

# Pesticide Storage at Workplaces

Steven Marino  
Prevention Officer  
WorkSafeBC

IEPMA January 25, 2013

**WORK SAFE BC**

# WorkSafeBC

Workplace No Fault Insurance  
Industry and Labour Services  
Occupational Health and Safety Regulations  
Workers Compensation Act

## Safety Officer Role

- Education
- Consultation
- Enforcement
- Multimedia and Publications

\*\*\*Video-Pesticide Storage\*\*\*



pesticideStorage-win.wmv

**WORK SAFE BC**

**Publications**

- Publications Index
- Reports
- Newsletters
- How to work with WorkSafeBC
- Health & safety information
- OHS Regulation**
  - Introduction
  - Regulation Contents
  - Prevention Policies
  - OHS Guidelines
  - WCB Standards
  - Personalized Regulation
- Policies
- Multimedia
- Translated publications
- High resolution publications
- How to order publications & videos

**Quick Links**

- View CSA Standards referenced in OHS Regulation
- Standards referenced in OHS Regulation
- Workers Compensation Act
- Controlled Products Regulations
- Hazardous Products Act
- Quick Reference Guide: Hazardous Products Act
- Transport Dangerous Goods Directorate
- Discriminatory action complaints
- Notice of Project
- Variations to the OHS Regulation
- Library Services
- WorkSafeBC Store
- Order printed copy of OHS Publications from Crown Publications

**Customer Centres**

- Employers/ Small Business
- Worker Centre
- Health Care Providers

**Subscribe to E-News**  
Get safety updates, incident summaries and other WorkSafeBC updates by e-mail

Insurance | Claims | Safety at Work | **Publications** | Forms | Regulation & Policy

Home » Publications » OHS Regulation » Home Page Email this page | Provide feedback

The Occupational Health and Safety (OHS) Regulation contains legal requirements that must be met by all workplaces under the inspection jurisdiction of WorkSafeBC. Many sections of the Regulation have associated guidelines and policies.

**Connect:**  
**Prevention Line**  
1 888 621-SAFE (7233)  
Fax: 604 276-3247

## OHS Regulation & Related Materials

Search for:  in

**Regulation** | Policies | Guidelines | WCB Standards

About the Regulation (?) Printing the Regulation (?)

**Regulation Parts**

<ol style="list-style-type: none"> <li>Definitions</li> <li>Application</li> <li>Rights and Responsibilities</li> <li>General Conditions</li> <li>Chemical Agents and Biological Agents</li> <li>Substance Specific Requirements</li> <li>Noise, Vibration, Radiation and Temperature</li> <li>Personal Protective Clothing and Equipment</li> <li>Confined Spaces</li> <li>De-energization and Lockout</li> <li>Fall Protection</li> <li>Tools, Machinery and Equipment</li> <li>Ladders, Scaffolds and Temporary Work Platforms</li> <li>Cranes and Hoists</li> <li>Rigging</li> <li>Mobile Equipment</li> </ol>	<ol style="list-style-type: none"> <li>Transportation of Workers</li> <li>Traffic Control</li> <li>Electrical Safety</li> <li>Construction, Excavation and Demolition</li> <li>Blasting Operations</li> <li>Underground Workings</li> <li>Oil and Gas</li> <li>Diving, Fishing and Other Marine Operations</li> <li>Camps</li> <li>Forestry Operations and Similar Activities</li> <li>Wood Products Manufacturing</li> <li>Agriculture</li> <li>Aircraft Operations</li> <li>Laboratories</li> <li>Firefighting</li> <li>Evacuation and Rescue</li> </ol>
--	--

**Acts** About the Acts (?)

- Workers Compensation Act - Excerpts and Summaries
- Hazardous Products Act (Canada) - Summary

**Spotlight:**

**OHS Regulation Mobile App**  
New version available now for Android and Apple mobile devices.

**Updates & Decisions**

**Regulatory Amendments**  
**Effective October 16, 2012**  
Definitions - Resource roads  
[Definitions - Resource roads](#)

**May-June 2012**  
Public Hearings scheduled for proposed 2012 Amendments  
[more](#)

**Guideline Updates**  
**December 14, 2012**  
Inventory of asbestos-containing materials  
Respiratory protection and provision of ventilation for welding, cutting, and allied processes  
Working on energized lighting circuits operating at more than 250 volts-to-ground  
Acceptable standards for immersion suits  
Wildlife danger tree  
[more](#)

**Policy Updates**  
**July 1, 2012**  
Construction, Excavation and Demolition - Concrete Pumping Outriggers  
[more](#)

# Outline

1. Introduction to Regulations and Acts \*quiz 1
2. OHS Regulation specific to Pesticide Storage
3. OHS Regulations describing Chemical Hazards
4. OHS Regulation describing Emergency Preparedness \*quiz 2
5. OHS Regulation describing Storage of Goods
6. OHS Regulation describing Work Environments
7. WCA Act General Duty Requirements \*quiz 3

# Quiz #1

Question: How many “pesticide specific” regulations are enforced by WorkSafeBC?

Hint- Part 6 6.70 thru 6.109(3)

Answer: 116-includes flag person for aircraft

8 regulations are informative

2 are worker responsibility violations

There are also upwards of 200+ other regulations that are, or could be related.

WORK SAFE BC

# CHEMICAL SAFETY AND STORAGE

Which Parts Of The Regulations?

Part 6-Pesticide Specific

Part 5-Chemical Agents

Part 4-General Conditions

- a. Emergency Preparedness
- b. Storing Materials
- c. Occupational Environments

Workers Compensation Act

115, 116, 117, 118, 119, and 120

WORK SAFE BC

# Chemical Hazards

There are Several Types of Chemical Hazards in Workplaces

## Pesticides

Controlled Products

TDG Regulated Goods

What are they?

Where are they used?

What should you know?

WORK SAFE BC

# Review

## **Pesticide Regulation by Acts and Agencies**

IPM Act-Enforced by MOE(WorkSafeBC)

PCP Act-Enforced by PMRA within Health  
Canada

Ministry of Agriculture

OHS Regulations-Enforced by WorkSafeBC

National Fire Code

BC Building Code

Municipal Bylaws

Health Authorities

WORK SAFE BC



# Pesticides and WCB

## STANDARD PRACTICES FOR PESTICIDE APPLICATORS



**WORK SAFE BC**

# Pesticide Storage Regulation

## OHS 6.100

The employer must ensure that pesticides are not stored in areas where food preparation occurs, in lunchrooms, or in food storage areas.

## OHS6.101.(1)

(1) The employer must supply a pesticide storage facility that meets the design criteria stated in the manual *Standard Practices for Pesticide Applicators*, published by the Workers' Compensation Board of BC, for the storage of bulk or reserve quantities of pesticides

# Storage

Guideline for design is described in Standards Practices For Pesticide Applicators Book pages 111 thru 118

The Mantra Has Always Been:

1. Locked
2. Signed
3. Vented

\*\*\*It does not end at 3\*\*\*

**WORK SAFE BC**

# Storage-Considerations

OHS 6.101.(2)

- (2) Factors that must be considered in the facility design include
- (a) maintenance of minimal quantities,
  - (b) compatibility of pesticides,
  - (c) strength of shelving materials, and
  - (d) containment of spills.

# Storage



# Storage-Location

- ❑ Separate from work areas
- ❑ Not in a basement
- ❑ As far as possible from areas/buildings of habitation
- ❑ Consideration must be made for control of run off water from fire fighting

# Storage-Construction

- ❑ Non combustible materials-gypsum board
- ❑ Porous surfaces sealed
- ❑ Preferable concrete floor with curbing-consider some form of containment
- ❑ Explosion proof lighting may be required

# Access

- Door locked
- Prefer outward swing
- Consider safe access including stairs, how to bring in remove material
- Tripping hazards
- Mobile equipment
- Signage in relevant language



# Ventilation

- ❑ Mechanical ventilation may be bathroom type fan
- ❑ Look for 6 air changes/hour
- ❑ If mixing in the room, additional ventilation may be required
- ❑ Passive ventilation allowed if small quantity is stored and not inside another workplace
- ❑ Activation can be by light switch-procedures
- ❑ Exhaust route must be planned
- ❑ Make up air must be effective

# Inside

- ❑ Sturdy shelves-wood may not be acceptable
- ❑ Clear aisles
- ❑ Separate by type
- ❑ Separate by formulation
- ❑ Separate based upon compatibility
- ❑ Dries above liquids
- ❑ Lighting critical
- ❑ Safe access to all products

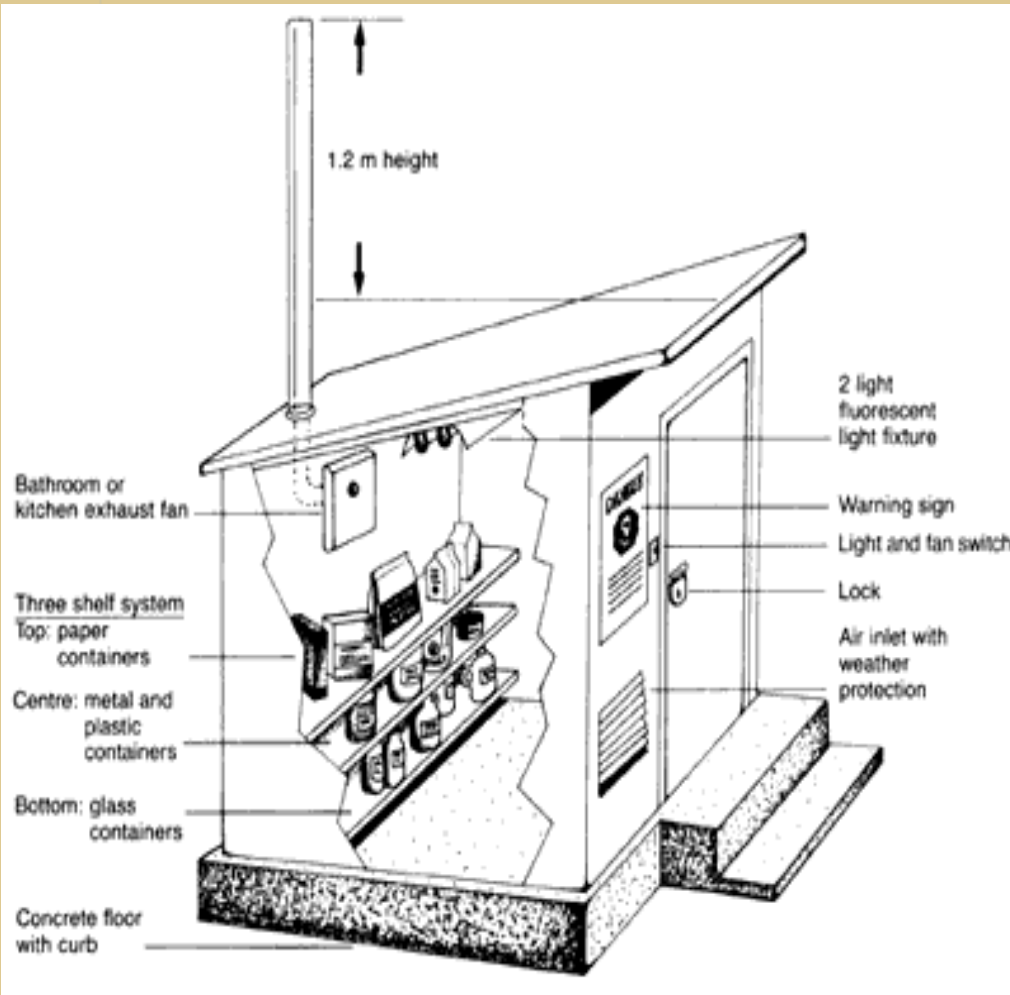
# Other Items for Planning

- ❑ Doors that swing outwards possibly fire rated
- ❑ Heating-intrinsically safe
- ❑ Lighting-intrinsically safe, damage proof
- ❑ Slip prevention and fall prevention
- ❑ Spill kit
- ❑ Fire extinguisher
- ❑ Flood potential from high water
- ❑ Floor impervious
- ❑ No smoking or drinking signs
- ❑ Not for propane tank storage

# STAND ALONE SHED

STAND ALONE SHED

STAND ALONE SHED



- Stand alone shed.
- Exhaust straight up.
- Cross ventilation.
- Clear access.
- Locked.
- Signage.
- Floor with curb.

WORK SAFE BC

# ACCEPTABLE STORAGE? APPROPRIATE PRODUCTS?

ΔΒΒΚΟΒΚΙΔΕ ΒΚΟΠΙΙΤΣ  
ΔΡΡΟΠΡΙΔΤΡ ΠΡΟΠΙΙΤΣ



- ❑ Poor cabinet design and location
- ❑ Not everything is stored in the cabinet
- ❑ Missing labels
- ❑ Not registered for commodity
- ❑ Electrical equipment

**WORK SAFE BC**

# Diazinon 50WP, Nova, Agral 90, Roundup, Kumulus S



# Chemical Storage Regulations

- ❑ OHS 5.20 to 5.25
- ❑ Condition of containers
- ❑ Material integrity-Can I use a sandwich bag?
- ❑ Covers and caps in place and in good condition
- ❑ Incompatible substances considered
- ❑ Storage practices-products falling over, becoming damaged, extreme temperatures

# Storage Adjacent To Cooking Areas? Equipment Used By Workers?





# Chemical Storage Regulations

## 5.26 Storage area

The designated storage area for a hazardous substance must be

- (a) designed and constructed to provide for the safe containment of the contents,
- (b) clearly identified by signs, placards or similar means,
- (c) designed and maintained to allow the safe movement of workers, equipment and material,
- (d) provided with adequate ventilation and lighting, and
- (e) in a location not normally occupied by workers, and not in a location such as a lunchroom, eating area, change room, clothing storage locker or passenger compartment of a vehicle.

# Storage of Flammable and Combustible Goods

## OHS 5.27 thru 5.35

Ignition sources

Dispensing

Vapours/gas

Prohibition for cleaning with

Permitted quantities

Cabinets

**WORK SAFE BC**

# Quiz #2

Question: Can a seasonal worker, not holding a PAC and having no intention of obtaining one, apply Imidan(ai Phosmet), while under direct supervision of a qualified PAC holder?

Hint-One must default to regulations with highest level of protection.

Answer: NO!

OHS Regulation 6.77 describes moderately toxic(500/1000) pesticide application restrictions.

WORK SAFE BC

# Emergency Preparedness

- Emergency Response Plan
- Inventories
- Risk Assessment
- Evacuation and Site Plan
- Procedures for notification persons
- Spill/Fire Fighting efforts clean up plan
- Notification of Fire Departments

# OHS 5.97 Emergency Plan

- (1) A workplace must have a written emergency plan, appropriate to the hazards of the workplace, that addresses the requirements of sections 5.98 to 5.102.
- (2) The plan must address emergency conditions which may arise from within the workplace and from adjacent workplaces.**

# OHS 5.98 Inventory

- (1) An inventory must be maintained which identifies all hazardous substances at the workplace in quantities that may **endanger workers** in an emergency including controlled products covered by WHMIS, explosives, pesticides, radioactive materials, hazardous wastes, and consumer products.
- (2) The inventory must identify the nature, location, and approximate quantity of all such substances, and the location of MSDSs.

# 5.99 Risk Assessment

An employer must ensure that an assessment is conducted of the risks posed by hazardous substances from accidental release, fire or other such emergency.

1. What could/would be released by fire?
2. Could firefighting with water increase risk?
3. Are other workplaces close by?
4. Could significant spill create a hazard-explosion/gas/etc?
5. Where will firefighting water go?
6. What about mobile storage?

# Evacuation-OHS 5.100 Procedures

- (1) Written evacuation procedures appropriate to the risk must be developed and implemented to
  - (a) notify workers, including the first aid attendant, of the nature and location of the emergency,
  - (b) evacuate workers safely,
  - (c) check and confirm the safe evacuation of all workers,
  - (d) notify the fire department or other emergency responders, and
  - (e) notify adjacent workplaces or residences which may be affected if the risk of exposure to a substance extends beyond the workplace.
- (2) Notification of the public must be in conformity with the requirements of other jurisdictions, including provincial and municipal agencies.



## 5.101 Procedures for spill cleanup and re-entry

If workers are required to control a release of a hazardous substance, to perform cleanup of a spill, or to carry out testing before re-entry, the employer must provide

- (a) adequate written safe work procedures,
- (b) appropriate personal protective equipment which is readily available to workers and is adequately maintained, and
- (c) material or equipment necessary for the control and disposal of the hazardous substance.

**\*\*Note:** Other jurisdictions and agencies may require notification in the event of a spill.

# Training

- Training on all procedures is required.
- Emergency drills are required and must be documented.
- Consider worker count and potential exposure.

# What Other Information Needs To Be Documented?

- Inventory of existing or intended goods. Pesticides, controlled products, substances under pressure.
- MSDS's or equivalents.
- Site map or layout indicating hazardous storage, location of equipment(trucks, lift trucks, etc.), offices, access and egress areas, hidden rooms and mezzanines.

**\*\*\*What do I do with this information?**

# Notification of Fire Departments

## 4.17 Notification of fire departments

(1) An employer having at a workplace controlled products covered by WHMIS, explosives, pesticides, radioactive material, consumer products or hazardous wastes in quantities which may endanger firefighters, must ensure the local fire department is notified of the nature and location of the hazardous materials or substances and methods to be used in their safe handling.

# How Do I Notify Fire Departments?

- Prepare an information package and drop it off.  
\*Request a receipt or letter.

OR

- Prepare an information package and locate it in a weather proof location and advise fire department in writing of the location and contents.
- This information is required for fire department pre plans. If they don't know, fire fighters and other responders may be at risk.

# OHS Regulations for Storage of Goods

- **4.43 Stacking materials**

**Leaning stacks, piles, palletized goods.**

- **4.44 Entrapment**

**Includes engulfment similar to confined spaces.**

- **4.45 Falling materials**

**Guarding areas to prevent items from falling onto workers.**

# OHS Regulations for Storage of Goods

Part 4 also describes the following:

1. Safe Workplace and Safe Structures-ie: mezzanines.
2. Safe Access and Egress.
3. Restricted Entry.
4. Arrangements of Work Areas.
5. Restricted Visibility.
6. Slip and Trip Hazards, Wet Floors, Waste Material.
7. Illumination.
8. Ventilation.

# Work Area Environments

- Hazardous Waste Management
- Emergency Wash Up.
- Flammable and Combustible Storage.  
Cabinets, quantities, etc.
- Containers-original containers, leaking containers, lids, storage practices, incompatible materials.
- Identification of piping.



# General Duties

Workers Compensation Act assigns clear responsibilities to:

115-Employers

116-Workers

117-Supervisors

118-Prime Contractors

119-Owners

120-Suppliers

**WORK SAFE BC**

# Quiz #3

Question: For a mobile pesticide reservoir, at what volume of tank do you require a fluid level indicator?

Hint-Less than a 45 gallon drum.

Answer: 200L (44 Imp gal).

\*\*\*If purchased after January 01/1999. Also require a spill proof lid and outfeed shut off valves.

# Review

- a) Plan your storage location-where will it be?
- b) Which construction materials?
- c) Consider access and egress.
- d) Ventilation
- e) Store in a safe manner-clutter, goods falling, compatibility and ignition sources, shelving, curbing.
- f) Monitor container integrity, covers, labels.
- g) Take inventory and include planned purchases.
- h) Plan for emergencies.
- i) Document your plans, inventories, spill clean up. Have this available.
- j) Submit notification to local Fire Department or create an “emergency response kit” and advise first responders where it is located.
- k) Have a successful 2013.

**WORK SAFE BC**

# Questions

