding acceptable range only in Portable Classroom 1 and Rooms 41, 54, 62, 74, 92, and 101. Relative humidity was outside of its corresponding acceptable

range only one location (Room 92; above 60%). The CO concentrations were all well below the threshold value of 9 ppm, and respirable particulate concentrations were all below the 0.15 mg/M^3 of air threshold concentration.

Regarding airborne mold spore sampling and analysis, there does not appear to be any indicators of significant interior sources of mold or mold growth. With the exception of Penicillium/Aspergillus, mold spores identified inside the investigated portions of the school were generally of the same those in the outside environment and at concentrations equal to or less than the outside control concentrations.

Recommendations

The maintenance staff should take measures to see that water leakage around the door to the art room ceases and replace any water-damaged materials caused by the past water leakage. Also, a reassessment of those locations where elevated airborne Penicillium/ Aspergillus fungal spore concentrations were identified should occur, including moisture measurements of building materials in these areas. If elevated moisture levels are identified, wall and/or ceiling cavities associated with the moist materials should be opened up to the extent necessary to visually inspect and determine if hidden mold growth exists.

TASK 12 – WILDE LAKE HIGH SCHOOL

Findings of IAQ Assessment Performed on July 12, 2016

Regarding the visual inspection performed of the areas assessed, the technician performing the assessment reported that, due to a roofing project occurring at the school on the day of the assessment, the auditorium had noticeable airborne dust and small-sized debris was falling down onto the drop ceiling in various rooms on the upper floor where the roofing work was occurring. The technician did not notice visible signs of past or ongoing water leaks or mold growth in any assessed portions of the school.

The temperature and relative humidity levels that fell outside their corresponding acceptable range do not pose a health risk. The CO_2 and CO concentrations were all below their corresponding upper limits, and respirable particulate concentrations were all below the 0.15 mg/M^3 of air threshold concentration. Relative humidity was above of its corresponding acceptable range in the mini theatre (161), boys locker room (24), hallway (171), theatre (197) and weight room (13). The temperature fell below its corresponding acceptable range in the kitchen (164) but exceeded its upper limit in Classrooms 316 and 317, the planning room (249), the auxiliary gym (150), the bio lab (331), the gym (148), and the weight room (13).

Regarding the airborne sampling and analysis for fungal spores in Wilde Lake High School, elevated levels of Basidiospores Genera mold spores were identified in the auxiliary gym (150) and gym (148) at a level higher than expected based on industry-accepted practices. Elevated levels of Penicillium/Aspergillus Genera mold spores were identified in Classrooms 222, 316, and 317; mini theatre (161); planning room (249); theatre entrance (199); auxiliary gym (150); bio lab (331); boys locker room (24); chem lab (234); FCS kitchen (139); gym (148); hallway (171); weight room (13); and wood shop (142). In addition, elevated levels of rusts

were identified in the theatre entrance (199), elevated levels of Smuts/Periconia/Myxomy Genera were identified in Classroom 222 and the theatre entrance (199), and elevated levels of Stachybotrys Genera were identified in the theatre (197).

Recommendations

All dust generated during the roof replacement work that has been deposited on horizontal surfaces should be removed with high-efficiency particulate air (HEPA) vacuums followed by wet wiping (hard/impervious surfaces). Duct work leaving these areas should be assessed and, if found to contain construction-generated dust, such dust should be removed and the return ducts cleaned. Areas of the school identified earlier as having elevated airborne mold spore concentrations should be reassessed utilizing a moisture meter to identify any building materials exhibiting elevated moisture content. If elevated moisture levels are identified, wall and/or ceiling cavities associated with the moist materials should be opened up to the extent necessary to visually inspect and determine if hidden mold growth exists.

SUMMARY

Skelly and Loy has identified concerns regarding indoor air quality within the 12 Howard County Public Schools. We have also offered recommendations to address these concerns which include moisture level assessments in suspect areas and intrusive visual inspections of wall and ceiling cavities exhibiting elevated moisture content. Lastly, minor and overall limited building material replacement is recommended along with eliminating the sources of suspected water leakage and infiltration.

If you have any questions regarding this project or the recommendations presented herein, please contact us. We thank Howard County for the continued opportunity to provide our environmental consulting services and look forward to assisting you in the future.

Sincerely yours,

SKELLY and LOY, Inc.

Robert D. Rowley, CIH, CSP
Director of Industrial Hygiene Services

Enclosures
cc: MBI/R10-0163.019
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