Legislations and Laws in Singapore Regarding Workplace Safety & Health

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WORKPLACE SAFETY AND HEALTH ACT
(CHapter 354A)

(Original Enactment: Act 7 of 2006)

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An Act relating to the safety, health and welfare of persons at work in workplaces.

[1st March 2006]

PART I
PRELIMINARY

Short title
1. This Act may be cited as the Workplace Safety and Health Act.

Application of Act
2. Except as otherwise provided in this Act (but not the regulations), the provisions of this Act shall apply to all workplaces.

Application of Act to Government
3.—(1) Except as provided in subsection (2), this Act shall bind the Government and shall apply to—
   
   (a) any workplace wholly or partly owned or occupied by the Government; and
   
   (b) any premises in which any building operation or any work of engineering construction is carried on by or on behalf of the Government.
   
(2) Nothing in this Act shall render the Government liable to prosecution for an offence.

(3) For the avoidance of doubt, no person shall be immune from prosecution for any offence under this Act by reason that the person is engaged to provide services to the Government.
Safety & Health Legislation Framework

- **Laboratories with Biological Agents & Toxins and/or Plants, Insects, Plant Microorganisms, Veterinary Biologics**
  - Biological Agents & Toxins Act
  - Animals & Birds Act

- **Radiation Protection Act**
  - Arms and Explosives Act
  - Chemical Weapons (Prohibition) Act
  - WSH (Medical Examinations) Regulations

- **Laboratories with Specialty Chemicals**
  - WSH (General Provisions) Regulations
  - Fire Safety (Petroleum & Flammable Materials) Regulations
  - Environmental Protection & Management Act

- **Laboratories & Workshops**
  - Workplace Safety & Health Act (WSHA)
  - WSH (Risk Management) Regulations
  - Fire Safety Act (FSA)

- **All workplaces**
Workplace Safety & Health Act

1. It places the responsibility for workplace safety on all stakeholders along lines of control at the workplace.

2. It focuses on WSH systems and outcomes, rather than merely on compliance.

3. It facilitates effective enforcement through the issuance of remedial orders.

4. It imposes higher penalties for non-compliance and risky behaviour.

Features of WSHA
Stakeholders under the WSHA

**Principals**
who engage another person other than those under a contract of service to either supply labour or to do any work for gain or reward.

**Employers**
who employ the service of any person to do work.

**Occupiers**
who occupy or have control over the management of the workplace.

**Manufacturers or Suppliers**
of machinery, equipment or hazardous substances used at work in the workplace.

**Owners, Installers or Erectors**
of machinery for use at work in the workplace.

**Self-employed Persons**
who work but is not under a contract of service.

**Persons at Work**
includes employee, i.e. one employed under a contract of service, volunteer or any other person training or working under the employer such as an industrial attachment student.
Legal Obligations of Stakeholders

To take *reasonably practicable measures* to ensure the safety and health of:

1. his employees at work
2. persons (not being his employees) who may be affected by any undertaking carried on by him in the workplace

To take *reasonably practicable measures* to ensure the safety and health of:

1. any contractor engaged by him
2. any direct or indirect subcontractor engaged by such contractor
3. any employee employed by such contractor or subcontractor
4. persons (not being his employees) who may be affected by any undertaking carried on by him in the workplace
Legal Obligations of Stakeholders

The measures include:

• providing and maintaining a work environment which is safe and without risk to health
• ensuring adequate measures for any machinery, equipment, plant, article or process
• ensuring persons are not exposed to hazards arising out of its activities
• developing and implementing procedures for dealing with emergencies
• ensuring adequate instruction, information, training and supervision
• provide persons (not being his employees) with information on how their safety or health will be affected while at his workplace
Legal Obligations of Stakeholders

- To use any suitable appliance, protective clothing, equipment, etc for securing his safety, health and welfare
- Co-operate with employer or principal to comply with the provisions of the WSH Act
- Not to willfully or recklessly misuse any appliance, protective clothing, equipment, etc
- Not to endanger the safety or health of himself or others
## Penalties for Offences

### Category of offender

<table>
<thead>
<tr>
<th>Category of offender</th>
<th>Maximum fine</th>
<th>Maximum imprisonment</th>
<th>Conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Individual persons:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Repeated offence:</td>
<td>$200,000</td>
<td>2 years</td>
<td>Either or both</td>
</tr>
<tr>
<td></td>
<td>$400,000</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Corporate body:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Repeated offence:</td>
<td>$500,000</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>$1 million</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Persons at Work</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Not using personal protective equipment</td>
<td>1st conviction - $1,000</td>
<td>2nd or subsequent conviction - $2,000</td>
<td></td>
</tr>
<tr>
<td>• Not co-operating with employer or principal to comply with Act</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• misuse of any safety appliance.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Persons at Work</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Does any negligent act which endangers the safety or health of himself or others</td>
<td>$30,000</td>
<td>2 years</td>
<td>Either or both</td>
</tr>
<tr>
<td>Category of offender</td>
<td>Maximum fine</td>
<td>Maximum imprisonment</td>
<td>Conditions</td>
</tr>
<tr>
<td>----------------------------------------------------------</td>
<td>--------------------------------------------</td>
<td>----------------------</td>
<td>--------------------</td>
</tr>
<tr>
<td>Person who fails to comply with Remedial Order</td>
<td>$50,000</td>
<td>12 months</td>
<td>Either or both</td>
</tr>
<tr>
<td>If offence is continued after conviction:</td>
<td>Additional fine of $5,000 for each day the offence continues</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Person who fails to comply with a Stop Work Order</td>
<td>$500,000</td>
<td>12 months</td>
<td>Either or both</td>
</tr>
<tr>
<td>If the offence is continued after conviction:</td>
<td>$20,000 for each day the offence continues.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Putting WSHA into Practice…

The Key Subsidiary Legislation:
• WSH (Risk Management) Regulations
• WSH (General Provisions) Regulations
• WSH (Medical Examinations) Regulations
• WSH (Incident Reporting) Regulations
WSH (Risk Management) Regulations

Conduct Risk Assessment

Control Risk

Record Keeping

Communication

Review Risk Assessment

Hierarchy of Controls

- Elimination: Physically remove the hazard
- Substitution: Replace the hazard
- Engineering Controls: Isolate people from the hazard
- Administrative Controls: Change the way people work
- PPE: Protect the worker with Personal Protective Equipment

Click here for details of this legislation
What is GHS?

- Globally Harmonised System of Classification and Labelling of Chemicals
- Developed by United Nations (UN)
- Standardised labels and Safety Data sheets
- Worldwide implementation (67 countries)
- Singapore Standard SS586
  - Specification for hazard communication for hazardous chemicals and dangerous goods
GHS Pictograms

- **Explosives**
  - Self-reactive substance
  - Organic peroxide

- **Flammable substance**
  - Self-reactive substance
  - Pyrophoric and self-heating substance
  - Organic peroxides

- **Oxidizing substance**

- **Gases under pressure**

- **Corrosives**

- **Environmental toxicity**

- **Acute toxicity**
  - Skin irritation
  - Eye irritation
  - Sensitizer (Dermal)
  - Transient Target organ toxicity
  - Hazard to the ozone layer

- **Respiratory Sensitizer**
  - Germ Cell Mutagenicity
  - Carcinogenicity
  - Reproductive toxicity
  - Target organ toxicity
  - Aspiration hazard
GHS Pictograms Stickers - OSHE
Permissible Exposure Limits

Semi-Quantitative Risk Assessment (SQRA)

Industrial Hygiene Monitoring

corporatecomplianceinsights.com

workforcesafetytraining.com
WSH (Medical Examinations) Regulations

*Includes any of its compounds

- Arsenic
- Manganese
- Mercury
- Cadmium
- Lead
- Organophosphates
- Benzene
- Perchloroethylene
- Trichloroethylene
- Vinyl chloride monomer
- Silica

Click here for details of this legislation
WSH (Medical Examinations) Regulations

WHERE?

OCCUPATIONAL HEALTH (OH) CLINIC
Basement of the University Health Centre
(Next to the Dental Clinic)
WSH (Incident Reporting) Regulations

- More than 3 days MC
- Hospitalization >24hrs
- Fatality
- Occupational Disease
- Dangerous occurrence

Click here for details of this legislation
WSH (Incident Reporting) Regulations

AIMS

Accident & Incident Management System

24 HOURS

REPORT ALL INCIDENTS TO OSHE WITHIN 24 HOURS!

Click here to access AIRS
We deal with chemicals
What are the legislation we need to know?
Legislations & Authorities

1. Fire Safety (Petroleum & Flammable Materials) Regulations
2. Environmental Protection & Management (Hazardous Substances) Regulations
3. Arms & Explosives Act
4. Chemical Weapons (Prohibition) Act
5. Poisons Act
6. Misuse of Drugs Act
Chemicals & substances of concern...

- Petroleum & Flammable Materials
- Hazardous Substances
- Explosives & Explosive Precursors
- Chemical Weapons
- Scheduled Poisons
- Controlled Drugs

Click on the respective image for more details.
# Quick Guide on Key Requirements

<table>
<thead>
<tr>
<th>Type</th>
<th>Regulatory Authority</th>
<th>Licence or Permit from the Authority to:</th>
<th>Live Inventory Record</th>
<th>Lock and Key</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Store &amp; Use for Research</td>
<td>Import</td>
<td>Export</td>
</tr>
<tr>
<td>Petroleum &amp; Flammable Materials</td>
<td>SCDF (The Life Saving Force)</td>
<td>✓</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Hazardous Substances</td>
<td>NEA (National Environment Agency)</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Explosive Precursors</td>
<td>Singapore Police Force (A member of the Home Team)</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Chemical Weapons</td>
<td>SINGAPORE CUSTOMS</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Scheduled Poisons</td>
<td>HSA (Health Sciences Authority)</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Controlled Drugs</td>
<td>CNB (CENTRAL NARCOTICS BUREAU)</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
</tbody>
</table>
Storage Requirements?

1. SECURITY

2.

3.

4.
How would I know which are the regulated ones??
ORMI
Your Identifier!

ORMI
Online Regulated Material identifier

https://wwws.nus.edu.sg/rci/default.aspx
### IVLE training requirements

<table>
<thead>
<tr>
<th>Chemical</th>
<th>Compulsory</th>
<th>Who should attend</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Chemical Safety (OSHCHM01)</td>
<td>Individuals performing activities involving the use of hazardous chemicals.</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Refresher training requirement:</strong> Individuals are required to retake this module after two years.</td>
</tr>
<tr>
<td>Recommended</td>
<td>Semi-Quantitative Risk Assessment (OSHCHM04)</td>
<td>Individuals appointed to conduct Semi-Quantitative Risk Assessment (SQRA).</td>
</tr>
<tr>
<td></td>
<td>Chemical Spill Response (OSHCHM05)</td>
<td>Individuals who have been appointed to perform chemical spill response.</td>
</tr>
</tbody>
</table>
Respiratory protection

1. Conduct risk assessment
2. Identify type of respirator required
3. Online Training
4. Do health declaration, submit to OH Clinic
5. Medical review (if necessary)
6. Fit test by vendor or OH Clinic
7. Fit check before every use
8. Annual online training
9. Seek OHC consult if there are any changes to health condition that affect respiratory use

<table>
<thead>
<tr>
<th>Compulsory</th>
<th>Who should attend</th>
</tr>
</thead>
<tbody>
<tr>
<td>Respiratory Protection Programme Training for first-time users (OSHGEN04)</td>
<td>The NUS Respiratory Protection Programme training aims to educate all NUS staff and students who are required to wear respirators in the course of their teaching and research work on the correct use of respirators.</td>
</tr>
<tr>
<td>Respiratory Protection Programme Training for returning users (refresher)</td>
<td>This Respiratory Protection Programme training is for returning users - all NUS staff and students to refresh their knowledge on the usage of respirators in the course of their teaching and research work one year after attending the NUS Respiratory Protection Programme (RPP) - First Time User.</td>
</tr>
</tbody>
</table>
Can I just throw or pour?

Environmental Public Health (Toxic Industrial Waste) Regulations

Sewerage and Drainage (Trade Effluent) Regulations
Environmental Public Health
(Toxic Industrial Waste) Regulations

Licensed Collector

TIW Register

e-Tracking

Click here for details of this legislation
Submit

TIW Generator

Submit

Submit

TIW Transporter/Collector
Chemical Waste label - OSHE
Sewerage and Drainage (Trade Effluent) Regulations

Discharge limits to public sewer

Click here for details of this legislation
How will this impact YOU?

DO NOT POUR DOWN THE SINK!

Sewerage System

How will this impact YOU?

DO NOT POUR DOWN THE OPEN DRAIN!

Open Drain System
Play a Part in Protecting our Portable Water Source!
Radiation Protection Act

Radiation Protection (Ionising Radiation) Regulations

Radiation Protection (Non-Ionising Radiation) Regulations
Licence – Ionising Radiation (Radioactive Materials)
Eg. H-3, C-14, S-35
Licence – Ionising Radiation (Radiation Machines)
Eg. X-ray machine, gamma irradiator

Owner or Operator has an L5 license and all equipments owned/operated by the person are listed in this license.

Each equipment has its own L3 license.

Radiation Workers have R1 license to use the equipment.
The N3 laser user licence shall indicate all the N2 laser equipment licence that the user use!

*L3 is only applicable for Class 3B/4 laser users*
## IVLE training Requirements

### Radiation

<table>
<thead>
<tr>
<th>Compulsory</th>
<th>Who should attend</th>
</tr>
</thead>
<tbody>
<tr>
<td>Radiation Safety (Ionizing) (OSHRAD01)</td>
<td>Individuals performing activities involving use of ionizing radiation.</td>
</tr>
<tr>
<td></td>
<td><strong>Refresher training requirement</strong>: Individuals are required to retake this module after two years.</td>
</tr>
<tr>
<td>Laser Safety Training (OSHRAD02)</td>
<td>Individuals performing activities involving use of Class 3b or Class 4 lasers.</td>
</tr>
<tr>
<td></td>
<td><strong>Refresher training requirement</strong>: Individuals are required to retake this module after two years.</td>
</tr>
</tbody>
</table>

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<thead>
<tr>
<th>Compulsory</th>
<th>Who should attend</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basic MRI Safety Training (OSHRAD05)</td>
<td>Individuals who will be accessing a MRI controlled area but NOT operating MRI machines/scanners.</td>
</tr>
<tr>
<td>MRI Safety Training for Operators (OSHRAD06)</td>
<td>Individuals who will be accessing MRI controlled areas AND operating MRI machines/scanners.</td>
</tr>
</tbody>
</table>