

# DOSH DIRECTIVE

Department of Labor and Industries  
Division of Occupational Safety and Health  
*Keeping Washington safe and working*

## 10.10

# Indoor Air Quality

(Updated) Date: January 14, 2011

### I. Purpose

This directive establishes inspection procedures and compliance policies related to workplace Indoor Air Quality (IAQ) hazards.

### II. Scope and Application

This directive applies statewide for both consultation and compliance staff when they are evaluating workplace hazards relating to IAQ. It replaces all previous instructions on this issue, whether formal or informal.

### III. References

- *Building Air Quality: A Guide for Building Owners and Facility Managers* – EPA, 1991. EPA 402-F-91-102, December 1991 Indoor Air Quality Information Clearinghouse, P.O. Box 37133, Washington, D.C. 20013-7133; <http://www.epa.gov/iaq/largebldgs/baqtoc.html>
- *An Office Building Occupant's Guide to Indoor Air Quality* – EPA 1997. Indoor Air Quality Information Clearinghouse, P.O. Box 37133, Washington, D.C. 20013-7133; 1-800-438-4318; <http://www.epa.gov/iaq/pubs/occupgd.html>
- *Building Air Quality Action Plan* – EPA/NIOSH – 1998. Indoor Air Quality Information Clearinghouse, P.O. Box 37133, Washington, D.C. 20013-7133; 1-800-438-4318; <http://www.epa.gov/iaq/largebldgs/baqtoc.html>
- *IAQ Tools for Schools Action Kit* – EPA et. al, 1995. Indoor Air Quality Information Clearinghouse, P.O. Box 37133, Washington, D.C. 20013-7133; 1-800-438-4318; <http://www.epa.gov/iaq/schools/actionkit.html>
- *School Indoor Air Quality Best Management Practices Manual* – Washington Department of Health-2003, <http://www.doh.wa.gov/ehp/ts/IAQ/schooliaqbmp.pdf>
- *Bioaerosols: Assessment and Control* – ACGIH 1999. ACGIH, 13300 Kemper Meadow Drive, Cincinnati, OH 45240-2020; <http://www.acgih.org>
- *Ventilation for Acceptable Indoor Air Quality* – American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) Standard 62 – 1989. ASHRAE, 1791 Tullie Circle NE, Atlanta, GA 30329.
- *DOSH IAQ Website*: <http://www.lni.wa.gov/Safety/Topics/AtoZ/IndoorAir/default.asp>

#### IV. Background

DOSH continues to receive inquiries from employers and employees regarding indoor air quality (IAQ). This directive establishes a process to determine the potential for WISHA rule violations, provides examples of serious and non-serious hazards, and provides guidelines on appropriate responses to workplace IAQ complaints.

Although the focus of this directive is on control of airborne contaminants, a vital role is played by ventilation, temperature, and humidity. Their importance in productivity, comfort, and a sense of health and well-being among building occupants should not be underestimated. It is also important to remember that factors such as noise, lighting, ergonomic stressors (work station and task design), and job-related psychological stressors can – individually and in combination – contribute to IAQ-related concerns.

The greatest challenge posed by IAQ investigations is that the reported symptoms and health complaints are generally diverse and usually not suggestive of any particular medical diagnosis or readily associated with a causative agent. A typical spectrum of symptoms includes headaches, fatigue, itching or burning eyes, skin irritation, nasal congestion, dry or irritated throat, and other respiratory irritations. Typically, the workplace environment is implicated because employees report that their symptoms lessen or cease once they leave the workplace. In such cases, however, it is often difficult to support a WISHA violation.

In some instances, specific illnesses can be associated with identifiable exposures in the indoor environment, and employers may be subject to a DOSH citation. Examples of such illnesses include Legionnaires disease, asthma, carbon monoxide poisoning, and allergic reactions associated with exposure to molds.

#### V. Compliance Policies

##### A. Evaluating Complaints.

1. Historically, few IAQ investigations have resulted in WISHA violations. Therefore, it is critical that the compliance supervisor carefully evaluate each complaint or other request prior to committing staff resources. Points to consider include the:
  - Potential for identifying specific causative agent(s)
  - Likelihood of an exposure pathway existing between the contaminated materials or sources and the building occupants, **and**
  - Specificity and severity of the symptoms or illnesses reported.

*Note: See Appendix C, Decision Tree for Conducting Indoor Air Quality Investigations.*

2. An investigation will normally only be conducted when a serious or potentially serious hazard is suspected. Examples of IAQ problems that normally indicate a serious hazard may exist include the following:
  - Complaints of headaches, nausea, lethargy, and/or dizziness (especially if onset was sudden and/or severe), and carbon monoxide poisoning from combustion sources is suspected.
  - Complaints of fever/chills and fatigue, or cough and shortness of breath (especially severe, or widespread complaints), other symptoms, or physician diagnosed disease (for example, Legionnaires' disease, histoplasmosis consistent with exposure to airborne microorganisms (see Appendix A).
  - Wheezing or other indications where chemicals are present that might prompt or aggravate asthma in a worker.
  - Complaints of significant mold growth within a building (see Appendix A).
3. A phone/fax/email response may be used in accordance with the guidance in the DOSH Compliance Manual. Examples of IAQ problems that normally will be addressed by phone/fax/email include:
  - Non-specific health symptoms shared by a group of employees who associate their problems with the building but no source of biological or chemical contamination has been identified. Recommend that a qualified person inspect the heating, ventilation, and air conditioning (HVAC) system for proper air supply and distribution throughout the area where the complaints were received.
  - Respiratory or eye irritation reported by employees after remodeling activities or installation of new carpets/furnishings. Recommend the employer increase outdoor air supply to the area and perform remodeling work after regular work hours.
  - Allergic reactions from biological contamination within the building are suspected by employees, but no significant water damage or mold contamination is reported or can be identified as a possible agent. Recommend that a qualified person search for moisture or water damage and promptly remove or clean these materials/areas using appropriate protective measures. Regular maintenance procedures are recommended to identify and eliminate situations where moisture could promote biological growth.
4. Investigations will **not** be initiated over issues of comfort, and such issues normally will not result in a phone/fax/e-mail response.

**B. Citation Policy.**

1. Follow the guidance regarding Indoor Air Quality in the DOSH Compliance Manual, whenever citations, including safe place citations (WAC 296-800-110), are issued.
2. Most IAQ hazards are not covered by specific DOSH standards. Those that could apply, depending on the hazard, include hazard communication, accident prevention programs, safety and health committee, air contaminants, and the safe place standard.

*Note: Environmental Tobacco Smoke (ETS) is not covered by this Directive, but is a recognized hazard covered under WAC 296-800-240, Environmental Tobacco Smoke in Office Environments.*

3. Assistance in evaluating potential violations involving IAQ issues may be obtained from DOSH Technical Services.

**VI. Consultation Policies**

- A. Consultation supervisors should rely on the guidance provided in Section V above, and on consultation priorities when determining whether to schedule an on-site visit. Such a visit should be scheduled when it is determined that a serious hazard may exist.
- B. When no visit is scheduled, the employer should be directed to the resource materials provided on DOSH, Department of Health, and Environmental Protection Agency IAQ websites.

Approved: \_\_\_\_\_



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For further information about this or other DOSH Directives, you may contact the Division of Occupational Safety & Health at P.O. Box 44610, Olympia, WA 98504-4610 – or by telephone at (360) 902-5436. You may also review policy information on the DOSH website (<http://www.lni.wa.gov/Safety>).

[Appendices A, B, B-1, and C, are attached to this Directive]

## Appendix A

### EVALUATING MICROBIOLOGICAL CONTAMINATION

**Further investigation of a potentially serious hazard may be appropriate if all three of the following criteria are met:**

- **A Source:** The building is significantly water damaged, contaminated with molds, or reservoirs of other microorganisms (*e.g., Histoplasma, Legionella*) exist;
- **An Exposure Pathway:** An exposure pathway is likely; *and*
- **Illness and Symptoms:** A physician has diagnosed a building-related illness or building occupants are suffering from symptoms consistent with exposure to the potential source

#### Evaluating the Source

A serious hazard can only be determined to exist if the workplace exhibits one of the potential sources of microbiological contamination listed in Table A-1 in this appendix. Consideration should be made of the possible extent of contamination. Small areas of contamination (i.e., traces of mold on a wall or ceiling tile) may not necessarily warrant classification as a serious hazard (although it may be a superficial indicator of hidden problems), as opposed to a contaminated air plenum or an extensively water-damaged wall.

Normally, mold contamination is easily recognizable due to moldy odors and their unique visual characteristics. If it is necessary to confirm the presence of molds at the source, it may be appropriate to take “Scotch tape” samples of the affected area (see Appendix B for more details).

Other specialized sampling may be required if *Legionella* or any other pathogenic (disease-causing) microorganism is suspected. Contact the DOSH laboratory for assistance.

#### Evaluating the Potential for an Exposure Pathway

Bioaerosol sampling has been used by many investigators to demonstrate the existence of exposure pathways. However, the numerous technical limitations and difficulties associated with this method make the sampling results extremely difficult to interpret. In general, bioaerosol sampling should not be performed, unless there are special circumstances that warrant this approach.

The IH should qualitatively evaluate factors such as the magnitude and proximity of the contaminated materials and potential exposure pathways. See Table A-1 in this appendix for potential sources and pathways for consideration.

## **Appendix A - Evaluating Microbiological Contamination (continued)**

### **Evaluating Illnesses and Symptoms:**

Examples of illnesses and symptoms consistent with exposure to molds and other microorganisms are indicated below. The IH must recognize that many of the listed symptoms are relatively common complaints and are not necessarily reflective of a workplace exposure or serious illness.

#### **Physician-diagnosed illnesses associated with microbial contamination include:**

- Allergic rhinitis or sinusitis
- New-onset asthma
- Hypersensitivity pneumonitis
- Pneumonia
- Fever/flu-like illness
- Recurrent airborne infections

#### **Symptoms associated with microbial contamination include:**

- Dry, irritated or sore throat
- Wheezing
- Difficulty breathing or shortness of breath
- Chronic postnasal drip
- Chronic cough
- Continual throat clearing
- Frontal headaches or facial pain that increases with bending over or straining
- Eustachian tube dysfunction (ear pain)
- Altered hearing, smell and/or taste
- Recurrent fevers or chills in addition to general malaise and muscle aches

### **Examples of Microbiological IAQ Evaluation Determinations:**

The following examples may assist evaluating compliance or consultation industrial hygienists determine the disposition of typical employee or employer generated complaints or referrals (Employee generated complaints are enforcement issues that may result in an inspection, while employer generated complaints are consultation issues that may result in a consultation visit).

#### **Example 1 – Triggers an inspection or consultation visit:**

The Complaint: A complainant reports that a physician has diagnosed new-onset asthma in a worker, whose workspace has evidence of chronic water damage, including several stained ceiling tiles and water-stained walls.

Employee complaint: The complaint results in a compliance inspection *if* there is also an apparent or alleged failure on the part of the employer to take appropriate steps to address the issue.

Employer complaint: The complaint results in a consultation visit.

## **Appendix A - Evaluating Microbiological Contamination (continued)**

### ***Example 2 – Triggers an inspection or consultation visit:***

The Complaint: A complainant reports that several workers are no longer able to tolerate working in a building. As soon as they come to work, they start to suffer from a variety of allergic-type symptoms (sneezing, coughing, and headaches). The roof has been leaking for years and there is evidence of water damage in their workspace – carpets are periodically soaked and ceiling tiles are stained.

Employee complaint: The complaint results in a compliance inspection *if* there is also an apparent or alleged failure on the part of the employer to take appropriate steps to address the issue.

Employer complaint: The complaint results in a consultation visit.

### ***Example 3 – Phone/fax and possibly recommend a qualified independent IH contractor (See also the DOSH Compliance Manual)***

The Complaint: A complainant reports that workers are suffering from a variety of allergic-type symptoms, but there is no evidence of water intrusion, water damage, or microbial growth in the building.

Employee Complaint: Compliance generates a letter (with appropriate information and resource material) to the employer.

Employer Complaint: Consultation sends appropriate information and resource material to the employer. No letter is required.

### ***Example 4 – No inspection or consultation visit, but possibly recommend use of a qualified independent IH consultant:***

The Complaint: A complainant reports that workers are not feeling well in their building. There are reports of headaches, metallic taste in the mouth, and muscle aches, but there are no objective symptoms that can be verified and no evidence of water intrusion, water damage, or microbial growth in the building.

Employee complaint: Compliance generates a letter (with appropriate information and resource material) to the employer.

Employer complaint: Consultation sends appropriate information and resource material to the employer. No letter is required.

**Appendix A - Evaluating Microbiological Contamination (continued)**

<b>Table A-1</b>	
<b>Potential Sources of Biological Agents or Bioaerosol entry Routes into Buildings AND Factors Related to Microbial Growth or Bioaerosol Dissemination</b>	
<b>HVAC SYSTEM</b>	
<b>Source/Route</b>	<b>Related Factors</b>
Outdoor air intakes (OAIs)	Bioaerosol sources near OAIs (e.g., plant debris, feathers and bird droppings, insect or rodent infestations, sanitary air vents, cooling towers or evaporative condensers, standing water); below-grade OAIs
Filters	Dampness; microbial growth on filters; gaps between filters and housings; low efficiency filters
Heat exchangers	Dirty heating or cooling coils; excessive water in condensate pans – inadequate drainage from collection pans; blow-through of water droplets onto surfaces downstream of coils; dampness and microbial growth on acoustical lining; poorly maintained air washers or humidifiers; stagnant water in air washers or humidifiers
Supply air plenums and ductwork	Excessive surface deposits; dampness and surface microbial growth; inaccessible humidifiers
Supply air diffusers	Surface deposits, rust, or microbial growth on louvers; soiling of adjacent ceilings and walls; poor air mixing
<b>OCCUPIED SPACE</b>	
<b>Source/Route</b>	<b>Related Factors</b>
Water damage	Evidence or history of plumbing or roof leaks, water intrusion or spills, high indoor humidity (70%), attempts to clean or disinfect carpets and other materials, musty or moldy odors
Chronic condensation	Inadequate insulation or intrusion of humid outdoor air that results in chronic condensation on windows, perimeter walls, or other cool surfaces
Window air conditioners and evaporative air coolers	Location inconvenient for maintenance; dirty grills; standing water in condensate pans or sumps; dampness and surface microbial growth near units
Fan coil and induction units	Dirty heating or cooling coils or filters; excessive water in condensate pans – inadequate drainage from collection pans; dampness and surface microbial growth near units
Carpet	Poorly maintained or water-damaged carpet that serve as sources for dirt accumulation or microbial growth
Fabric office partitions, wall coverings, drapes; upholstered furniture	Poorly maintained or water-damaged fabric-covered and upholstered items that serve as sources for dirt accumulation or microbial growth
Portable (console) humidifiers	Poorly maintained units with microbial growth in the water reservoirs; spray or mist units
Return air plenums	Excessive surface deposits, dampness, and surface microbial growth

## Appendix B

### SCOTCH TAPE SAMPLING

#### Equipment needed:

- Gloves (latex, vinyl, or nitrile)
- Sharp permanent marker pen
- Glass microscope slides
- Transparent tape

#### Procedure:

When microbial contamination is suspected on a surface, the simplest and most inexpensive method to confirm the presence of microorganisms and identify fungi (molds) to the genus level is by transparent tape sampling. The sample is shipped to a qualified mycologist for microscopic evaluation. The minimum PPE requirement is the use of gloves. If there is any potential for disturbing the contaminated material, then Tyvek and a 1/2-face respirator with N-95 filters should be worn also.

A piece of transparent tape 1"-2" long is taken from the dispenser and lightly pressed against the contaminated surface. Ensure that powder from the gloves does not stick to the tape in the area that will be subsequently examined. The tape is then pressed against a clean, lint-free microscope slide. The slide should then be labeled with the date and other sample ID information.

The DOSH Lab is not set up to do microbial identification and slides must be sent to an outside private lab. Slides should be mailed promptly.

## Appendix B-1

### INDOOR AIR QUALITY (IAQ)

### QUESTIONS AND ANSWERS

#### INTRODUCTION

Every year, DOSH receives numerous inquiries and complaints from employees and employers on the subject of indoor air quality (IAQ) in the workplace. Office buildings and public schools in particular are common sites of indoor air quality problems. Because DOSH has no specific regulations for indoor air quality, we are limited in how we can respond to employer requests for assistance or employee complaints. In most cases, DOSH will not conduct an onsite investigation unless there is sufficient evidence of exposure to a known chemical, gross mold contamination or other evidence of exposure to disease-causing microorganisms. However, there is a wealth of information and guidance available on this subject from EPA and other non-governmental organizations. A number of consulting engineering firms in the state of Washington also specialize in solving IAQ problems.

#### QUESTIONS AND ANSWERS

**1. What is “indoor air quality”?**

Indoor air quality or IAQ refers to the quality of air inside buildings where people work or live. Air quality can be a problem when there is inadequate fresh air ventilation, when chemicals are used in the building, when gas furnaces malfunction, when outdoor pollutants enter fresh air intakes, or when mold or other microorganisms grow inside the building or in the heating and ventilation system. The term “indoor air quality” is usually used in reference to non-industrial workplaces, such as office buildings, governmental institutions, hospitals, libraries, and schools.

**2. Does the Dept. of Labor & Industries - DOSH have regulations covering indoor air quality?**

DOSH does not have specific regulations that address the general topic of indoor air quality. DOSH does have specific regulations that prohibit smoking in offices (see question 14). Other DOSH regulations protect employees from exposures to specific chemicals that can cause ill effects. These regulations specify concentrations of certain chemicals that must not be exceeded and are called “permissible exposure limits” (PELs). However, these permissible exposure limits are usually much higher than levels found in most office buildings or other non-industrial workplaces.

## Appendix B-1

### INDOOR AIR QUALITY (IAQ) - QUESTIONS AND ANSWERS

#### (Continued)

**3. How does DOSH handle employee complaints of indoor air quality problems?**

Because DOSH has no general indoor air quality regulation, most complaints of this nature are not investigated. Instead, the employer is contacted advising them of complaints and asking them to investigate the situation. Exceptions that would likely initiate an inspection include complaints of carbon monoxide exposure, exposure to high levels of chemicals during their use, or evidence of exposure to life-threatening infectious agents like Legionella (Legionnaire's disease) or Histoplasma (histoplasmosis).

Under certain specific circumstances, an investigation may also be warranted if there is extensive water damage to a building, gross mold contamination and reports of adverse health effects associated with mold exposure. See Section V above for more information on this subject.

**4. What help will DOSH provide to employers in solving their IAQ problems?**

DOSH Consultation staff can provide some limited assistance. This may include sending out information, recommending private IAQ consultants, and in some cases conducting an investigation to look for visible mold contamination or water damage, measuring temperature, humidity, or measuring carbon dioxide levels as an indicator of the amount of fresh air ventilation.

**5. Will DOSH conduct air monitoring for an indoor air quality problem when requested?**

DOSH will not normally conduct air monitoring for chemicals in indoor air quality problem situations. Past experience in air monitoring has shown that levels of chemicals in the air rarely exceed current DOSH permissible exposure limits. Exceptions include situations where there is evidence of employee exposure to carbon monoxide or high levels of other chemicals being used in the workplace.

Normally, air monitoring for molds or other microorganisms will not be performed because of technical difficulties associated with this type of sampling and the lack of standards for levels of mold or mold spores in the air. Instead, DOSH recommends that ongoing sources of water (roof leaks, leaking pipes) be fixed, mold-contaminated material be removed or cleaned by qualified personnel, or the pathway between the mold source and building occupants be identified and removed or blocked.

## Appendix B-1

### INDOOR AIR QUALITY (IAQ) - QUESTIONS AND ANSWERS

#### (Continued)

**6. Will DOSH inspect my heating, ventilation and air conditioning system (HVAC) to see if it is operating properly?**

DOSH will not normally inspect HVAC systems since we do not have regulations regarding these ventilation systems. Instead, DOSH recommends that qualified HVAC consultants be contacted for assistance. For a list of environmental consultation firms go to:

<http://www.lni.wa.gov/Safety/Topics/AtoZ/IndoorAir/default.asp>

**7. Where can I get additional information on IAQ problems and how to solve them?**

There is a great deal of information and guidance available to assist you in solving IAQ problems. The following internet sites provide general IAQ information:

- EPA Indoor Air Quality homepage at <http://www.epa.gov/iaq>
- This website has several publications and guidelines that can be downloaded or ordered.
- National Institute of Occupational Safety & Health (NIOSH) at <http://www.cdc.gov/niosh/topics/indoorenv/> or by calling 1- 800-CDC-INFO (800-232-4636) TTY: (888) 232-6348 • American Lung Association at <http://www.lungusa.org>.
- *Bioaerosols: Assessment and Control*. from the American Conference of Governmental Industrial Hygienists. To order a copy, call (513)742-2020 or e-mail: [www.acgih.org](http://www.acgih.org)
- American Society of Heating, Refrigeration and Air-conditioning Engineers (ASHRAE) at <http://www.ashrae.org>. This organization publishes technical documents and standards on ventilation and indoor air including the ASHRAE standard 62.2-2007, *Ventilation for Acceptable Indoor Air Quality in Low-Rise residential buildings*.
- *EPA Tools for Schools*. available on the Environmental Protection Agency IAQ website <http://www.epa.gov/iaq/schools/actionkit.html>
- *School Indoor Air Quality Best Management Practices Manual*. Published by Washington Dept. of Health in 2003 and available at <http://www.doh.wa.gov/ehp/ts/IAQ/default.HTM>

**8. What should be done if there is mold contamination at my workplace?**

Visible mold contamination should be addressed promptly by either removing contaminated porous material such as rugs, ceiling tiles or sheetrock or thoroughly cleaning contaminated hard surfaces such as ductwork, cooling coils in HVAC systems or drip pans. All investigation and cleanup operations should be conducted in such a manner that investigators, cleanup personnel and building occupants are not exposed to the contaminated material. This may require using gloves, coveralls and respirators during removal and conducting removal work when the building is not occupied and the HVAC system is shut down. Since mold cannot grow without moisture, all sources of moisture or water leaks must be stopped or repaired, to prevent contamination from re-occurring.

## Appendix B-1

### INDOOR AIR QUALITY (IAQ) - QUESTIONS AND ANSWERS

#### (Continued)

**9. Does DOSH have any requirements for temperature control in offices?**

DOSH does not have regulations on temperature in offices. We may conduct an investigation in workplaces where heat stress (heat exhaustion or heat stroke) has occurred or is a possibility. This typically will occur only when temperatures are sustained above 90 degrees F. and employees are physically active on their job. In these cases, heat stress measurements can be taken with special instruments. If specified levels are exceeded, DOSH may require that the employer take remedial measures. Similarly, employee exposure to cold temperatures below freezing may also require remedial measures.

**10. Should I be concerned about strong odors from hot tar roofing on my building or a nearby building?**

While hot tar operations can be smelly and even cause adverse symptoms in some people, the permissible limits are rarely exceeded in offices or workplaces inside the building. For this reason, DOSH cannot usually direct a tarring crew to cease operations. However, because fresh air intakes are often on the roof or downwind of the tarring operation, the odors and fumes can be drawn into the building and affect sensitive individuals. The best solution is to have the tarring operation done during non-business hours. Another less effective measure would be to temporarily close down or block the affected fresh air intakes.

**11. What should be done during remodeling or construction in my building?**

Remodeling or construction conducted in a building while occupied by office workers can sometimes expose them to significant amounts of dust, noise and chemicals. The operation should be isolated as much as possible from office workers with temporary barriers. In some cases exhaust ventilation will be needed in the construction area to remove dust or chemical vapors. Alternatively, remodeling and construction can be done after hours or on weekends. Occasionally these operations can expose office workers to levels of contaminants above their permissible exposure limits. In these cases, if DOSH is asked to investigate either by an employee complaint or by a request from management, we may require that measures be implemented to reduce employee exposures.

## Appendix B-1

### INDOOR AIR QUALITY (IAQ) - QUESTIONS AND ANSWERS

#### (Continued)

**12. The new carpet in my office has a strong odor. Is it a health hazard?**

While some new carpets can smell strongly after installation, they do not emit gases or vapors that exceed permissible exposure limits. Some sensitive people however, may be temporarily affected by the odors. Generally, the odors diminish within a few days or weeks. If time allows, the carpet can be installed several days prior to occupancy and maximum fresh air ventilation be provided to reduce odors when employees occupy the building or room. Low-odor carpets can also be purchased from some manufacturers.

For more information on carpets and carpet adhesives related to indoor air quality, see the Carpet and Rug Institute webpage at <http://www.carpet-rug.org/>

**13. What can I do about airborne contaminants coming into my building or office from other businesses in my building or adjacent to my building?**

The first step is to express your concerns to the manager of the business generating the contaminants or the building manager or owner. If the company or building owner fails to take action, you can call the local air pollution authority and ask for their investigation. If an employee files a complaint with DOSH, an inspector may inspect both your business and the adjacent business and may require either or both to control their employee exposures to tobacco smoke or chemicals that exceed permissible exposure limits. In some instances, a building owner directly in control of activities in the building may be required to control exposures to building occupants. If an employer asks for assistance from a DOSH consultant, the consultant may also recommend a course of action to as needed to control employee exposures. However, if permissible exposure limits are not exceeded, DOSH cannot compel an employer, adjacent business or building owner or manager to stop or change their activities.

**14. Is smoking allowed in workplaces?**

DOSH has specific regulations (WAC 296-800-240) which prohibits smoking in offices or office buildings except in specially ventilated rooms. DOSH has no regulations that limit or prohibit smoking in workplaces other than offices.

Department of Health (DOH) regulates under RCW 70.160 Smoking in Public Places. RCW 70-160 prohibits smoking with 25ft of any public entrance. For information go to the DOH Tobacco Prevention and Control website at <http://www.doh.wa.gov/tobacco/default.htm>

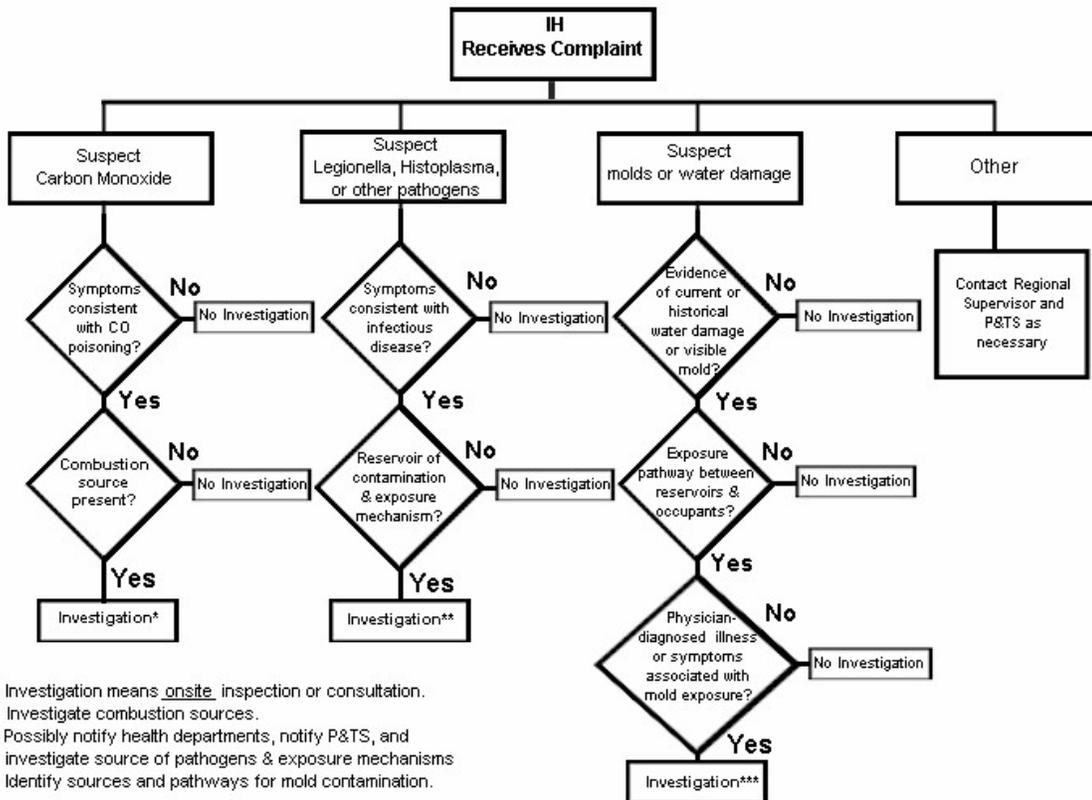
**15. How Can I contact L&I with questions concerning IAQ?**

You can contact your regional office at phone numbers found on the following website: <http://www.lni.wa.gov/Safety/Basics/Assistance/default.asp>

For further information and a list of private indoor air quality consulting companies go to: <http://www.lni.wa.gov/Safety/Topics/AtoZ/IndoorAir/default.asp>

## Appendix C

### Decision Tree for Conducting Indoor Air Quality Investigations<sup>†</sup>



NOTE: This guideline may not apply in all cases and unique circumstances may require an investigation.