



NCCEH Mould Investigation Toolkit Sample Checklists and Forms

Table of Contents

Introduction	2
Indoor Air Quality Questionnaire	3
Microbial and Moisture Building Inspection Checklist	7
Microbial and Moisture Visual Inspection Form	15
Microbial and Moisture Assessment Form.....	16
Filled-out Example: Microbial and Moisture Assessment Form	19
Microbial Bulk Sampling Form.....	20
Microbial Air Monitoring Record Sheet.....	21
Indoor Air Quality Spot Measurement Record Sheet.....	22

This document is one of several in the NCCEH Mould Investigation Toolkit. Production of this document has been made possible through a financial contribution from the Public Health Agency of Canada.

Introduction

The following questionnaire, checklists, and forms, are intended to assist in the activities of a mould/microbial assessment and should be modified to match the objectives and context of the investigation:

1. Collection of background information on occupants
 - a. Indoor Air Quality Questionnaire
2. Non-intrusive and intrusive walkthrough inspections of suspect building and areas
 - a. Microbial and Moisture Building Checklist
 - b. Microbial and Moisture Visual Inspection Form*
 - c. Microbial and Moisture Assessment Form*
3. Sampling of air or materials for microbial analysis
 - a. Microbial Bulk Sampling Form
 - b. Microbial Air Monitoring Record Sheet
 - c. Indoor Air Quality Spot Measurement Record Sheet

**Instructions on using the forms can be found on page 17-19.*

To contribute to a community of practice, we invite you to submit tools and guidance documents to share via the NCCEH network or website; please e-mail contact@ncceh.ca with a link to the tool or document.

Indoor Air Quality Questionnaire

The following questionnaire may be adapted to different types of occupants (e.g., tenants, students, workers). Questionnaires that are clear and easily understandable can provide timely information but rely on cooperation from occupants. Interviews require trained personnel for consistency but can supplement questionnaires with in-depth information that can help validate complaints or health issues related to air.

Consider collecting information on recurring respiratory symptoms or infections, annual or temporal patterns in complaints or health issues, activities which coincide with health issues, and history of building conditions which exacerbate health issues (e.g., mould, pests, inadequate ventilation, chemicals).

Physician input might be necessary to review results and interpret if health issues from occupants are related to contaminants in indoor air or the suspect building/area. Individual questionnaires are scanned and those that indicate health issues with potential links to the suspect building/area are grouped to determine where and when they occur and if other personal factors may contribute to the health issues. Electronic databases are recommended, especially when managing large numbers of questionnaires.

Indoor Air Quality Questionnaire

Some individuals working in your building have identified air quality and health-related concerns. To help investigate the possible causes of these concerns and the success of any remediation actions taken, this questionnaire is being distributed to all building occupants. Your assistance is requested. Please complete this questionnaire as accurately as possible and return it to the individual listed below in a sealed envelope by the date indicated. All information provided in this questionnaire is confidential; only summary information will be used in any indoor air quality reports generated.

Return Completed Questionnaires To: _____

Return Completed Questionnaire By: _____

1. Please select from the list provided below all of the descriptions that currently apply to your work environment and physical health. This is a random list of potential issues; not all of the issues listed have been noted in this building. Please indicate in the final row any additional issues you have that are not listed above. If you have health concerns relating to these symptoms, we recommend that you contact your physician.

- | | | |
|---|--|--|
| <input type="checkbox"/> Aching Joints | <input type="checkbox"/> Dusty | <input type="checkbox"/> Runny Nose |
| <input type="checkbox"/> Back Pain | <input type="checkbox"/> Drafty | <input type="checkbox"/> Sinus Congestion |
| <input type="checkbox"/> Chest Tightness | <input type="checkbox"/> Dry Eyes | <input type="checkbox"/> Skin Irritation/Itching |
| <input type="checkbox"/> Shoulder Pain | <input type="checkbox"/> Eye Irritation | <input type="checkbox"/> Sneezing |
| <input type="checkbox"/> Fatigue/Drowsiness | <input type="checkbox"/> Dizziness | <input type="checkbox"/> Sore throat |
| <input type="checkbox"/> Discoloured Skin | <input type="checkbox"/> Headache | <input type="checkbox"/> Stuffy/Stale Air |
| <input type="checkbox"/> Dry, Flaking Skin | <input type="checkbox"/> Nausea | <input type="checkbox"/> Temperature Too Cold |
| <input type="checkbox"/> Noisy | <input type="checkbox"/> Noticeable Odours | <input type="checkbox"/> Temperature Too Hot |

Others (Specify):

2. Please indicate when you first noted your symptoms.

- <3 months ago 3-6 months ago 7-12 months ago >12 months ago

3. Please indicate any noticeable trends you have observed with regards to your complaints.

Symptoms occur more prevalently in the:

- Morning Afternoon Evening

Symptoms are more prevalent at the:

- Beginning of the Week Middle of the Week End of the Week

4. Please indicate any other trends you have noted in the space provided below. Please indicate if no noticeable trends have been observed.

5. Please describe in the space provided below if/when you experience relief from the issues you indicated on the previous page. If you experience relief, please indicate what relieves the issues.

6. Please indicate in the space provided below if you have any of the following:

- Hay Fever or Pollen Allergies Cold/Flu Other Allergies
 Skin Allergies/Dermatitis Sinus Problems Asthma

7. Please indicate “yes” or “no” to the following questions:

- Do you currently smoke? Yes No Have you ever smoked? Yes No
Do you work with chemicals? Yes No Do you sit beside a window? Yes No
Do you work near someone else who uses chemicals? Yes No Do you work near any office equipment? Yes No

If you answered yes to either of the questions concerning chemicals, please indicate what chemicals you work with or near in the space provided below.

8. Please indicate in the space provided below where your workstation is located and where in the suite you feel the air quality is not satisfactory.

Location of your workstation:

Areas in the suite where the air quality is not satisfactory:

Please provide in the space provided below any additional comments or observations regarding the quality of air in your suite.

Name (Optional): _____ Date:

Microbial and Moisture Building Inspection Checklist

Site Name / Descriptor:	_____	Environmental Conditions at Time of Inspection:
Address:	_____	Temperature: _____
	_____	Relative Humidity: _____
Contact Name:	_____	Wind Speed: _____
Building Type (e.g., strata, condo, rental, etc.)	_____	Wind Direction: _____
Contact Information:	_____	General Synopsis (e.g., sunny, cloudy, etc.)
Inspector Name:	_____	
Date:	_____	

Prior to completing this form, obtain and discuss the following information with the building owner, building manager, or building occupants and review it:

- **Age, historical and current use** of building.
- Information on general **building design and construction**.
- **Building plans and drawings** – Review copies of available floor plans, mechanical plans (ventilation system) and plumbing plans.
- **The building leak history** (if applicable) – A chronological timeline of water intrusion events, including information on known or suspected sources, locations in building, and duration of leaks or wet conditions.
- **The chronology of corrective action** (if applicable) – A timeline of corrective measures taken following each water intrusion / microbial growth event including information on the specific corrective action taken, how soon the corrective action was taken and any follow up conducted to confirm corrective actions were effective.
- **Occupant complaints and health status** – A summary of occupant concerns/complaints and the general summary of the type of occupants and their health status (e.g., children, elderly, adults, persons with compromised immune systems, individuals with respiratory conditions, etc.)
- **Investigative Reports** – Reports on historical/recent investigations of water intrusion and or microbial growth assessments, building envelope assessments, or ventilation system performance reports conducted. Quantitative assessment results should be included in the review (e.g., sampling or monitoring results).

This information, where available, can be used to help the inspector to determine where to concentrate or focus his or her attention during the physical inspection of the building. The questions in the form below are generic in nature. Specific questions may not be relevant based on the results of the document review and discussions with building owners, managers, or occupants prior to the inspection.

Observations of water intrusion or moisture, suspect visible microbial growth, and possible sources or contributors of water or moisture intrusion and suspect visible growth made in the inspection report **should be accompanied by:**

- **Photographs** – It is essential to capture the visual observations of suspect areas. This may include an overview photograph, midrange photograph, and close-up photograph.
- **Quantitative measurements** – Surface moisture (moisture meters), temperature, and relative humidity measurements (hygrometers) are essential, but may also include bulk, tape, swab or air sampling results.
- **Drawings** – It is helpful to indicate the locations of observations made and where samples and measurements were collected.

A	Outside of Building	Issue		Action*		Additional Comments / Details
		Yes	No	Required	Taken	
A1	Fresh Air Intakes					
1	How many fresh air inlets are there for the building and where are they located?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2	Are any intakes located near sources of potential microbial contamination? (e.g., near cooling towers, vegetation, sewage treatment plant, significant bird droppings near intakes, garbage, recycling or composting areas, etc.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3	Are there any signs of blockage to the fresh air inlets? (e.g., snow, leaves, debris, etc.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
A2	General Exterior of Building					
4	How much vegetation is in proximity to the building?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
5	Is there any evidence of animals or birds, or their droppings in the vicinity of the building, particularly near air intakes? If so, describe.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6	Is there any evidence of water staining or suspect visible microbial growth near the air intakes? If so, where and to what extent?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
7	Is there any evidence of efflorescence (white mineral deposits) on the concrete masonry of the building?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
8	Are there cracks in the brick / concrete slabs / masonry of the building? Is there mortar missing?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
9	Is there a noticeable negative soil grade (sloping) towards the building location?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
10	Is there standing water outside the building or near the building?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
11	Is the building equipped with rain gutters? Are the gutters free of debris, and do they direct water away from the building?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
12	Is there a water re-use system (e.g., rain water collection systems, rain barrels)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
13	Is there any evidence of suspect visible microbial growth on the exterior building surfaces (e.g., discolouration, staining)? If so, where and to what extent?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
14	What is the condition of the exterior of the building (e.g., are there cracks in the stucco, is the paint peeling, is the wood siding warped, etc.)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
15	Is there any evidence of dry rot, or wood stain fungi? If so, where?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

16	Are there any sprinklers located near building walls or is there a leaking hose bib? If so please describe.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
A3	Entrances					
17	Are building entrances located near sources of potential microbial contamination (e.g., stagnant water, drainage, downspouts)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
18	Can an inward flow of air be sensed at entrances (e.g., is the door difficult to close)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
A4	Air Outlets					
19	How many air outlets are there in the building? _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
20	Are there any exhaust outlets located within 2 m of the fresh air inlets?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
21	Do any of the air exhaust outlets face in the direction of the fresh air inlets?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
A5	Roof Specify roof material (clay, gravel, slate, asphalt, etc.), type (sloped or flat) and any additions or interfaces between roofs _____ _____					
22	Is there evidence of current or historical standing water or plant growth on the roof? Is the slope adequate?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
23	Is there evidence of cracks or deterioration in roofing materials that might result in water intrusion into the building (e.g., visible cracks in caulking or seams, holes in roofs)? If so describe.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
24	Is there significant deterioration of roofing membrane or is there moss growth that might hide damage to roofing membrane? If so, describe.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
25	Are there any signs of deterioration of the roofing materials or membranes at the interfaces between different roofs, or areas of the roof (e.g., additions)? If so, describe.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
B	Inside Building	Issue		Action*		Additional Comments / Details
		Yes	No	Required	Taken	
B1	Mechanical Room					
26	Is there a musty or earthy odour in the mechanical room?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
27	Is there any evidence of water (current or historical) on the floor?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
28	Is there evidence of wet spots or water damage on the walls or ceiling? If so, where?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

29	Is there any suspect visible microbial growth on the walls or floors or ceiling? If so, where and to what extent?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
30	Is there evidence of paint peeling on the walls, floors, or ceiling? If so, where and to what extent? (Peeling paint may indicate that surfaces have become wet or have been wet in the past.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
31	Is there ventilation? What type? Is it operable?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
B2	Interior Spaces (e.g., offices, hallways, classrooms, crawl spaces) (Photocopy and repeat questions 32-49 for each individual space assessed.) Description of Space: _____					
32	Is there a musty or earthy odour in the space? If so, describe and determine source if possible (e.g., from garage or compost, from water damaged materials, etc.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
33	Does the space feel warm and dry or damp? (If the space feels damp, arrange for the relative humidity inside the space to be assessed.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
34	Is there any evidence of standing water or water staining (current or historical) on the floor or flooring materials? Is the floor warped? If so, describe.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
35	Is there evidence of wet spots, water damage or condensation on the walls or ceilings (e.g., stained ceiling tiles)? If so, where?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
36	Is there any evidence of condensation or leaks from piping located in ceiling plenums? If so, please describe. Have drip trays been installed? If so, are they adequately sloped to prevent stagnant water accumulation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
37	Is there any water staining in the vicinity of the windows or window sills? If so, what type (e.g., single or double paned) and where? (Water staining near windows and window sills sometimes can indicate that there is a leak around the window or indicate a condensation problem. Check for water leaks and condensation on windows and window sills on cold days.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
38	Is there any visible or suspect microbial growth on the walls, floors, ceilings, above ceilings, around plumbed fixtures, or lines (e.g., washing machines, sprinkler lines, sinks, ice machines)? If so, where and to what extent?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

39	<p>Is there evidence of paint or drywall tape peeling on the walls, floors, or ceiling? Is there peeling vinyl wall paper? If so, where and to what extent?</p> <p>(Peeling paint or drywall tape may indicate that surfaces have become wet or have been wet in the past. Vinyl wall paper on indoor surfaces of exterior walls in air-conditioned spaces in hot/humid climates can trap moisture and result in mould growth.)</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
40	<p>Is there any evidence of condensation on the windows, between window panes or on window sills? If so, where and to what extent?</p> <p>(Condensation on windows or window sills is sometimes an indicator of elevated relative humidity, possibly due to a lack of ventilation. Have relative humidity levels measured and sources of moisture in space.)</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
41	<p>Does the space seem to have adequate air supply?</p> <p>(Note whether the space seems stuffy or hot, cool or drafty. Check the locations of the air supply and return air grills and confirm they are operational and have not been blocked or obstructed. Discuss with building maintenance the HVAC system settings. Monitor temperature, relative humidity, and carbon dioxide concentrations in air if concerned about adequacy of ventilation to space.)</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
42	<p>Are there any houseplants located inside the space? If so, how many and where are they located? What is the condition of the flooring/shelving material under the plant containers?</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
43	<p>Are there any water features inside the space (e.g., aquarium, water fall / water feature)? If so, describe.</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
44	<p>Are there dryers or exhaust vents inside the space? If so, describe. Are they vented to the outside?</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
45	<p>Is there evidence of animals or insects, or their by-products (e.g., fecal droppings) inside the space (e.g., domestic pets, rodents, bats, insects)? If so, describe.</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
46	<p>Are dehumidifiers or humidifiers used inside the space? If so, please indicate where and describe make(s) and model(s) used.</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
47	<p>Are air purifiers used inside the space? If so, please indicate where and describe type of purifier.</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
48	<p>Does the space look clean and well maintained? If not, please describe.</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
49	<p>Note general occupancy density and type of work conducted inside office space.</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
B3	<p>Kitchen (Please answer the following questions in addition to those in Section B2)</p>					
50	<p>Are there crevices between the refrigerators, counters, or walls where food or water could accumulate?</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

51	Is there any evidence of water leaks or condensation under the sink or near the dishwasher associated with plumbing lines? If so, describe.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
52	Does the kitchen look clean and well maintained (e.g., is there food left on the plates in sink, food overflowing in garbage, refrigerator dirty, floors dirty, etc.)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
53	Are large quantities of food being cooked routinely in the space where there is the potential for evaporation of liquids? Is there an operating exhaust fan over the stove and is it utilized? If so, describe.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
54	Is there a produce food storage room or cellar? If so, describe.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
55	Is there a fridge or freezer inside the kitchen? Is there any evidence of water leakage due to defrosting?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
B4	Bathrooms / Change Rooms (Please answer the following questions in addition to those in Section B2)					
56	Is there an exhaust fan in the bathroom? If so, where is it located and does it appear to be operational?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
57	Does the bathroom and/or change room look clean and well maintained (e.g., mildew showers, toilets/sinks have not been cleaned, floors dirty, etc.)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
58	Is there any evidence of water leakage, staining, condensation, or suspect visible microbial growth around the toilets (check backside and underside of water tanks), showers, sinks, and plumbing lines? If so, detail where and extent.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
59	Is there a floor drain in the bathroom, and is the floor sloped to allow for drainage of any water spilled on the floor?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
60	Is there a sauna, steam bath, or whirlpool in the bathroom and/or change room?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
61	Is there any evidence of delamination of finishing materials on walls or floors (e.g., delaminating tiles from walls)? If so, describe. Is there adequate grout/caulking between finishing materials, and what is the condition of the grout/caulking?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
B5	Parking Area (Complete questions 62-66 if there is indoor parking attached to the space.)					
62	Is there any visible evidence of standing water or moisture on the walls, ceiling, and floors of the parking lot? Are there drains present? If so, where and to what extent? (Check for sumps or manholes inside the parking lot that may contain standing water or be plugged.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
63	Is there any suspect visible microbial growth on the walls, floors, or ceiling? If so, where and to what extent?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

64	Is there evidence of paint peeling on the walls, floors, or ceiling? If so, where and to what extent? (Peeling paint may indicate that surfaces have become wet or have been wet in the past.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
65	Is there any evidence of suspect visible microbial growth in the parking area? If so, where and to what extent?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
66	Can airflow from the parking area or garage be entrained into the building via doorways or the air supply? Are there any odours?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
C	Building Mechanical System	Issue		Action*		Additional Comments / Details
		Yes	No	Required	Taken	
67	Is there a written preventative maintenance system in place for the building ventilation system? Does it include provisions for preventing: 1) entrainment of microbial contaminants, 2) minimizing potential microbial growth in the mechanical system, and 3) providing adequately conditioned air to all spaces inside the building?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
68	Do the air filters on the air intake units appear to need cleaning? How often are they cleaned or replaced? Are there records to track filter maintenance?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
69	Is there any evidence of water stains or standing water under the pumps, evaporative coolers, cooling coils, or in the condensate pans? Is there any evidence of rust on coils or drain pans? If so, describe. (If present, have the water source cleaned up and the source determined.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
70	Is there a chemical water treatment program in place to prevent growth of microbial contaminants in cooling waters? If so, describe. Obtain previous water monitoring results if available.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
71	Is there a foul or musty odour in the mechanical room or around the air conditioning units? If so, describe.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
72	Are the ventilation system, duct work, or mixing chambers clean? If not, describe.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Additional Notes / Observations / Comments

References:

1. Yang CS, Heinsohn PA. Sampling and analysis of indoor microorganisms [Chapter 2]. New York, NY: Wiley; 2007, pp. 17-29. Available from: <http://ca.wiley.com/WileyCDA/WileyTitle/productCd-0471730939.html>.
2. Public Works Canada, National Research Council Canada. Managing indoor air quality, a manual for property managers, Annex 7.2. Ottawa, ON: Public Works Canada and the National Research Council Canada; 1992. Available from: <http://www.worldcat.org/title/managing-indoor-air-quality-a-manual-for-property-managers/oclc/244313018?referer=br&ht=edition>.
3. Canadian Construction Association. Mould guidelines for the Canadian construction industry. Standard Construction Document CCA 82-2004, Appendix A. Ottawa, ON: CCA; 2004. Available from: <http://www.cca-acc.com/documents/cca82/cca82.pdf>.

Microbial and Moisture Assessment Form

(Complete one form per room / area)

- Full New
 Complaint Follow Up

Client Name: _____ Inspector Name: _____
 Site Name / Description: _____ Inspection Date: _____
 Site Address: _____

Building Name: _____
 Floor Number: _____ Room Number: _____
 Description of Room / Area Location: Across from: _____ Next to: _____ Inside of: _____ Near: _____
 Type of Room (e.g., office): _____

Odour: When you first walk into an area or room, note any microbial or moisture-related odours in the field below. Check the appropriate box.

- None Mild Moderate Strong

Description of Odour: _____
 Source of Odour: _____ Source Unknown

Check (☒) first column if component is in room.	Check (☒) if nothing found	Damage or Stains				Visible SMG				Wet or Damp				Row Total Value	Notes
		0	1	2	3	0	1	2	3	0	1	2	3		
<input type="checkbox"/> Ceiling	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		"[Click to enter Text here]"
<input type="checkbox"/> Walls	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		"[Click to enter Text here]"
<input type="checkbox"/> Floors	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		"[Click to enter Text here]"
<input type="checkbox"/> Windows	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		"[Click to enter Text here]"
<input type="checkbox"/> Furniture	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		"[Click to enter Text here]"
<input type="checkbox"/> HVAC System	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		"[Click to enter Text here]"
<input type="checkbox"/> Supplies and Materials	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		"[Click to enter Text here]"
<input type="checkbox"/> Other: _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		"[Click to enter Text here]"
<input type="checkbox"/> Other: _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		"[Click to enter Text here]"
<input type="checkbox"/> Other: _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		"[Click to enter Text here]"
Total Room and Column Score															"[Click to enter Text here]"

Score: 0 – None; 1 – The size of this form or smaller; 2 – Between the size of this form and the size of a standard interior door; 3 – Equal to or larger than the size of an interior door

SMG – Suspect Microbial Growth

This form was adapted from the National Institute of Occupational Safety and Health (NIOSH), NIOSH Dampness and Mould Form for Schools.

Instructions for Using the Forms

This form is intended to be used in conjunction with the *Microbial and Moisture Visual Inspection Form* and constitutes one part of the assessment, identification, repair and remediation cycle. The purpose of this form is to identify and document areas with moisture or water intrusion and suspect visible microbial growth in buildings and to track and monitor previously identified problem areas to determine if mitigative measures implemented have successfully resolved the problems identified. This form was adapted from the National Institute of Occupational Safety and Health (NIOSH), *NIOSH Dampness and Mold Form for Schools*.

Step 1: Conduct an inspection of the building or area using the *Microbial and Moisture Visual Inspection Form*. For rooms or areas where moisture or water intrusion, suspect microbial growth, and/or odours are identified, this *Microbial and Moisture Assessment Form* should be used to record more details about the specifics for each room.

Step 2: Conduct further inspection of the areas or rooms to confirm the presence of microbial growth and to identify the source of water intrusion or moisture problems identified and perform necessary repairs and remediation as required in accordance with acceptable procedures.

Step 3: Reassess problem areas that have been remediated at regular intervals to confirm that the source of moisture or water has been solved and that microbial growth is not reoccurring. This *Microbial and Moisture Assessment Form* can be used for these reassessments.

To complete this form:

1. Indicate if the inspection is part of a full assessment of a building ('full') or is being conducted in response to a specific complaint ('complaint').
2. Indicate if this is a new inspection ('new') or a follow up on a previous inspection ("follow-up").
3. Complete the information in the first two tables on the form indicating the information about the client, site, inspector, date, and specific information about the room(s) or area(s) being inspected. If a room number is available, this can be used to describe the area being inspected. If the room or area does not have a unique identifier, enter "N.Av." under room number and complete the row below.
4. Upon entering the room or area, document any noticeable microbial or moisture like odours. If there is an odour present, rate the intensity of the odour, the description of the odour (what does it smell like), and indicate the possible source(s) of the odour if possible.
5. Check each surface or content present in the room being assessed that is present in the column on the left in the last table. Add any additional surfaces or contents present in the room to be included in the assessment under the "Other" rows (e.g., office decor, equipment).
6. For each component identified in the room, rate on a scale of 0 – 3 (see definitions below table), the presence of water stains or water damage, visible suspect microbial growth, and level of wetness or dampness based on the size of the area affected only. The scoring should be based on the size of the affected area alone and not on the density or darkness of staining or suspect microbial growth. If standing water is observed, the "Wet or Damp" score should be rated as a 3 with a note in the comment section. Additional comments can be provided in

the notes column. Photographs should be used to supplement notes on water stained or damaged, visible suspect microbial growth and wet or damp materials or surfaces.

7. If you do not find any water stains or water damage, visible suspect microbial growth, or wet or damp materials, check column two to indicate nothing was found. This step should be confirmed with a moisture meter.
8. Upon completion of the inspection:
 - a. Add up the score in each row and enter the value in the “Row Total Value” column.
 - b. Add up the scores for each column (Damage or Stains, Visible SMG, and Wet or Damp) and enter it in the “Total Room and Column Score” cells.
 - c. Add up the values in the “Row Total Value” and enter into the shaded cell at the bottom of the table. Add up the values in the “Total Room and Column Score” column and confirm that the value is the same as the “Row Total Value.”

The total score for the inspection can be used to determine which rooms or areas require follow up inspection or remediation, and can be used to help prioritize which rooms or areas should be addressed first. Rooms or areas with a higher total score or with a higher visible suspect microbial growth should be given a higher priority for follow up investigation and remediation than those with lower scores.

Filled-out Example: Microbial and Moisture Assessment Form

(Complete one form per room / area)

- Full New
 Complaint Follow Up

Client Name:	Mr. Happy, Restaurant Owner	Inspector Name:	Public Inspector Number 1
Site Name / Description:	Happy Day Restaurant	Inspection Date:	March 6, 2014
Site Address:	Burnaby, BC		

Building Name:	Happy Day Restaurant		
Floor Number:	First Floor	Room Number:	N.Av.
Description of Room / Area Location:	Across from: _____	Next to: the Kitchen	Inside of: _____ Near: _____
Type of Room (e.g. office, etc.):	Dining Room		

Odour: When you first walk into an area / room, note any microbial / moisture related odours in the field below. Check the appropriate box.																
<input type="checkbox"/>	None	<input checked="" type="checkbox"/>	Mild	<input type="checkbox"/>	Moderate	<input type="checkbox"/>	Strong									
Description of Odour:		Musty, damp smelling														
Source of Odour:		Wet building materials in NE Corner of Dining Room, near ceiling.											<input type="checkbox"/>	Source Unknown		
Check(<input checked="" type="checkbox"/>) first column if component is in room		Check(<input checked="" type="checkbox"/>) if nothing found	Damage or Stains				Visible SMG				Wet or Damp				Row Total Value	Notes
			0	1	2	3	0	1	2	3	0	1	2	3		
<input checked="" type="checkbox"/>	Ceiling	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	5	Several ceiling tiles wet, possible suspect microbial growth. See photo 1 and 2
<input checked="" type="checkbox"/>	Walls	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	4	Water staining down walls visible. See photo 3
<input checked="" type="checkbox"/>	Floors	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
<input checked="" type="checkbox"/>	Windows	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
<input checked="" type="checkbox"/>	Furniture	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
<input checked="" type="checkbox"/>	HVAC System	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0	Not accessible to inspect.
<input type="checkbox"/>	Supplies and Materials	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
<input checked="" type="checkbox"/>	Other: Restaurant Décor	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
<input type="checkbox"/>	Other: _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Total Column and Room Score		Total	4				1				4				9	Recent evidence of water intrusion and the start of possible microbial growth on wet materials.

Score: 0 – None; 1 – The size of this form or smaller; 2 – Between the size of this form and the size of a standard interior door; 3 – Equal to or larger than the size of an interior door
 SMG – Suspect Microbial Growth

This form was adapted from the National Institute of Occupational Safety and Health (NIOSH), NIOSH Dampness and Mould Form for Schools
 November 2014

Microbial Air Monitoring Record Sheet

Client Name: _____ Reference No. _____
 Site Location / Facility: _____ Department / Area: _____
 Temperature at Site _____°C Relative Humidity _____% Weather: _____ Inside Outside Rain Wind Sun

Sample No.	Pump No.	Date	Pump Calibration			Sampling Time			Volume (Litre)	Type of Sample		
			Initial (LPM)	Final (LPM)	Avg. (LPM)	On	Off	Duration (min)		Contaminant	Occupational/Personal/Area	Type of tube/filter

Sample Description / Task Observations

Sampled by: _____ Notes: _____
 Date: _____
 Lab Name: _____
 Date Submitted _____

Indoor Air Quality Spot Measurement Record Sheet

Client Name:	_____	Reference No.:	_____
Facility:	_____	Date:	_____
Department / Area:	_____	Inspector:	_____
Instrument Make:	_____	Calibration Date:	_____
Instrument Model:	_____		_____

Monitoring Information					Results (Avg. And Range)			
Sample No.	Sample Location	Sample Time	Sample Duration (min)	Datalog Session No.	Carbon Monoxide (ppm)	Carbon Dioxide (ppm)	Relative Humidity (%)	Temperature (°C)
Notes								