Read the Instructions for IAQ Commissioning Checklist (below) before using this checklist

Glossary

Zone For the purposes of this checklist, a zone is all the areas served by a single air handling unit (AHU) that provides outdoor air supply. If the AHU is a small unit ventilator located within the room, most likely the zone is a single classroom or office. If the AHU is a large piece of equipment in a separate mechanical room, then the zone is likely several rooms, such as a whole wing of classrooms or the office area.

Air Handling Unit AHU. A mechanical piece of equipment that usually contains air filters, one or more air blowers, controls, and components that will heat and/or cool the air that is being supplied to a room or zone. Some AHUs will also contain components that dehumidify or humidify the air.

Outdoor air intake OAI. This is usually a grille on a wall, or sometimes a hood on the roof, where the outdoor air enters into the air handling unit, or a duct leading to the air handling unit.

Outdoor air supply OAS. That portion of the total air supplied to a room or zone that is made up of air from outdoors, not the air that has been recirculated from the zone. A minimum amount of OAS is necessary to help ensure remove of polluted indoor air, and therefore good indoor air quality. The unit of measure is the CFM.

CFM Cubic Feet per Minute. A measure of the number of cubic feet of air flowing past a given point in one minute.

Flow Hood A device used to measure the volume of air flowing into or out of a grille or vent. The flow hood can be placed over the outdoor air intake to measure the amount of outdoor air that is being supplied to the zone served by that OAI.

Instructions for IAQ Commissioning Checklist

If a "No" is checked, the problem must be corrected

Lines 1, 2, 4, 5, 6, and 9 can be completed before performing the on-site inspection

Instructions by line number

1. The IAQ O&M Manual provided by the design and construction team should provide a detailed zone map. If the map is not available, contact the architect or mechanical designer to determine the zones in the school. Use highlighter pens or other means to identify each zone on the fire escape map(s), and give each zone a name or number. At the same time, mark the location for the outdoor air intake and air handling unit in each zone onto the fire escape plan.

2. Give a basic description of the zone, if the name does not do so already
3. Self-explanatory.
4. The number of occupants for each zone may be noted in the education specifications or on the mechanical plans. If not, ask the architect or mechanical designer for these numbers.
5. Enter the CFM per person based on the types of rooms in this zone:

    15 cfm: Classrooms, auditoriums, cafeterias
    20 cfm: Offices, library, multimedia areas, gymnasium and locker areas
6. Multiply Line 4 by Line 5. This is the minimum amount of outdoor air, in CFM, that should be flowing into the outdoor air intake (Line 9) to ensure that this zone is properly ventilated.
7. The total amount of outdoor air actually entering the outdoor air intake, in CFM, as measured using a flow hood or similar instrument. Before taking the measurement, it is important that the air handling unit be operating normally, as if students and staff were occupying the space. This may require that the controls be overridden so that the outdoor air supply damper is set to its minimum open position.
8. If no, increase outdoor air supply.
9. Self-explanatory.
10. Self-explanatory.
11. Self-explanatory.
12. Ensure that the air filters and heating and/or cooling coils are clean, and that any insulation on the inside surfaces of the AHU are dry to the touch.
13. The condensate drain pan under the cooling coil must be clean and sloped so that all water drains quickly from the pan. Pour a bucket of water into the pan and observe for proper drainage.
14. All dampers linkages should be labeled to indicate when the damper is CLOSED, in MINIMUM position, and fully OPEN. Doors providing access to air filters and coils should be labeled. Except for unducted unit ventilators, all air handling units should be labeled: OA for outdoor air, RA for return air, SA for supply air, each with arrows indicating the direction of airflow.
15. Perform an inspection of the inside surfaces of ducts by looking for excessive dust and debris, and by feeling the interior duct liner (if any) for dampness. You do not have to check every inch of ductwork. Spot inspection of those portions of ducts near vents, grilles, duct access doors, and the air handling unit will provide an indication whether the ductwork is dirty, and in need of extensive inspection and cleaning, or if the ductwork is reasonably clean and ready for service.
16. Because the nose quickly becomes accustomed to new odors, it is important to perform this basic smell check when first entering a room. Generally, the problematic odors associated with new schools are the "chemical" smells that off-gas from sources such as paint, flooring products and adhesives, caulks and sealants, and synthetic furnishings; and the musty smells from microbial growth. This subjective test is not intended to quantify toxicity, but rather to indicate whether more ventilation is needed, if more building flush out time is required, or if there may be serious IAQ problems resulting from mold growth or inappropriate

building materials, finishes, or furnishings.

17. It is not intended that you inspect every square foot for visible signs of moisture damage or mold, but as you move through the rooms in each zone, generally check the ceilings and floors for signs of problems.
18. Generally, one relative humidity reading in each zone is sufficient. If the reading is greater than 60%, note "Wet," and if less than 30%, note "Dry."
19. The ground should slope downward, away from the building, so that water flows away from the building. If you cannot positively identify a slope by eye, pour a bucket of water next to the building and ensure that the water quickly flows away from the building.
20. The O&M Manual provided by the design and construction team should contain important details about how to properly operate and maintain this school.
21. If a school custodian or facilities person will be responsible for the daily operation and maintenance of this equipment, ask them if they received special training on this specific air handling system from the designers, contractors, and equipment suppliers.

Indoor Air Quality Commissioning Checklist			
NAME OF SCHOOL			
NAME OF COMMISSIONING AGENT			
TITLE AND ORGANIZATION			
1. Zone number or name			
2. Zone description			
3. Date and time of inspection for the zone			
4. Number of expected occupants in the zone			
5. Minimum outdoor air supply for each zone, CFM per person			
6. Minimum outdoor air needed for this zone, Line 4 x Line 5			
7. Total CFM measured at intake			
8. Is Line 7 greater than or equal to Line 6?			
9. Location of outdoor air intake grille			
10. Location of air handling unit			
11. Can air filters be quickly and easily accessed without the use of tools?			
12. Is air handling unit clean, especially the air filters and heating/cooling coils?			
13. Is drain pan clean and draining properly, not having any standing water?			
14. Duct work and damper controls appear to be properly labeled?			
15. Are ducts clean, and if ducts are lined with insulation, is the insulation dry?			
16. Do all of the areas within this zone smell acceptable (no objectionable odors)?			
17. There are not any visible signs of water damage or mold growth in this zone?			
18. Is the relative humidity in this zone between 30% and 60%			
19. Is the ground next to the walls of this zone sloping away from the building?			
20. Does the O&M Manual contain details for operating & maintaining this zone ?			
21. Has the O&M training for the school and walkthrough for this zone been completed?			