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## Working safely with hazardous substances – Water Quality Monitoring

### Overview:

Hazardous substances are substances that are explosive, flammable, oxidising, toxic, corrosive or ecotoxic. A hazardous substance may be a single chemical or a mixture of both hazardous and non-hazardous chemicals.

The Environmental Data (ED) and Natural Resources and Partnerships Science (Science) teams use, handle and store hazardous substances. Therefore, Horizons Regional Council (HRC) and its staff are obligated work in accordance with the Health and Safety at Work Act (HWSA), the Health and Safety at Work (Hazardous substances) Regulations (the regulations) and the Hazardous Substances and New Organisms Act 1996 (HSNO).

This document concerns the hazardous substances stored within the Water Quality Laboratory (WQ Lab), NRP Science Store (Store) and Marton Office (Office). It is aimed specifically at the ED/Survey and NRP staff who are required to work with and around them on a regular basis.

### Defining the controls for managing hazardous substances:

Whenever a hazardous substance is present in either the WQ lab, office or store, controls need to be put in place for that substance as per the regulations and HSNO. The majority of substances used are subject to a series of generic controls, some substances may trigger specific controls, whilst some controls may only apply when a certain threshold quantity is reached.

These controls are defined by a hazardous substances inventory. These inventories as controlled documents under the responsibility of the Discrete Water Quality Portfolio holder. The Worksafe NZ hazardous substances calculator generates this inventory: <http://www.hazardoussubstances.govt.nz/calculator>. A pin is required to access the inventories specific to this document.



A pdf copy of the hazardous substances inventory and a csv copy of the hazardous substances inventory list are filed here as per section 1. below. Additionally hard copies will be stored with Safety Data Sheets \*(stored at each location).

This document will now outline the controls required for the safe use, handling and storage of all hazardous substances used by staff at the WQ lab, office and store.

### 1. INVENTORY- ***“You must prepare and maintain an inventory of all your hazardous substances”:***

The Discrete Water Quality Portfolio holder maintains the inventory, paper copies will be stored with the SDS files located at the WQ lab, office, store and the Discrete Water Quality Portfolio holder's desk. Electronic copies of the inventory and inventory list shall be stored here:

- WQ Lab: [\\ares\Environmental Monitoring Programmes\Discrete WQ Health and Safety\##MARTON OFFICE##](#)
- Store: [\\ares\Environmental Monitoring Programmes\Discrete WQ Health and Safety\##NRP SCIENCE STORE##](#)
- Office: [\\ares\Environmental Monitoring Programmes\Discrete WQ Health and Safety\##MARTON OFFICE##](#)

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Prior to purchasing any new substances, the relevant SDS must be provided to the Discrete Water Quality Portfolio for addition to the inventory. This is to assess whether the required controls attributed to the substance can be met by HRC. The control requirements triggered by certain substances have led to alternative substances being used instead. There is the potential that some controls cannot be met within the limitations of the current facilities available to the ED and science teams.

**Therefore, it must be proven that all controls required are met prior to the use, handling and storage of any new substances.**

### 2. PERSONAL PROTECTIVE EQUIPMENT (PPE) - *“PPE must be used to minimise risks to health and safety.”*

PPE is kept at the WQ lab, office and/or store. It is expected that the PPE is treated correctly and put back for the next person.

The provision and maintenance of listed PPE used in the WQ Lab and Office is the responsibility of the Discrete Water Quality Portfolio holder. Any lack of (i.e. missing), damaged or faulty PPE in either the WQ Lab or Office **MUST** be reported to the Discrete Water Quality Portfolio holder (or appropriate staff member) immediately.

The provision and maintenance of listed PPE used in the Store is the responsibility of the Senior Scientist – Freshwater. Subsequently any lack of (i.e. missing), damaged or faulty PPE in either the WQ Lab is the responsibility of the Senior Scientist - Freshwater

An inventory of PPE is stored here:

- WQ Lab: [\\ares\Environmental Monitoring Programmes\Discrete WQ Health and Safety\##MARTON OFFICE##](#)
- Store: [\\ares\Environmental Monitoring Programmes\Discrete WQ Health and Safety\##NRP SCIENCE STORE##](#)
- Office: [\\ares\Environmental Monitoring Programmes\Discrete WQ Health and Safety\##MARTON OFFICE##](#)

Appropriate PPE should be logged in the asset database via the Discrete Water Quality Portfolio holder.

### 3. SAFETY DATA SHEET (SDS) - *“You must have a SDS for all substances listed on your inventory.”*

SDS's are required to create the hazardous substances inventory therefore; every substance we use will have an SDS.

These are designed to provide staff and emergency personnel with procedures for handling or working with a designated substance in a safe manner.

It is expected that staff are aware of their location(s) and purpose.

All hazardous substances stored in the WQ Lab, office and store shall have an appropriate SDS filed and stored at the relevant location for reference. Primary physical copies of these SDS's for the workplace shall also be filed at the Discrete Water Quality Portfolio Holders desk. In addition, electronic copies of all SDS are filed here:

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- WQ Lab: [\\ares\Environmental Monitoring Programmes\Discrete WQ Health and Safety\##MARTON OFFICE##](#)
- Store: [\\ares\Environmental Monitoring Programmes\Discrete WQ Health and Safety\##NRP SCIENCE STORE##](#)
- Office: [\\ares\Environmental Monitoring Programmes\Discrete WQ Health and Safety\##MARTON OFFICE##](#)

### 3. TRAINING AND SUPERVISION OF WORKERS - *“Every worker must be trained and supervised appropriately”*

The provision of training and initial supervision of staff regarding the use of hazardous substances stored in the WQ lab and office is the responsibility of the Discrete Water Quality Portfolio holder. For hazardous substances stored in the store is the provision of training and initial supervision is the responsibility of the Senior Scientist - Freshwater.

This training is captured as part of a wider group of skills required in HRC's discrete water quality programme. The training undertaken of each staff member shall be registered here:

- [http://tqm.horizons.govt.nz/hydrology/SOPs/cd\\_om\\_15.6\\_appendix\\_8\\_Sampling%20Procedures%20Training%20Log.xlsx](http://tqm.horizons.govt.nz/hydrology/SOPs/cd_om_15.6_appendix_8_Sampling%20Procedures%20Training%20Log.xlsx)

The ED and Science teams use a 'buddy' supervision system for all new staff members whereby extensive supervision is provided as a matter of course. Initial supervision should be provided by those named above, or to a staff member delegated by said person. It is expected that further and continuing supervision of a staff members shall be a shared responsibility of all staff across both teams.

### 4. LABELLING - *“All hazardous substances should be appropriately labelled including substances you have, decanted, transferred, manufacture or have been supplied to you.”*

All hazardous substances shall be stored in labelled containers with preference being their original containers. The labelling will be appropriate to the substance and staff competency. The volume and quantity of any decanted substances shall be minimal.

The labelling of decanted hazardous substances by HRC shall be in accordance with Section 7.3 of AS/NZS 2243.10:2004.


### 5. PACKAGING - *“All hazardous substances should be appropriately packaged including substances you have, decanted, transferred, manufacture or have been supplied to you.”*

All hazardous substances shall be stored in appropriate containers with preference being their original containers.

Any repackaging of decanted hazardous substances by HRC shall be in accordance with Section 7.3 of AS/NZS 2243.10:2004.

### 6. HAZARDOUS AREAS - *“Establishing a hazardous areas for flammable substances”*

Regarding the storage of Ethanol and Isopropanol within the Store the potential requirement of a *hazardous area* has been identified. At the time of writing this document this matter has been raised with senior management for resolution.

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### 7. STORAGE AND SEGREGATION:

All substances contained at the WQ lab, Office and Store (as documented the appropriate inventories) are to be stored appropriately.

The following guidelines are to be adhered to:

1. The opening and decanting substances within the WQ Lab and Office is to only be undertaken within the sink areas.
2. The labelling, packaging and repackaging of substances should adhere to points 4 and 5 above.
3. Any individual container brought into office and WQ lab for decanting or dispensing shall not be greater than 25L for liquids.
4. Storage of substances shall be based on the properties and mutual reactivity's of the chemicals. Incompatible materials as confirmed by the Worksafe NZ hazardous substances calculator shall be segregated from each other by space and stored within separate bins.
5. Substances, other than those decanted in sink areas, shall be stored in bins thereby providing separate spill catchments.