

CHEMICAL AND BIOLOGICAL CONTROL PLAN

The Seven Oaks School Division's plan for control of any chemical or biological substance used, produced, stored or disposed of at our sites.

Chemical and biological hazards are chemical, micro-organisms or products of living organisms that can cause occupational illnesses. Chemicals can exist as a solid, liquid or gas. Dusts, fumes, mists, smoke and vapours may also contain chemical hazards. Biological hazards are living things or substances produced by living things that can cause illness or disease. Micro-organisms, fungi, parasites and some plants are examples of biological hazards.

POLICY STATEMENT

The Seven Oaks School Division shall:

- Identify all existing and potential risks to health or safety of workers.
- Take all reasonable steps to reduce, eliminate or control identified and potential risk to workers from chemical or biological hazards.
- Take health and safety into consideration in purchasing decisions, and select the least hazardous products where reasonably practical.
- Plan for responding to emergency situations where chemical and or biological hazards are involved.

RESPONSIBILITIES

Seven Oaks School Division:

- Identify, assess and control chemical and biological hazards.
- Prepare a current list of chemical and biological hazards.
- Develop written safe work procedures.
- Inform workers about the chemical and biological hazards in the workplace.
- Train workers with regards to required control measures to keep themselves and others safe at work.
- Ensure that an emergency response plan is developed for tasks involving chemical and biological substances.
- Maintain a MSDS system.

Supervisors:

- Identify all potential chemical and biological hazards and risks to workers or others in their work areas.
- Assist in implementing measures to reduce or control identified risks.
- Include chemical and biological hazard identification and control strategies as part of new worker orientation.
- Ensure worker compliance with safe work procedure.

Workers:

- Comply with safe work procedures.
- Inform their supervisor of chemical and biological hazards encountered in their workplace.
- Work with supervisors to resolve hazardous situations.

Workplace Safety and Health Committees:

- Assist the employer and supervisors to identify, assess and control chemical biological hazards.
- Monitor the effectiveness of implemented controls.
- Assist with training programs for workers regarding chemical and biological hazards

Safety Coordinator:

- Assist in developing inventory lists for all departments.
- Maintain files of all inventory lists and make changes and additions that are brought forward.
- List hazardous chemicals and biological substances.
- Review MSDS sheets with workplace committees, managers, supervisors, employees to identify hazardous chemicals or biological substances.
- Assist departments in reducing hazardous chemicals or substances.
- Consult committees in preparing and updating hazardous lists.

CHEMICAL AND BIOLOGICAL HAZARD ASSESSMENT PROCEDURES

From inventory lists, Supervisors or Managers shall review chemicals and biological substances to identify and list hazardous substances.

These reviews will use MSDS sheets, supplier information, concerns raised by workers, government regulations, safety organizations, dangerous occurrences, incidents, media information, and internet searches to determine whether substances can cause harm and how serious the harm could be.

The Workplace Safety and Health Committee shall review the findings. Disagreements shall be forwarded to the Workplace Safety and Health Steering Committee for resolution.

Degree of Risk

Hazard assessment shall indicate the probability or likelihood of the hazard causing harm as well as the potential severity of the harm.

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| Probability | - | is the chance that a hazard will cause harm. |
| Severity | - | is the seriousness of the harm that could be suffered. |
| Risk | - | is the odds that a hazard will cause harm. |

When determining the degree of risk, questions to be considered are:

- How likely is the hazard to cause harm?
- Under what conditions is harm likely to occur?
- How quickly could an unsafe condition occur?
- What type of harm is involved?
- How many people could get hurt?
- Is there a history of incidents, problems, occurrences?
- Is monitoring required to evaluate the risk?

Non-Airborne Hazards

If the assessment of a chemical or biological substance determines that non-airborne exposure creates or may create a risk to the safety and health of a worker or others, then Seven Oaks School Division must immediately implement control measures to eliminate any risk of non-airborne exposure.

Airborne Hazards

If the assessment of a chemical or biological substance determines that the presence of an airborne chemical or biological substance creates or may create a risk to the safety and health of workers or others, then the Seven Oaks School Division must:

- In the case of an airborne substance for which the American Conference of Governmental Industrial Hygienists (ACGIH) has established a threshold limit value, establish an occupation exposure limit for the substance that does not exceed the threshold limit value established by the ACGIH;
- In the case of an airborne designated hazardous material, establish an occupational exposure limit for the material that is as close to zero as possible and does not exceed the threshold limit value established by the ACGIH, where one exists; or
- In the case of an airborne substance for which the ACGIH has not established a threshold limit value,
- Implement control measures in the workplace sufficient to eliminate any risk to the safety or health of a worker, or ensure that a competent person establishes an occupational exposure limit for the substance that will ensure that the safety or health of all workers in the workplace will not be placed at risk.

Airborne chemical or biological substance creating risk due to conditions in the workplace, including:

- Heat
- Ultraviolet and ionizing radiation
- Humidity

- Pressure
- Length of exposure
- Additive and synergistic effects of materials

OR

- The health or physical conditions of a worker or people in the workplace known to the employer.

The Seven Oaks School Division shall establish a lower OEL limit for that substance than the limit established by the ACGIH. The limit established must ensure the safety or health of workers or others will not be at risk.

CHEMICAL AND BIOLOGICAL CONTROLS

The Seven Oaks School Division is responsible for determining and implementing control measures in an attempt to reduce, eliminate or control hazards. One or more control methods may need to be implemented in order to protect the health and safety of workers and others.

Control Measure - means a measure used to prevent or reduce exposure to a chemical or biological substance and may include substitution of materials, work practice controls, engineering controls or the use of personal protection equipment.

Exposure - means exposure through inhalation, ingestion, injection, skin or mucosal contact, absorption or other route of entry to the human body.

Controls at the Source

Engineering controls either reduce or remove the hazard at the source or isolate workers and others from the hazard.

1. **Eliminate** the risk by getting rid of the hazardous substance.
2. **Substitute** the hazard with a less hazardous process or material.
3. **Redesign** the layout of the workplaces, workstations, work processes and jobs.
4. **Isolate, contain or enclose the hazard**, often used for **chemical** or **biological** hazards.
5. **Automate** dangerous work processes by using mechanical equipment.

Controls along the Path to the Worker

6. **Relocate** by moving the hazard a safe distance from the worker.
7. **Create barriers** between worker and the hazard to block the hazard path. For example, use of screens, walls, aprons or other personal protective equipment.
8. **Absorb** the hazard by using local exhaust ventilation to remove toxic gases (airborne hazards) at the source where they are produced.
9. **Dilute** the hazard, such as hazardous gases, by mixing with clean outside air.

Controls at the Worker

Work practice controls alter the manner in which a hazardous task is performed, such as minimizing exposure, inspecting equipment and eating in regulated areas.

10. **Administrative controls** such as implementation of new policies, improved and standardized work procedures, job rotations, shift scheduling and good supervision.
11. **Housekeeping, maintenance and repair** to ensure cleaning, waste disposal and spill cleanup at the workplace, as well routine preventive maintenance and repair of equipment.
12. **Hygiene practices** that can reduce the spread of infections such as frequent hand washing, lockers for changing between work and street clothes and footwear, separate eating areas from the hazardous work areas.
13. **Personal protective equipment (PPE)** such as gloves, eye protection and face shields are to be used as controls when other controls are not feasible or where additional protection is required.
14. **Train** workers in safe work procedures and inform them of **chemical** and **biological** hazards.
15. **Supervise workers** to ensure worker compliance.

SAFE WORK PROCEDURES

Supervisors, Managers, Department Heads shall work in conjunction with the Safety Coordinator to develop and implement written safe work procedures. The Workplace Safety and Health Committees shall review these procedures and provide input. Safe work procedures involve the use, production, storage and handling of any hazardous chemical or biological substances in the workplace.

Once established, training in the safe work procedures shall be given. Supervisors and Managers shall ensure workers comply with safe work procedures.

The Seven Oaks School Division will develop written safe work procedures for all hazardous procedures detailing the safest manner in which the task or procedure is to be performed.

Written safe work procedures will be made available to workers in the workplace and be placed on line.

Safe work procedures will be kept up to date. Revisions will be communicated to all workers who perform the task.

Safe work procedures shall be part of worker training programs. Workers will be provided with training on the safest method for performing hazardous tasks.

Safe work procedures shall be reviewed at least every 3 years.

Training

Supervisors are responsible to ensure that prior to performing any hazardous task(s), workers are trained regarding potential and existing hazard(s) and required safety measures. Workers should be trained in the proper use and care of safety equipment, work processes and emergency procedures.

Compliance

Supervisors are responsible to ensure that workers comply with safe work procedures. Procedures are written to provide information and guidance to anyone performing a hazardous task or work process. Workers must comply with safe work procedures by using equipment and/or tools provided in order to do the task safely. Non-compliance with safe work practices may result in disciplinary action of the worker.

Personal Protection Equipment

The Seven Oaks School Division will provide PPE to any employee who requires this equipment when performing tasks for the Division that require PPE to protect them from hazardous substances.

Managers and supervisors shall provide PPE to employees requesting equipment for School Division use.

Handling

Managers and supervisors will instruct employees on the safe handling of hazardous substances and provide equipment when necessary.

Storage

The Seven Oaks School Division shall provide proper storage for all chemicals. Flammable storage cabinets, vented chemical cabinets, lockable cabinets or containers as required.

Disposal

Disposal of hazardous and biological substances shall be coordinated through the Seven Oaks School Division's Safety Coordinator. Staff shall label and identify the chemical and quantities. Forms listing the chemical information will be forwarded to Miller Environment for disposal and documentation.

Emergency Equipment

Eye wash stations are located in every school. New labs shall have emergency showers as well as eye wash stations. Spill kits will be made available where necessary.

WORKPLACE HAZARDOUS MATERIAL INFORMATION SYSTEM

MSDS Material Safety Data Sheets

The Seven Oaks School division uses a WHMIS Sheet Management System to provide Material Safety Data information on all chemical and biological substances used in Seven Oaks buildings. This information shall be printed and made available to staff or others. Information is also available on-line.

The system provides MSDS sheets, workplace labels, email notification of MSDS updates and also archive MSDS information on substances no longer in use.

How the System Works

The WHMIS Sheet Management System allows employees access with a login and password. A Master Book online contains all the MSDS information for all our sites. Sub-units serve as a means of separating departments or sites. Sub-units can also be divided to separate departments within a site.

Administration

There are three types of Administrators: Sub-Unit Administrators, General Administrators and Root Administrators.

Sub-Unit Administrators

A Sub-Unit Administrator can access only the Sub-Unit to which they are assigned and any Sub-Unit of that Unit. A Sub-Unit Administrator cannot make any changes to the Main Unit or any other Sub-Unit of the Main Unit other than the one to which they are assigned.

General Administrators

General Administrators are created in the Main Unit and have administrative privileges over the entire site including the Master Book in the Main Unit and all Books within Sub-Units.

Root Administrators

There is one Root Administrator for each site. This user has all of the privileges of a General Administrator plus the ability to add and edit all administrator accounts. All other Administrator can create other administrator or edit their own account.

Sheet Management System Training

A user guide for the MSDS management system is available on-line.

The Seven Oaks School Division shall train employee administrators to be proficient in retrieving information and making changes as required.

Responsibility

Managers and Supervisors shall:

- Ensure MSDS sheets are up to date and that product labels are in place.
- Use WHMIS information to help implement safe work procedures.
- Ensure employees are trained to understand WHMIS requirements and safely handle controlled products they work with.
- Take all practical steps to prevent workers from being injured by controlled products.

Employees shall:

- Attend WHMIS training.
- Follow WHMIS regulations.
- Report problems regarding WHMIS to your supervisor.

Steering Committee shall:

- Provide advice and audit the effectiveness of the training.

ADDITIONAL MEASURES

Airborne Monitoring

When airborne monitoring of a hazardous chemical or biological substance is conducted by the Seven Oaks School Division, they must ensure that:

- The concentrations of the chemical or biological substance to which a worker is exposed are determined by a competent person from analysis of air samples representative of the worker's exposure; and
- The air sampling and the analysis of the air samples are conducted in accordance with the requirements of
 - The National Institute for Occupational Safety and Health *Manual of Analytical Methods*, published by the United States Department of Health and Human Services or
 - Another method established by a recognized occupation hygiene practice.

Recording

An employer must make a record of all monitoring, which must include the following information:

- The type of monitoring.
- The type of equipment used.
- Each result of the monitoring and the time each result was obtained.
- Any interpretation of the monitoring data.

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- The names of the workers who exposure was measured.
- Records must be maintained for 30 years.
- Records to be forwarded to safety committees and employees on request.

Re-monitoring

When the Seven Oaks School Division implements control measures to control the concentration level of an airborne chemical or biological substance, the Seven Oaks School Division must monitor the concentration of the substances in the workplace for a period of time sufficient to determine that the control measures have reduced the concentration of the substance below the OEL for that substance.

PPE

When the Seven Oaks School Division is required to implement control measures under this Part to control a worker's exposure to an airborne chemical or biological substance, the control measures must not include a requirement for a worker to wear or use personal protective equipment to prevent or reduce exposure to a chemical or biological substance unless no other measure is reasonably practicable.

Any personal protective equipment required under subsection (1), including respiratory protective equipment, must meet the requirements of Part 6 (Personal Protective Equipment).