



Infrastructure Services

Marijuana Grow Operation Response Protocol



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Purpose Statement

This document outlines the Town of Halton Hills response protocol for premises that have been utilized for the illegal cultivation of marijuana in residential or non-residential premises within The Town of Halton Hills.

Agencies involved:

- Brampton Real Estate Board
- Electrical Safety Authority
- Fire Prevention & Protection Services
- Halton Hills Hydro Inc.
- Halton Regional Police Service
- Senior Legal Council
- Regional Municipality of Halton Health Department
- Regional Municipality of Halton Planning & Public Works Department
- Town of Halton Hills - Town Clerk
- Town of Halton Hills - Building Services Division

The Town of Halton Hills will undertake a public awareness campaign to educate the general public regarding the potential risks to the community of premise utilization for the production and/or cultivation of illicit substances. This campaign will include information with respect to contacting the Halton Regional Police Service in order for members of the public to report any suspicious premises.

Background

For the purposes of this protocol, “Marijuana Grow Operation” means:

“A discovered (whether through warrant or other means) concerted effort to illicitly or surreptitiously grow marijuana in a building where the set up is such that it is reasonable to believe that it is for beyond personal or limited use and/or involves artificial, assistive growing methods or techniques. It does not include legally sanctioned operations pursuant to federal legislation and regulation.”

Marijuana Grow Operations pose a serious threat to the safety and security of municipalities throughout Ontario. The detection, investigation, dismantling and return of the premises to legitimate use can be a complex undertaking requiring the cooperation of Police and municipal officials. A coordinated approach to this problem will help ensure that the entire process is conducted in a safe and effective manner. The safety of the personnel involved in the process and that of the public is of paramount importance.

Marijuana grow operations are typically residential homes utilized for the indoor cultivation of marijuana, however, marijuana grow operations have also been identified in residential apartments as well as commercial and industrial buildings.

In many cases in order to convert a premises for the illegal cultivation of marijuana significant changes are made to the home's structural, electrical and HVAC systems. High intensity lighting is needed to grow the marijuana plants so many grow operations will by-pass the electrical panel putting the premises and perhaps the neighbourhood at risk of fire and possibly electrocution.

Structural alterations and damage to the premises may also occur, such as, holes in:

1. The foundation wall to provide for an electrical by-pass
2. In floors and ceiling to allow for the ventilation of the excess heat and odours, and/or
3. In the exterior walls to access attached garages for the movement of grow equipment and cultivated marijuana.

Structural damage and toxic mould may also result from the excess moisture introduced into the building due to irrigation systems used to provide water to the plants and increased humidity due to the number of plants.

The structural and electrical alterations along with the possibility of water damage and toxic mould may make the premises unsuitable for human habitation unless repairs are undertaken. If the necessary remedial measures are not taken the premises may be permanently damaged and property value of other homes in the area may be lowered.

The operators of marijuana grow operations often have links to criminal elements and organized crime. Individuals associated with grow operations have been found to carry weapons and may be considered dangerous. Evidence of booby-traps both outside and inside premises used for grow operations has also been documented. These booby-traps have been known to include:

1. Electrified door handles and window frames
2. Boards with large nails protruding up placed outside the premises around windows, and
3. Holes cut in interior floors

There is also a possible risk to increased violence and residual crime in neighbourhoods where marijuana grow operations are located, making marijuana grow operations not only a police concern but also a public safety issue.

Dangers Associated with Marijuana Grow Operations

Poisonous Fumes – harmful fumes from the grow operations can build up inside the premises. Mould and fungus caused by high humidity and condensation can accumulate inside the premises creating a potential health hazard. Gases from chemicals used in the grow operation can also build up inside the premises or be vented outside, possibly impacting nearby residents.

Fire Hazard - electrical systems are often tampered with to accommodate high intensity lighting utilized in grow operations, which in turn creates excessive heat. This increases the risk of fire due to unauthorized tampering with the electrical system.

Power Outages – tampering with the electrical systems in grow operations can cause possible overloads and may even cause hydro transformers to malfunction or explode.

Higher Utility Costs – the cultivation of marijuana requires large amounts of water and electricity. As a result utilities are either stolen or tampered with. By stealing the utilities, the costs of growing the marijuana are lowered. However, this theft leads to higher utility bills for the general public.

Electrocution – persons inexperienced with the installation and repair of electrical systems may electrocute themselves or persons exposed to hazards associated with faulty wiring. Individuals outside the premises could possibly be shocked by an electrical panel bypass, which has charged the ground around the premises.

Environmental Damage – chemicals used in the grow operation may be improperly disposed of, draining onto the ground or into the sewer system, high humidity and water damage may result in harmful mould forming in the premises. Extensive testing and remediation to the premises for harmful mould may be required to make the premises habitable after the grow operation has been terminated.

Structural Damage – premises may be structurally altered to allow for the marijuana grow operation. Damage may be caused from alterations to the structure such as holes in foundation walls, floors, ceiling and exterior walls above grade. Major remedial measures may be required to make the premises structurally sound and safe for the occupants after the grow operation has been terminated.

Violence – to protect production and distribution of marijuana, those involved in a grow operation may be armed with weapons and have been known to carry out assaults or homicides. Criminal elements attracted to the area to purchase or transport marijuana may also be armed and violent or commit residual crimes.

Increased Crime – marijuana is a controlled substance. Marijuana from illegal grow operations is sold to members of the community and possibly minors. The money raised from the sales can be used to fund organized crime, which has a detrimental effect on overall public safety and can spawn further, more violent crime.

Coordinated Marijuana Grow Operation – Response

Note: The extent to which the responsibilities outlined in this protocol are to be implemented is contingent upon the information provided by the Halton Regional Police Service in their Marijuana Grow Operation Notification (Appendix “A”) and the related

degree of risk to public health and safety as a consequence of the premises being used as a marijuana grow operation.

All steps taken under this protocol shall be in compliance with sections 447.2 and 447.3 of the Municipal Act, 2001, as amended.

Response Team

1. Halton Regional Police Service

1.1 Identification and Notification of Marijuana Grow Operation

- 1.1.1 Halton Regional Police Service conducts criminal investigation of alleged marijuana grow operation.
- 1.1.2 Halton Regional Police Service obtains a search warrant (if required), and any other judicial orders as may be deemed necessary and attend the property.
- 1.1.3 Halton Regional Police Service attends the property.
- 1.1.4 Halton Regional Police Service contacts the appropriate agencies necessary to the Police investigation:
 - 1.1.4.1 Halton Hills Hydro, to request disconnection of electrical service if deemed necessary
 - 1.1.4.2 Halton Hills Fire Prevention & Protection Services, to determine the presence of any combustible or volatile chemicals or liquids
 - 1.1.4.3 Children's Aid Society and Immigration, if required
 - 1.1.4.4 Federal immigration authorities, if required
- 1.1.5 Halton Regional Police Service gathers physical and photographic evidence, dismantle the grow operation and remove marijuana plants
- 1.1.6 Halton Regional Police Service places Notice (Appendix "B") on the principal entrance to the premises
- 1.1.7 Halton Regional Police Service prepares a Marijuana Grow Operation Notification (Appendix "A") identifying any potential risks associated with the premises, such as but not limited to:
 - Booby traps
 - Chemicals and potentially hazardous materials
 - Electrical system tampering
 - Foreign Substances
 - Possible theft of power and/or water
 - Status of occupancy
 - Structural damage or alterations

- Visible mould
- Water damage
- Any other potential hazards or safety concerns

1.1.8 Halton Regional Police Service provides the following information on the notification:

- Division and unit
- Halton Regional Police Service contact telephone number regarding current investigation
- Lead investigating officer's name and badge number

1.1.9 Halton Regional Police Service forwards Notification of Marijuana Grow Operation (Appendix "A") to the Town Clerk.

1.2 Premise Investigation

1.2.1 A premise is deemed suitable for inspection by persons other than the Halton Regional Police Service when:

- 1.2.1.1 Halton Regional Police Service's investigation of the premises and removal of the marijuana plants is complete
- 1.2.1.2 All hazards of which the Halton Regional Police Service are aware of have been contained, dismantled and/or removed
- 1.2.1.3 A Notice (Appendix "B") will be affixed to the principal entrance of the premises by the Halton Regional Police Service indicating that an illegal marijuana grow operation was contained on the premises and the premises may not be suitable for habitation

2. Town Clerk

2.1 When a Marijuana Grow Operation has been discovered as operating in a building (e.g. premises or structure) on land within the jurisdiction of the Town, upon request from the Halton Regional Police Service, the Town Clerk will provide the name of the last known registered owner of the property and shall request upon a title search for the property to be determine all parties having interest in the property, including financial institution.

2.2 Upon receiving the Marijuana Grow Operation Notification from the Halton Regional Police Service, the Town Clerk shall forward a copy of the Notification of Marijuana Grow Operation to the Senior Legal Council and to the Chief Building Official.

3. Senior Legal Council

3.1 The Senior Legal Council shall, upon receiving the Notification from the Town Clerk, notify the Health Department and the Planning and Infrastructure Services - Public Works Division for appropriate action as deemed necessary. Regional staff will communicate directly with the Town staff (Town Response Team) assigned to the investigation.

4. Town of Halton Hills Fire Prevention & Protection Services

- 4.1 When the Town of Halton Hills Fire Prevention & Protection Services becomes aware of a marijuana grow operation it shall notify the Halton Regional Police Service and follow departmental Standard Operating Guidelines.
- 4.2 Upon receiving the Grow Operation Notification from the Halton Regional Police Service indicating the possibility of the presence of fire safety issues, the Town of Halton Hills Fire Prevention & Protection Services may investigate and follow-up pursuant to possible violations of the Fire Protection and Prevention Act, S.O. 1997, c 4.

5. Chief Building Official

- 5.1 Upon receiving a copy of the Marijuana Grow Operation Notification from the Town Clerk, the Chief Building Official will notify the Town Response Team (Municipal Law Enforcement Officer and the Supervisor of Inspections) for the purpose of further investigation.
- 5.2 If a building is determined to be in a condition that could be hazardous to the health and safety of persons in the normal use of the building, persons outside the building, or persons whose access to the building has not been reasonably prevented, an Order to Remedy Unsafe Condition may be issued pursuant to Section 15.9 of the Building Code Act, 1992, S.O. 1992, Chapter 23. and/or Section 447.2(5) of the Municipal Act, 2001.
- 5.3 If an Order to Remedy an Unsafe Condition is not complied with within the time specified in the Order, the Chief Building Official may by Order prohibit occupancy; and may cause the building to be renovated, repaired or demolished to remove the unsafe condition. The cost for remediation by the municipality or on behalf of the municipality shall be recoverable by a lien as provided for in Section 446 of the Municipal Act, 2001. S.O. 2001, c. 25. and/or Section 15.9 of the Ontario Building Code Act, 1992, S.O. 1992, Chapter 23.

6. Town Response Team

- 6.1 Role and Responsibility
 - 6.1.1 The Town Response Team shall be comprised of designated members of the Building Services Division (Municipal Law Enforcement Officer and Supervisor of Inspections) and (as required) the Town of Halton Hills Fire Prevention & Protection Services.
 - 6.1.2 The Municipal Law Enforcement Officer shall be the principal contact for the Response Team. The area Supervisor of Inspections will be the secondary contact.
 - 6.1.3 The Town Response Team may request the assistance at any time from other members of the Response Team, as deemed necessary

to draw upon their assistance and specific expertise as part of the investigation process.

- 6.1.4 The Municipal Law Enforcement Officer shall notify the listing agent of the Brampton Real Estate Board that the Halton Regional Police Services has advised the municipality that a premises has been investigated and found to have been used as a marijuana grow operation.
- 6.2 Premise Investigation/Orders
 - 6.2.1 Once the premise is deemed safe and free from physical hazard by the Halton Regional Police Services, members of the Town Response Team will attend the property to conduct an initial inspection to determine if the premise is occupied, vacant, secure and/or pose any obvious danger to the public.
 - 6.2.2 During the initial inspection, The Town Response Team may need to have the property secured.
 - 6.2.3 If deficiencies are found on the exterior/interior of the building and/or its surrounding yards a Property Standards Order may be issued pursuant to Section 15.2 of the Building Code Act, S.O. 1992, c. 23 to the owner of the property and such others that may be affected by the Order.
 - 6.2.4 If conditions warrant further examination and/or testing by a qualified professional or consultant, an Order requiring a report on the specified condition(s) of the premises may be issued to the property owner and such others that may be affected by the Order pursuant to Sections 15.2 and or 15.8(1) of the Building Code Act, S.O.1992, c. 23.
 - 6.2.5 In the case of a property owner failing to comply with an Order requiring a professional or consultant's report pursuant to Section 15.8(1) of the Building Code Act, S.O. 1992, c. 23, the property owner may be charged for failing to comply with an Order under 36(1) of the Building Code Act S.O. 1992, c. 23.
 - 6.2.6 Conditions may warrant the issuance of an Unsafe Order by an inspector pursuant to 15.9(4) of the Building Code Act, S.O. 1992, c.23 which could be followed by the issuance of an Order Prohibiting Occupancy by the Chief Building Official pursuant to Section 15.9(6) of the Building Code Act S.O. 1992, c. 23 and requiring remedial action to be taken to make the building safe.
 - 6.2.7 The Town Response Team will post copies of applicable Order(s) on the premises.

- 6.2.8 Any Order issued pursuant to Section 15.2 of the Building Code Act S.O. 1992, c. 23 may be registered on title.
- 6.3 Reports/Remediation of Premises
- 6.3.1 The Town Response Team may require the owner to provide stamped and signed report(s) from a Professional Engineer with a Masters in Occupational Hygiene, a Certified Industrial Hygienist, or a Registered Occupational Hygienist, that identifies and details a remediation plan to mitigate the following:
- Indoor air quality
 - Mechanical Safety
 - Other as may be deemed necessary
 - Structural Adequacy
 - Water damage and Mould
- 6.3.2 Report(s) must list the current conditions of the premise and specify remedial work, if required.
- 6.3.3 Environmental reports assessing indoor air quality, water damage, mould etc., must be prepared in accordance with “Guidance Document: Environmental Assessment for Mould in Marijuana Grow Houses”, July 2007 edition, Halton Health (Appendix “C”). Copies of such reports shall be provided to the member of the Response Team responsible for the request or issuance of the Order.
- 6.3.4 Any environmental assessment reports received will be forwarded to the Halton Health Department for review, comment and follow-up. The Health Department shall advise the Municipal Law Enforcement Officer about the outcome.
- 6.3.5 The Order(s) will require the owner to hire a contractor experienced in water damage and mould remediation to complete the remedial work as detailed in the said report, under the supervision and guidance of the engineer/consultant. The engineer/consultant shall be responsible for providing the Town with a report that the work proposed has been completed in accordance with the generally accepted guidelines and protocols in the industry.
- 6.3.6 The Order(s) may require the owner to hire a professional engineer licensed to practice in the Province of Ontario, for the purpose of examining the structural adequacy and condition of the building. Said engineer will be required to provide a written report to the Response Team signed and stamped by him/her giving details of the findings and proposed repair methods, if required, together with drawings. The owner shall be responsible for hiring a qualified

contractor in the trade to make the necessary repairs required in the engineer's report. On completion of all the work the engineer shall submit a report to the Response Team, signed and stamped by said engineer, stating the all the work has been completed to his/her satisfaction.

- 6.3.7 The owner may be ordered to retain an Heating Refrigeration Air Condition Institute (HRAI) certified heating and ventilation contractor to inspect the appliances and ductwork to ensure that the system is clean and functioning as designed. The contractor will submit a written report to the Municipal Law Enforcement Officer providing details of his/her findings and/or remediation (if required) together with drawings specific to the proposed repairs for review and building permit purposes.
- 6.3.8A Building Permit may be required for any of the remedial work as stated above.

7. Halton Hills Hydro Inc.

- 7.1 Halton Regional Police Service provides Halton Hills Hydro with Marijuana Grow Operation Notification and Halton Hills Hydro will disconnect the electrical service upon request, if deemed necessary.
- 7.2 Halton Hills Hydro will request Halton Regional Police Service to have representative at the site at the time of disconnection.
- 7.3 Halton Hills Hydro attends the premises and disconnects the electrical service at the source. Halton Hills Hydro will advise the Municipal Law Enforcement Officer of the date of the disconnection of the electrical service.
- 7.4 Halton Hills Hydro notifies Electrical Safety Authority of disconnection of electrical service.
- 7.5 Upon receipt of the Electrical Safety Authority's connection authorization and payment of the any fees/costs incurred, Halton Hills Hydro will reconnect the electrical service.
- 7.6 Halton Hills Hydro advises the Municipal Law Enforcement Officer of the date of the electrical service reconnection.
- 7.7 In the case of marijuana grow operation in a multi-residential premises without individual electrical service to the residential units, Halton Hills Hydro will assess the risk and decide if the power needs to be disconnected to the entire building.

8. Electrical Safety Authority

- 8.1 Electrical Safety Authority receives notification from Halton Hills Hydro regarding disconnection of electrical service.
- 8.2 Receives and processes an Application for Inspection (permit) from the owner of the property, or the authorized agent of the owner of the property, for remediation of electrical system.
- 8.3 Inspects property for compliance with the Electrical Safety Code.
- 8.4 Upon fulfillment of requirements for reconnection to the satisfaction of the Electrical Safety Authority, by the owner of the property, the Electrical Safety Authority will issue authorization to Halton Hills Hydro Inc. to reconnect the electrical service.

9. Regional Municipality of Halton Planning and Infrastructure Services - Public Works Department

- 9.1 The Halton Planning and Public Works Department may request Halton Regional Police Service to be present if deemed necessary when disconnection of the water service at source takes place.
- 9.2 The Halton Planning and Public Works Department will advise the Municipal Law Enforcement Officer. of the date of the disconnection and reconnection of the water service.
- 9.3 Upon fulfillment of requirements by the owner of the property for reconnection, to the satisfaction of the Halton Planning and Public Works Department, the Halton Planning and Public Works Department will reconnect the water service.

10. Regional Municipality of Halton Health Department

- 10.1 Role and Responsibility
 - 10.1.1 The Halton Health Department receives Marijuana Grow Operation Notification from Senior Legal Council.
 - 10.1.2 The Halton Health Department reviews and evaluates the Marijuana Grow Operation Notification for potential health hazards and will inform the Municipal Law Enforcement Officer in writing regarding their interest in the premises from a health perspective. Issuance of an Order pursuant to the Health Protection and Promotion Act, R.S.O. 1990, Chapter H. 7. may be considered on a case by case basis.
 - 10.1.3 Any environmental assessment report forwarded to the Halton Health Department will be reviewed and written comments provided to Municipal Law Enforcement Officer.

10.2 Issuance of Orders

- 10.2.1 Where a health hazard exists or may exist as a result of the existence of mould, water damage or chemical contamination, the Halton Health Department may serve an Order pursuant to The Health Protection and Promotion Act, R.S.O 1990, Chapter H. 7, to the owner of the premises and such others that may be affected by the Order, along with a copy of the Halton Health Department Interim Guidance Document for Environmental Assessment for Mould in Marijuana Grow Operations, requiring any one or more of the following:
- Prohibition of Occupancy
 - Placard the premises, or require the placarding of the premises, within 24 hours of issuing an Order
 - Require an environmental consultants report prepared in accordance with the “Guidance Document: Environmental Assessment for Mould in Marijuana Grow Houses”, July 2007, Halton Health Department (Appendix “C”), which will include:
 - assessment of the health risks within the premises
 - a remediation work plan
 - verification report confirming that repair work is completed in accordance with the approved remediation plan
- 10.2.2 The Halton Health Department shall notify the Municipal Law Enforcement Officer. in writing of any Order(s) issued, date premises placarded, of approved remediation plan implementation and consultant’s verification of completion of approved remediation plan.
- 10.2.3 Failure to comply with an Order issued by the Halton Health Department may result in further legal action against the property owner under The Health Protection and Promotion Act, R.S.O. 1990, Chapter H.7.

11. Final Correspondence

- 11.1 Upon the completion of all inspections and the lifting of all respective Orders, the Municipal Law Enforcement Office shall forward a letter to the Owner of the property accordingly.

Contacts

Town of Halton Hills

905-873-2601

- Corporate Services, Town Clerk ext. 2331
- Infrastructure Services - Building Services Division, Chief Building Official ext. 2322
- Infrastructure Services - Municipal Law Enforcement & Property Standards Officer ext. 2334
- Infrastructure Services - Building Services Division, Supervisor of Inspections ext. 2326
- Fire Protection & Prevention Services, Chief Officer – Prevention Education ext. 2102

Region Contacts

905-825-6000

- Halton Region Health Department ext. 7457
- Halton Region Planning and Public Works Department ext. 7626
- Legislation & Planning Services, Senior Legal Council ext. 7370

Other Agencies

- Brampton Real Estate Board 905-791-9913
- Electrical Safety Authority (E.S.A.) 1-877-372-7233
- Halton Hills Hydro Inc. 519-853-3700
- Halton Regional Police Service 905-878-5511

Air Quality Consultants

- Pinchin Environmental Toll Free 1-888-767-3330 ext. 3021
- Safetech Environmental Ltd. 905-624-2722

Appendix A

Halton Regional Police Service Notification



MARIJUANA GROW OPERATION NOTIFICATION

Please be advised that the Halton Regional Police-Drug and Morality Bureau has investigated and dismantled a marijuana grow operation in your municipality.

Date:	Occurrence No.:
Location:	
Date and time of grow operation discovery:	
Contact: Det Glenn Mannella #4628 905 878 5511 ext 5044	
Property Owner (If Known):	
Owner Contact Information:	

Hazard	COMMENTS / HAZARDS IDENTIFIED	
	Location	Comments
<input type="checkbox"/> Structural alteration/damage		
<input type="checkbox"/> Chemicals or fuels		
<input type="checkbox"/> Mould/Water Damage		
<input type="checkbox"/> Electrical Wiring/Fire Damage		
<input type="checkbox"/> Other:		

Discarded

Appendix B

Halton Regional Police Service Notice



NOTICE

Occurrence #: _____

Date: _____

These premises (insert address) were investigated by the Halton Regional Police Service and were found to contain an illegal Marijuana Grow Operation.

As a result, the premises may contain numerous hazards and may not be fit for occupancy. The Town of Halton Hills has been notified.

Appendix C

**Guidance Document:
Environmental Assessment for Mould in Marijuana Grow Houses**

Halton Region Health Department

July 2007

Acknowledgement

**This document was adapted from
“Interim Guidance Document for Environmental Assessment
For Mould in Marijuana Grow Houses”
produced by Toronto Public Health with permission.**

Guidance Document

Environmental Assessment for Mould in Marijuana Grow Houses

This guidance has been developed to assist owners of premises who are required to provide an environmental assessment and remediation plan on a premise reported as a Marijuana Grow House and those who are seeking to have a “prohibit occupancy” order removed. This document outlines the required work for conducting an environmental assessment for mould (environmental investigation and fungal air testing), remediation plan, and reporting requirements.

Objectives of the Environmental Assessment

- a) To determine the extent of fungal contamination and identify the contributory source(s).
- b) To identify indoor pesticide contamination and sources of exposure.
- c) To determine and evaluate the extent of water damage and indoor moisture problems.
- d) To develop a remediation plan to mitigate the identified problems.
- e) To re-evaluate the environmental conditions post-remediation to ensure the premises is suitable for occupancy (verification report).

Professional Assistance

2.1 Environmental Consultant

The owner will ensure that the assessment is undertaken by a person who is qualified in the assessment of mould and other indoor air quality problems, herein referred to as the Consultant. The Consultant will undertake an initial assessment, produce a remediation plan as appropriate, and conduct an environmental assessment after the remediation work has been done. The Consultant will produce the reports as outlined in section 3.0 (Reporting Requirements).

2.2 Laboratory Services

Any microbial analysis that is undertaken as part of the assessment or verification of the remediation will be conducted by a Laboratory that can demonstrate AIHA (American Industrial Hygiene Association) certification as an Environmental Microbiology Accredited Laboratory with a competence in moulds or demonstrated routine participation and acceptable performance in an Environmental Microbiology Proficiency Analytical Testing (EMPAT) program for both culturable and direct examination determination of fungi, or other comparable accreditation.

A statement of qualification of the laboratory shall accompany analytical reports and included in reports submitted to Halton Region Health Department.

Reporting Requirements

The Consultant is required to provide Halton Health Department with the following reports and documentation:

- a) A written report, including original colour photographs upon request, of the findings of the investigation. The report should address the following items as minimum:
 - Description of the findings related to water damage including an identification of the room/ space being described.
 - Description of the findings on visible mould including an identification of the room/ space being described, and the size of the mould-contaminated area
 - Condition of the HVAC system
 - Colour photographs of visible mould, and
 - For any of the requirements listed in sections 4.1 and 4.2 are not carried out, an explanation of why it was omitted
- b) Documented results of on-site measurements (e.g. relative humidity levels)
- c) All laboratory test results as provided by the analytical laboratory and documentation on the following items:
 - Date, time and location of sample collection for each sample result
 - Number of outdoor samples collected including date(s), time, and location.
 - Comments on damage or signs of mould contamination during air sampling
 - Comments on the assessment of the building regarding evidence of water
 - Description of the weather conditions on the day of testing (s), including temperature.
 - Species identification results for both indoor and outdoor samples, and a numeric value for each species identified.
 - An interpretation of the air monitoring results and their significance.
- d) A written report of the recommended remediation work. The report should address the following items as a minimum:
 - Description of the general layout of the premises (number of floors, rooms etc.)
 - Description of the extent of visible mould contamination with reference to the four levels of abatement as stated in section 5.0
 - Statement on the clean-up strategy for mould contamination and water damage
 - Statement on required maintenance work on the HVAC system and to rectify water damage
- e) A written report of the remediation assessment results after remediation work has been completed including information on the following items:
 - Status of the mould clean-up work and maintenance work as identified in the Remediation Plan
 - If any of the required clean-up or maintenance work are not completed, a statement of the reasons

- Post-remediation fungal air sampling results with an interpretation of the significance of the results
 - A statement on whether the premise is deemed habitable
- f) Any additional reports or documentation that is requested by Halton Health Department.

Forward the above report(s) and assessment(s) to:

Halton Health Department
1151 Bronte Road
Oakville, Ontario, L6M 3L1
Tel: 311, if you have a Halton phone number
Toll Free 1-866-442-5866 ext. 7357
www.halton.ca

Conducting an Environmental Assessment

The activities listed in sections 4.1 and 4.2 are expected as a minimum in conducting environmental investigations and fungal air testing respectively. If the Consultant determines that certain testing or assessment is not required, the Consultant will provide the reason for not undertaking it. The Consultant will ensure the completeness of the documentation to the satisfaction of the Medical Officer of Health.

4.1 Environmental Investigation

The environmental investigation shall include as a minimum:

- Visual inspection of the basement, crawl spaces(s), all floors, attics, furnace ventilation and heating ducts for mould and water damage. This shall include intrusive and destructive investigation of hidden cavities and surfaces to the extent considered necessary in the opinion of the expert consultant. Intrusive and destructive testing may include but is not limited to, cutting access holes in walls and ceilings, lifting carpets or vinyl sheet flooring and removing wallpaper for investigation purposes.
- Assessment of the structure by use of moisture meters and/or borescopes.
- Surface swabbing for pesticides, chemicals and fertilizers in areas where plants and equipment used in the operation of the grow house were located.
- An inventory of obvious and potential areas that may contribute to mould contamination such as HVAC system malfunctions, signs of water damage, etc.

4.2 Fungal Air Testing

Air samples for fungal numeration and speciation purposes should be carried out by

the consultant contracted by the owner. Air sampling is required in addition to the environmental investigation outlined in section 4.1 and should be carried out (a) prior to developing a remediation plan and (b) after the remediation work has been completed.

Fungal air sampling requirements listed below are based on Health Canada's publication, Fungal Contamination in Public Buildings: Health Effects and Investigation Method (2004, pages 40-41)¹, and requires the following:

- Ventilation system is operational
- Collection of representative air samples from each floor of the premises including the attic space(s), basement and crawl space(s).
- Allow one or two hours between duplicate air sampling in a given space.
- Sampling is not to occur during precipitation. A 24 hour buffer period between the end of a precipitation event and air sampling is recommended.
- Collect at least between three and six samples outdoors during the period when the indoor samples are collected. Collect representative outdoor samples for each day of sampling.
- One of the outdoor control samples should be collected at the furnace outdoor air intake grill. If the air intake grill is not accessible, the test location is at the discretion of the consultant but sampling on the windward side of the structure is recommended.
- The air samples should provide information on culturable or viable propagules in air, including species identification.

4.3 Interpretation of Fungal Air Sampling Results

The consultant is required to interpret the air sampling results based on Health Canada's guidelines as provided in section 5.2.8.4 of the publication Indoor Air Quality in Office Buildings: A Technical Guide (2004)² which is included as Appendix 1 of this document. Interpretation of results should be based on the criteria that "normal" air mycoflora is qualitatively similar and quantitatively lower than that of outdoor air. In other words, the distribution of indoor moulds at the genus or species level is similar to the outdoor distribution and quantitatively lower than outdoors. The consultant can summarize findings from the analytical laboratory but must include the analytical report from the laboratory showing the mould genus/species breakdown for each sample.

4. Remediation Plan

Mitigation strategies for areas identified in the environmental investigation (section 4) as either contributing to the environmental contamination or as potential sources shall be clearly documented. The appropriate remedial actions for mould contamination will be determined based on the size of the mould-contaminated area.

There are four levels of abatement for private residences as follows (refer to appendix 2 for detail):

- Level 1: Small Isolated Areas (10 sq.ft. or less)
- Level 2: Mid-Sized Isolated Areas (10- 30 sq.ft.)
- Level 3: Large Isolated Areas (30 – 100 sq. ft.)
- Level 4: Extensive Contamination (greater than 100 contiguous sq.ft.)
- Level 5: Remediation of HVAC Systems

6. Remediation of Mould

Halton Health Department requires that the presence of mould be corrected in accordance to the requirements in Appendix 2 of this document. In addition, sources of water accumulation or excess humidity (above 50% relative humidity) must be rectified or else mould growth may recur³. Any initial water infiltration should be stopped and cleaned. Thorough clean up, drying, and/or removal of water damaged materials will prevent or limit mould growth. Emphasis should be on ensuring proper repairs of the building infrastructure, so that water damage and moisture build-up does not recur.

7. Post-remediation Assessment

The Consultant shall ensure all remediation work completed and provide the appropriate documentation of completion.

The Consultant shall report document and comment on the mould investigation, delineation, and remediation work undertaken and indicate if the work was effective, thorough and satisfactorily completed in accordance with acceptable guidelines and protocols and if the premise is deemed habitable.

References

¹ Health Canada, (2004). Fungal Contamination in Public Buildings Health Effects and Investigation Method. Accessed on 11/25/06 at website:
http://www.hc-sc.gc.ca/ewh-semt/pubs/air/fungal-fongique/index_e.html

² Health Canada, (2004). Indoor Air Quality in Office Buildings A Technical Guide. Accessed on 11/25/06 at website: http://www.hc-sc.gc.ca/ewh-semt/pubs/air/office_building-immeubles_bureaux/index_e.html

³ Health Canada, (1987). Exposure Guidelines for Residential Indoor Air Quality (Revised July 1989), section 4.A.8. Accessed on 11/25/06 at website:
http://www.hc-sc.gc.ca/ewh-semt/pubs/air/exposure-exposition/index_e.html