



HEALTH & SAFETY

- ❖ H&S at Profluid Pty Ltd
- ❖ Psychosocial Hazards in the Workplace
- ❖ Ergonomic Desks in the Office
- ❖ Safety on Site
- ❖ Management of Asbestos



H&S General

Profluid Pty Ltd recognizes its moral and legal responsibilities and is committed to providing a safe and healthy work environment for employees, contractors, visitors, and the community.

Profluid Pty Ltd Health and Safety Policies and Procedures are driven not only by our commitment to fulfil statutory and regulatory obligations, but also by the desire to establish and maintain an environment free from workplace injury. Our people are our strength and their safety, both at work and away from work, is of paramount importance to us.

Profluid Pty Ltd aims to:

- Implement a Health and Safety Management System (HSMS) that complies with all requirements of International Standard ISO45001.
- Implement work practices which provide safe and healthy work conditions to prevent the injury and ill health of our workers.
- Become a supplier and service provider of choice by providing healthy and safe work practices.
- Ensure all possible hazards are eliminated and the highest level of control in the hierarchy of control is applied to the remaining risks at all the times.
- Promote our Policy that people should come to work safely, perform their duties, and return home safely.
- Ensure there is always a safe way of doing things.
- Look at ways to learn and improve in our day-to-day undertakings.

Profluid Pty Ltd aims to achieve these objectives by:

- Adhering to legal, customer and other requirements.
- Providing safe plant, equipment, and systems of work.
- Providing employees and contractors with necessary PPE, relevant information, instruction, training, and supervision to ensure their safety.
- Ensuring continual improvement of our management system.
- Consulting with and encouraging participation of our workers.
- Ensuring a hazard risk management approach is taken to occupational safety and health.

Our Policy will be made available to any interested party via our website at: <https://profluid.com.au/>

APPROVED: 10 October 2023
REVISION No.: 1
REVIEWED: 16 November 2023



Jerome Monteiro
Managing Director

Profluid Pty Ltd is committed to providing a place of work which minimizes risk arising from lack of fitness for work.

The management of fitness for work is considered a shared responsibility between an organization and its personnel. Profluid Pty Ltd is responsible for providing a safe system of work, which includes the development, implementation and management of a safe work environment and work practices.

Profluid Pty Ltd has a responsibility to take appropriate action when health, safety, or work performance of individuals in the workplace is impacted by fatigue, stress or alcohol and/or drug use.

Individuals are also responsible for ensuring that they consider their lifestyle and medical factors to ensure they are fit for work and not impaired by fatigue, or under the influence of alcohol or any drugs that may in any way affect their, or other's ability to safely perform their duties or negatively impact on their health and wellbeing.

Profluid Pty Ltd will:

- Educate its employees about the impacts of fatigue and stress.
- Increase awareness about fitness for work, and drug/alcohol consumption.
- Provide appropriate fatigue management training.
- Develop and implement agreed working rosters to ensure adequate opportunity for restorative sleep and work-life capacity is provided.
- Ensure that if a person's capacity to work safely is reduced by fatigue they can notify their supervisor without fear of adverse repercussions.

This Policy applies to all individuals at Profluid Pty Ltd and covers a range of issues that may impact on fitness for work including fatigue, stress, physical wellbeing, medical issues and drugs and alcohol.

Our Policy will be made available to any interested party via our website at: <https://profluid.com.au/>

APPROVED: 29 March 2021
REVISION No.: 0
REVIEWED: 16 November 2023



Jerome Monteiro
Managing Director



DRUG AND ALCOHOL POLICY

Drug and alcohol use can affect a person's ability to work safely. It creates a risk to workers and work health and safety.

Profluid Pty Ltd is committed to a safe, healthy, and productive workplace, and is focused on eliminating risks associated with the adverse effects of alcohol and drug use. In accordance with this commitment employees should not be impaired by Alcohol and/or Other Drugs when at work. All Employees should be in a fit condition to perform their duties without compromising the safety of themselves, their colleagues, and members of the community.

POLICY OBJECTIVES:

- Ensure Employees are fit for work and carry out their duties in a safe manner unimpaired by drugs or alcohol.
- Assist Employees at all levels in understanding how the use (and/or abuse) of these substances can impact health, safety and work performance of individuals and their colleagues.

POLICY PRINCIPLES:

- Employees must not be under the influence of alcohol and/or illegal drugs when at work.
- Employees must not possess, distribute, sell, or consume illegal drugs in the workplace or on premises, including lunchrooms and car parks.
- Employees must not consume alcohol while at work or on premises, including lunchrooms and car parks.
- Employees using prescription drugs for medical treatment must consult with their supervisor/manager.
- Employees who suspect a colleague is unfit for work because of alcohol or drug use should immediately raise these concerns with their manager, so that assistance can be provided.
- When an employee is suspected by a supervisor/manager to be unfit for work/impaired because of alcohol or drug use or had an incident in the workplace they should be tested in accordance with this Policy.
- Workshop personnel performing high risk activities may be tested regularly in accordance with this Policy.

TESTING PROCEDURES:

- Testing may be undertaken for the following reasons: workshop staff pre-employment, workshop staff health monitoring, reasonable suspicion, and incidents.
- Employee subject to alcohol/drug testing will be asked to go to a designed testing facility and directed to provide urine specimens and/or to conduct breath/blood/ saliva test for alcohol detection.
- Collected specimens will be sent to a federally certified laboratory and tested for evidence of AMPHETAMINE TYPE SUBSTANCES, BENZODIAZEPINE CLASS, CANNABINOIDS, COCAINE/METABOLITE, METHADONE METABOLITE (EDDP) and OPIATE CLASS.

CONSEQUENCES:

- Applicants who refuse to cooperate in an alcohol and drug test will not be hired.



DRUG AND ALCOHOL POLICY

- Employees who refuse to cooperate in required tests will be terminated.
- Employees who violate this policy by consuming/selling/being in possession or under the influence of alcohol or drugs while in the workplace will be terminated.
- Employees who have tested positive to drugs and alcohol will be subjected to disciplinary action, up to and including termination, depending on their job position and the type/quantity of drug/alcohol detected. In the case that termination is not appropriate, the Director will provide them with a formal written warning, which will state further disciplinary measures if the policy is breached again.

CONFIDENTIALITY

Information and records relating to positive test results, drug and alcohol dependencies, and legitimate medical explanations will be kept confidential to the extent required by law and maintained in secure files separate from normal personnel files. Such records and information may be disclosed among managers and supervisors on a need-to-know basis and may also be disclosed when relevant to a grievance, charge, claim or other legal proceeding initiated by or on behalf of an employee or applicant.

This Policy applies to all Profluid Pty Ltd Employees (including interns and apprentices), contractors, agency staff, and students on work -placement. This policy is not limited to the workplace or work hours and extends to work-related functions and events.

Our Policy will be made available to any interested party via our website at: <https://profluid.com.au/>

APPROVED: 26 June 2023

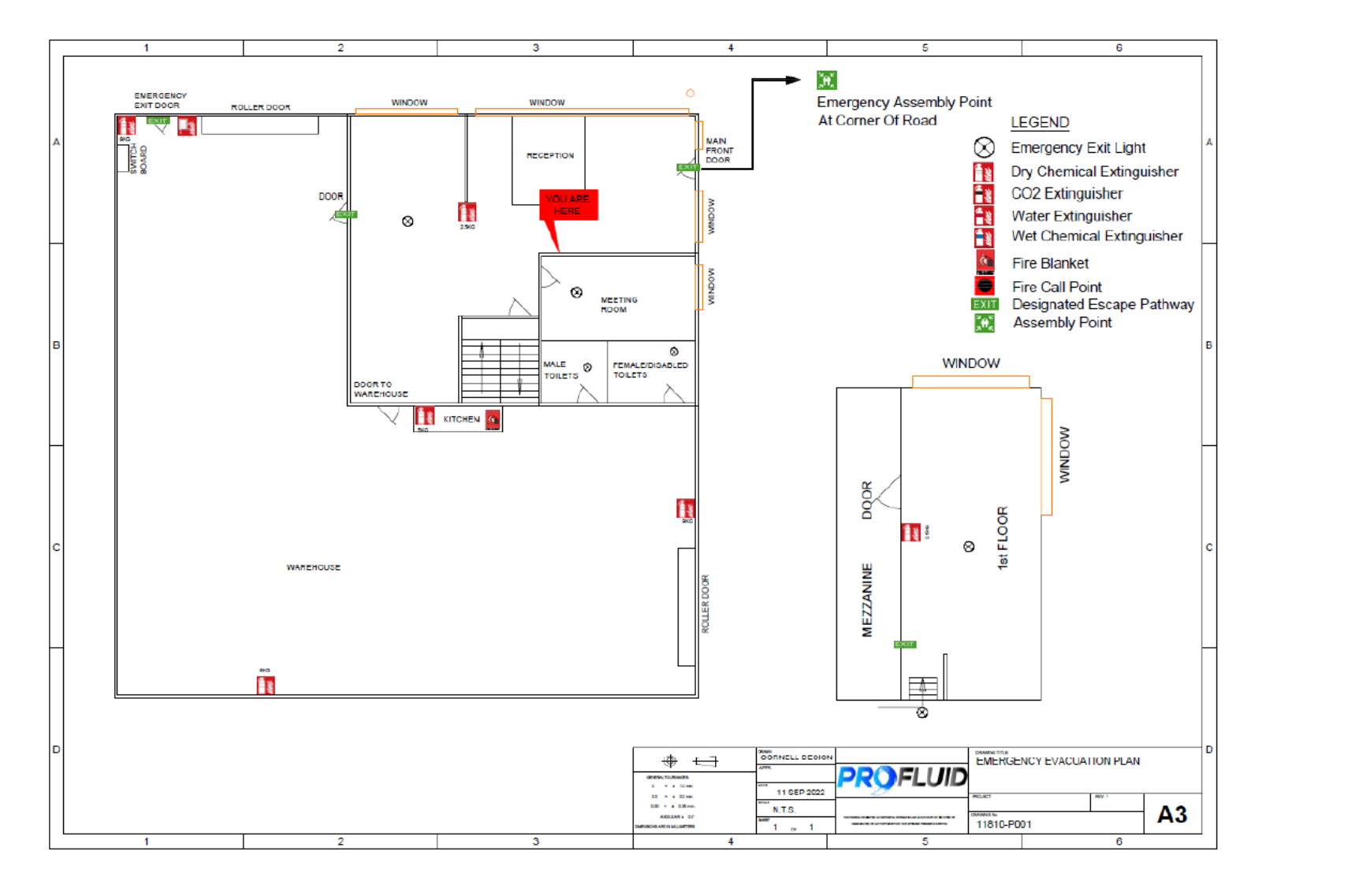
REVISION No.: 0

REVIEWED: 16 November 2023

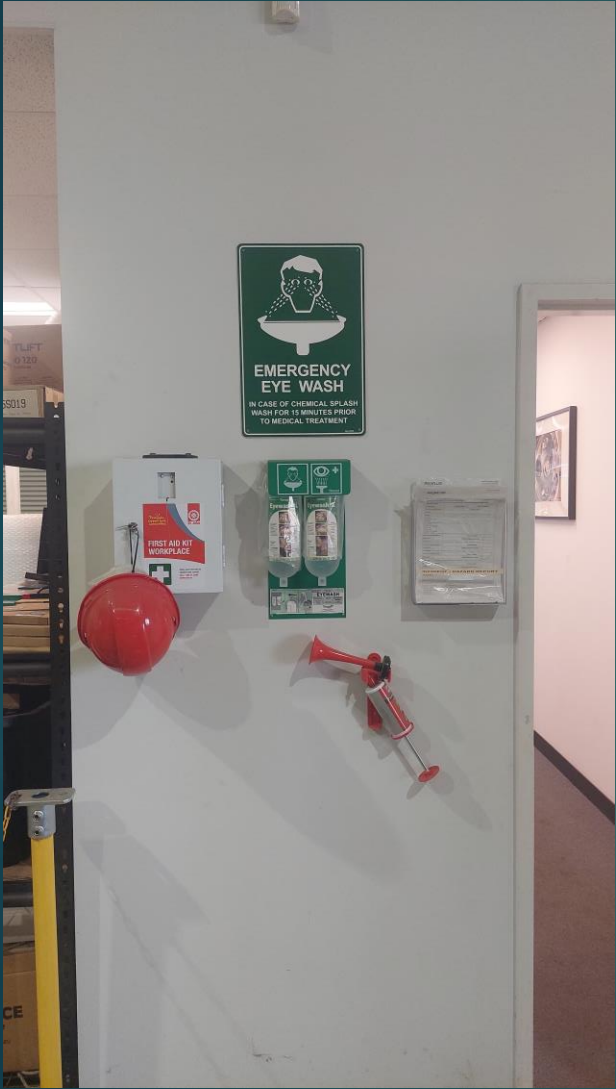
Jerome Montelero
Managing Director

SITE EMERGENCY EVACUATION PLAN

If you hear the horn (3 times) reach the emergency assembly point outside as soon as possible.



FIRST AID KITS, EYE WASH STATION, SPILL KIT



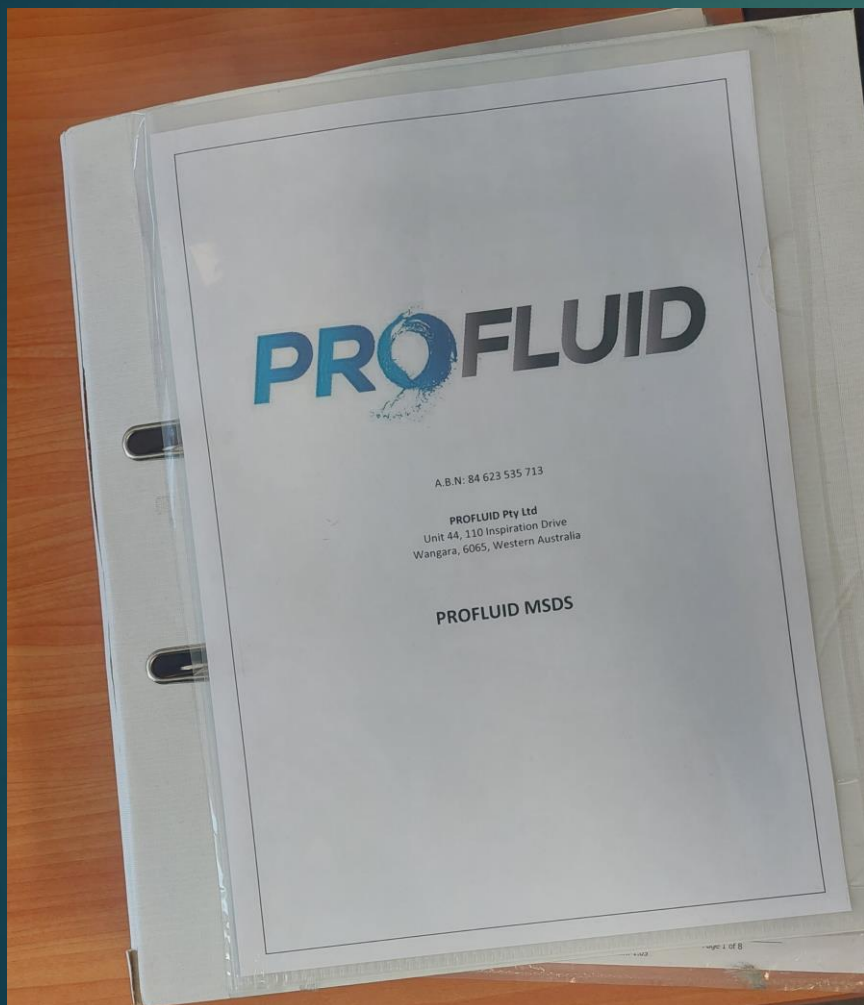
MANAGEMENT OF CHEMICALS

- Flammable Liquids Class 3
- Flammable Gas Class 2
- Corrosive Class 8



MANAGEMENT OF CHEMICALS

Material Safety Data Sheet (MSDS): Check each time before use a chemical product



International Also Nobel Pty Ltd.

Safety Data Sheet
DIKX36 INTERPLUS 1180 N35 LIGHT GREY PART A
 Version Number 3 Revision Date 05/10/23

1. Product and company identification

Hazardous according to criteria of Australian WHS Regulations.
 Classified as a Dangerous Good for transport according to the latest ADO code.

1.1. Product Identifier: INTERPLUS 1180 N35 LIGHT GREY PART A
 Product Code: DIKX36

1.2. Relevant identified uses of the substance or mixture and uses advised against:
 Intended use: Refer Technical Data Sheet.
 For professional use only: This product is intended for use in the Machine and Protective Coatings markets. Refer Technical Data Sheet.
 Application Method: Apply by brush and roller for small areas. Advise away for large areas.

1.3. Details of the supplier of the safety data sheet:
 Importer or Manufacturer: Also Nobel Pty Ltd.
 51 McIntyre Road
 Sunshine North
 Victoria
 Australia, 3030

Telephone No. (office hours): (03) 9213 4055
 Fax No.: (03) 9211 9141
 1.4. Emergency telephone number (24 hour): 193 126
 For Poisons Advice telephone: 193 126
 To provide telephone consultation to medical professionals and the general public in cases of acute and chronic poisonings - 24 hours a day

2. Hazard identification of the product

2.1. Classification of the substance or mixture:
 Flam. Liq. 3+H226 Flammable liquid and vapour.

Skin Irrit. 2+H315 Causes skin irritation.
 Eye Irrit. 2+H319 Causes serious eye irritation.
 Skin Sens. 1+H317 May cause an allergic skin reaction.
 Aquatic Chronic 3+H412 Harmful to aquatic life with long lasting effects.

2.2. Label elements:
 Using the Toxicity Data listed in section 11 & 12 the product is labelled as follows.



H226 Flammable liquid and vapour.
 H315 Causes skin irritation.
 H319 Causes serious eye irritation.
 H317 May cause an allergic skin reaction.
 H412 Harmful to aquatic life with long lasting effects.

Precautionary Phrases (P) listed below:

[Prevention]:
 P210 Keep away from heat/hot surfaces, sparks, open flames and other ignition sources. No smoking.
 P231 Keep cool.
 P240 Ground and bond container and receiving equipment.
 P241 Use explosion-proof (electrical/ventilating/lighting) equipment.
 P242 Use non-sparking tools.
 P243 Take action to prevent static discharge.
 P261 Avoid breathing dust / fume / gas / mist / vapour / spray.
 P264 Wash thoroughly after handling.
 P273 Contaminated work clothing should not be allowed out of the workplace.
 P273 Avoid release to the environment.
 P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.
 (Response):
 P302+352 IF ON SKIN: Wash with soap and water.
 P303+361+353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
 P305+351+338 IF IN EYES: Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.
 P312 Specific treatment (see information on the label).
 P330+313 If skin irritation or a rash occurs: Get medical advice / attention.
 P337 If eye irritation persists: Get medical advice / attention.
 P362 Take off contaminated clothing and wash before reuse.
 P363 Wash contaminated clothing before reuse.

8. Exposure controls and personal protection

8.1. Control parameters
 From Australia's Hazardous Substance Information System (HSIS)
 For detailed information refer to the HSIS web site (<http://hsis.safeworkaustralia.gov.au>).

Material	Short term (15m ave STEL)		Long term (8hr TWA)		Comments
	ppm	mg/m ³	ppm	mg/M3	
Barium Sulphate	-	-	-	10	---
Ethyl Benzene	125	543	100	434	---
Titanium dioxide	-	-	-	10	---
Xylene	150	655	80	350	---

Chemicals classified as hazardous according to WHS regulations may have a notification alongside the exposure standard. If such a notification is necessary, it will appear in the far right hand column. The legend is as follows:

- (P) Peak exposure limit
- (R) Suppliers Recommended Limit
- (Sk) There is a risk of absorption through unbroken skin
- (Sen) Sensitiser
- (Cat1) Category 1 - established human carcinogen
- (Cat2) Category 2 - probable human carcinogen
- (Cat3) Category 3 - substances suspected of having carcinogenic potential.

There is no biological limit allocated.

DNEL/PNEC values
 No Data Available

8.2. Exposure controls
 Provide adequate ventilation. Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction. If these are not sufficient to maintain concentrations of particulates and any vapour below occupational exposure limits suitable respiratory protection must be worn.

Eye Protection
 Wear safety eyewear, e.g. safety spectacles, goggles or visors to protect against the splash of liquids. Eyewear should comply with AS/NZS1337.

Wear a full face shield if mixing or pouring operations pose a risk of splashes.
 An eye wash station is suggested as a good work place practice.

Skin Protection
 Gloves of an appropriate material should be worn during mixing and application. Nitrile or PVC gloves are generally recommended for products containing solvents.

Other
 Overalls which cover the body, arms and legs should be worn. Skin should not be exposed. Barrier creams may help to protect areas which are difficult to cover such as the face and neck. They should however not be applied once exposure has occurred. Petroleum jelly based types such as Vaseline should not be used. All parts of the body should be washed after contact.

Respiratory Protection
 In Liquid, Paste or Atomised form (e.g. Spray Application), workers must wear respirators with a filter Type 4 (Cartridges must be approved in accordance with AS/NZS 4756).

Personal protective Equipment (PPE)

*Always wear your high visibility clothes and steel boots in the workshop



INCIDENTS AND HAZARDS

What to do in case of an incident?

- Immediately call someone else
- First Aid
- Inform your supervisor and QHSE Manager
- Fill up Incident Report and ICAM if necessary (FRMs are situated both in the workshop and close to reception)
- In case of emergency call the emergency number

PROFLUID INCIDENT REPORT
Document No.: FRM-005
Revision No.: 0

This report is to be used to initially report any accident, illness or injury. It can be used to report insignificant or minor incidents or low to medium risk hazards if considered adequate.
Once completed this form must be reviewed and signed off by relevant parties and submitted to your Supervisor/Manager.

Date of Report: _____ Date of Incident: _____ Time of Incident: _____
 Person completing report: _____ Contact Details: _____
 Location: _____

DETAILS

Fatality
 Significant Event
 Quality
 Environmental – specify: _____
 Lost Time
 Medical Treatment
 First Aid
 Near Miss
 Equipment Damage
 Other – specify: _____

Name/s of people involved: _____ Contact Details: _____
 Occupation: _____ Industry Experience (years): _____
 Employment: Full Time Part Time Casual Contractor Visitor Customer Other _____

Name/s of people involved: _____ Contact Details: _____
 Occupation: _____ Industry Experience (years): _____
 Employment: Full Time Part Time Casual Contractor Visitor Customer Other _____

Name/s of people involved: _____ Contact Details: _____
 Occupation: _____ Industry Experience (years): _____
 Employment: Full Time Part Time Casual Contractor Visitor Customer Other _____

Name/s of people involved: _____ Contact Details: _____
 Occupation: _____ Industry Experience (years): _____
 Employment: Full Time Part Time Casual Contractor Visitor Customer Other _____

Full description _____

AGENT OF INCIDENT, INJURY, HAZARD

Amputation Exposure
 Bruise or Crushing Foreign Body
 Burn or Scald Fracture
 Concussion Heart / Circulation
 Cut or Open Wound Inhalation
 Obstruction Sprain / Strain
 Electric Shock Other _____

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PROFLUID INCIDENT REPORT
Document No.: FRM-005
Revision No.: 0

INDICATE BODY LOCATION (if injury)

Upper Ankle Finger Mouth
 Lower Arm Foot Neck
 Front Back Groin Shoulder
 Back Chest Hand Wrist
 Left Ear Head Leg
 Right Eye Knee Face
 Other _____

REVIEW PROCESS

RISK SCORE	PROCESS REVIEW	INCIDENT NOTIFICATION	TIME FRAME
<input type="checkbox"/> High	ICAM Investigation Mandatory Procedure/Process Review Mandatory Risk Register Review Mandatory Corrective Actions Required	Originator to notify Manager, HSE Manager	48 hours
<input type="checkbox"/> Medium	Procedure/Process Review Mandatory Corrective Actions Required	Originator to notify Manager, HSE Manager	72 hours
<input type="checkbox"/> Low	Procedure/Process Review Mandatory	Originator to notify Manager, HSE Manager	7 days

ROOT CAUSE ANALYSIS (What was the Root Cause of the Incident)

IMMEDIATE CORRECTIVE ACTIONS TAKEN (the area has been made safe from any immediate risk by the following actions)

OTHER COMMENTS (include other factors associated with the incident (ie estimated costs))

Supervisor's Name: _____ Signature: _____
 Management Review Required: Yes No Date: _____
 Manager's Name: _____ Signature: _____
 Is this reportable to a Government Authority / Workers Compensation Insurer Yes No

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PROFLUID INCIDENT CAUSE ASSESSMENT METHOD (ICAM) INVESTIGATION REPORT
Doc No: FRM-005
Rev. No.: 0

INCIDENT DETAILS

Incident Date: _____ Incident Report No: _____
 Investigation Report Date: _____ Responsible Manager: _____

INVESTIGATION TEAM

Name	Role	Name	Role

INCIDENT OVERVIEW
Executive summary of the incident. Pictures / sketches can be included in "Additional Information" section.


PREVIOUS SIMILAR INCIDENTS
Describe any previous similar incidents that have occurred in the business and assess whether all corrective actions have been addressed.

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INCIDENTS AND HAZARDS

What to do in case you notice a dangerous situation/hazard?

- Report immediately to QHSE manager
- Fill up Hazard Report Card (FRMs are situated both in the workshop and close to reception)



HAZARD REPORT CARD
Document No: FRM-004
Rev. No.: 0

+ TO BE COMPLETED BY OBSERVER

<input type="checkbox"/> Near Miss	<input type="checkbox"/> Hazard/Issue	<input type="checkbox"/> Suggestion	<input type="checkbox"/> Positive Feedback
Date:	Time:		
Exact Location:		Project/Job:	
Description of Observation:			

Potential for (select all that are applicable)

<input type="checkbox"/> Damage to Environment	<input type="checkbox"/> Impact on Operations	<input type="checkbox"/> Damage to Equipment/Material	<input type="checkbox"/> Personal Injury
Action taken by you:			
What further actions are recommended?			
Observer's name (Optional):			

TO BE COMPLETED BY SUPERVISOR/MANAGER

Further corrective actions required?	<input type="checkbox"/> YES	<input type="checkbox"/> NO
If Yes, what actions		
Further reports required?	<input type="checkbox"/> YES	<input type="checkbox"/> NO
If Yes, what?		
Who else has been notified? (e.g. client, manager)		
Supervisor/Manager's name:	Sign:	Date:

REPORT CARD CLOSED

Has observer been informed of action taken?	<input type="checkbox"/> YES	<input type="checkbox"/> NO
Sign (Supervisor/Manager):	Date:	
Sign (Site HSEQ Advisor):	Date:	

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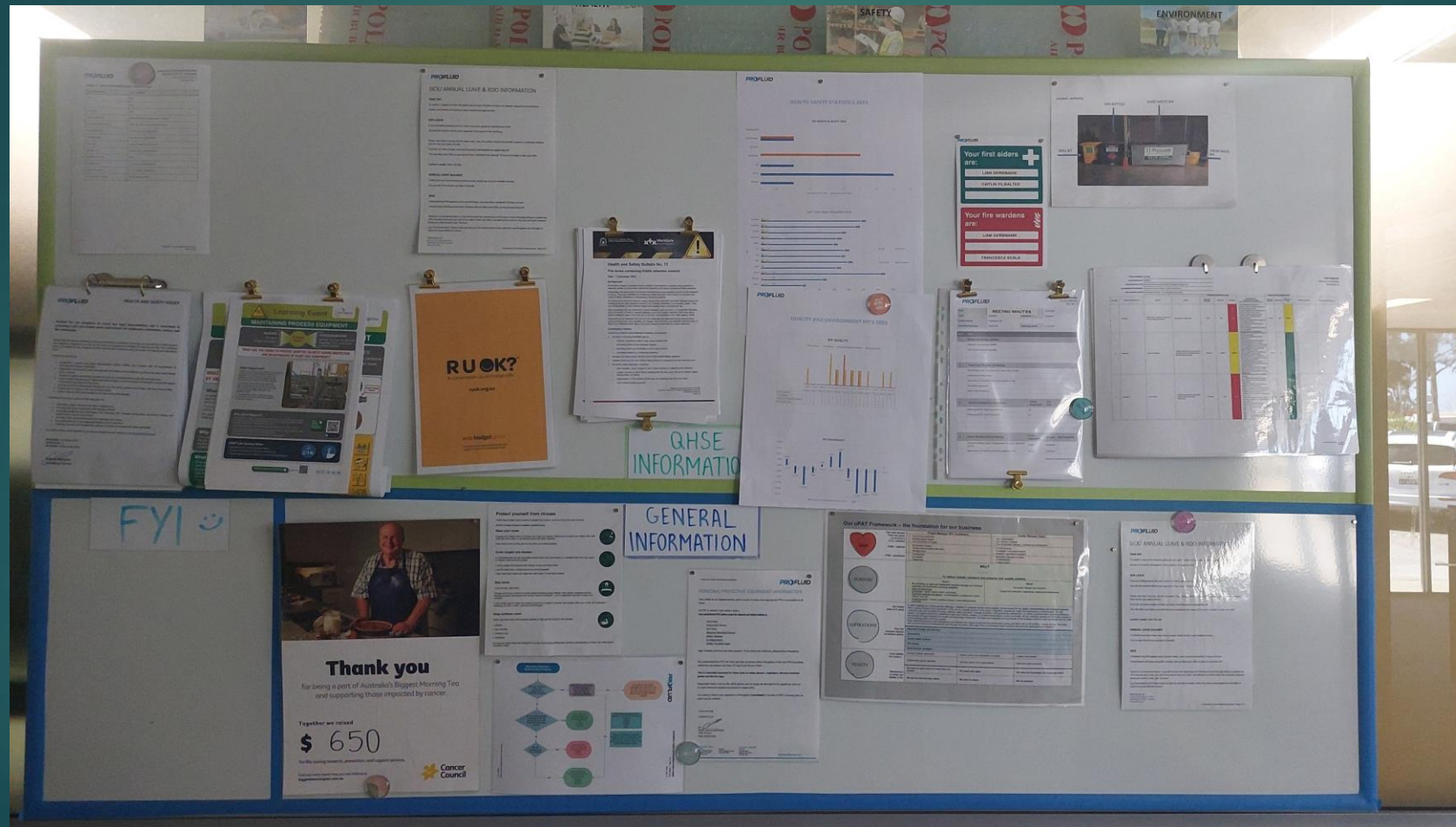
Workshop Requirements H&S

- ▶ White card
- ▶ Forklift licence (for forklift use)
- ▶ Sign of Risk Assessments
- ▶ Sign of SWMSs
- ▶ VOC/Training

***** PLEASE INFORM THE QHSE MANAGER IF YOU ARE NOT FEELING SAFE OR CONFIDENT WHILE ENGAGING IN ANY ACTIVITY OR USING ANY INSTRUMENT/TOOL*****

Where to find H&S Communications/Alerts

QHSE Information board





Psychosocial Hazards in the Workplace

- ❑ CODE OF PRACTICE PSYCHOSOCIAL HAZARDS IN THE WORKPLACE
- ❑ CODE OF PRACTISE MANAGING PSYCHOSOCIAL HAZARDS AT WORK
- ❑ WORK HEALTH AND SAFETY ACT 2020

WHY IS IT IMPORTANT TO MANAGE PSYCHOCOCIAL HAZARDS AT WORK?

Psychosocial hazards at work are aspects of work and work situations which can lead to psychological or physical harm.

MAIN ROOT CAUSE:

- The way the tasks or job are designed, organized, managed and supervised. Example: work demand, inadequate support, lack of role clarity, lack of policies or procedures, etc
- Social factors at work, workplace relationships and social interactions

Psychosocial hazards and risk factors in the workplace

The way the tasks or job are designed, organized, managed and supervised



Stress
Fatigue
Burnout
Depression



Social factors at work, workplace relationships and social interactions



Bullying
Racism
Sexual Harassment
Aggression
Violence



Impact on
Mental Health/
Physical Health

Signs of Mental Illness



Feeling anxious or worried



Feeling depressed or unhappy



Emotional outbursts



Sleep problems



Weight or appetite changes



Quiet or withdrawn



Substance abuse



Feeling guilty or worthless



Changes in behaviour or feelings


Identification of psychosocial hazards..... Not easy!!

Psychosocial hazards and risk factors at work may interact with non-work related factors including:

- Personality
- Age
- education level
- culture
- health status
- social status
- Personal problems

Company Responsibilities/Preventive Actions:

- Understand legislative requirements and determine what the workplace is already doing to meet these requirements (e.g. policies, procedures, training) → QHSE
 - Policies in place → HEALTH & SAFETY, CODE OF CONDUCT, EEO, ANTI-DISCRIMINATION AND HARASSMENT, DRUG&ALCOHOL POLICIES
 - Undertaking Training to personnel → THIS TRAINING!
 - Hazard, incident and investigation reports → PROFLUID FORM-002 AND FORM-005
 - Consultation with employees about their health → HEALTH MONITORING PROGRAM- ANNUAL HEALTH SURVEY

 - Encouraging employees to provide feedback
 - Encouraging employees to communicate issues and report/claim incidents
 - Ensure confidentiality
- 
- QHSE

Everybody Responsibilities/Preventive Actions

- Understand and respect Profluid Policies and procedures.
- Communicate any sort of incidents, issues related to psychosocial hazards/mental health to QHSE Manager, even if not directly involved
- Be honest when answering the questions on the Annual Health Survey!



Automatic High Adjustable Standing Desks in the Office

HOW TO SAFELY USE

Can I push the button to adjust the height of my desk?



Caitlin is showing to Natalia something on her laptop.

Can I push the button to adjust the height of my desk?



Caitlin is looking for a missing workpack folder under Natalia's desk

Can I push the button to adjust the height of my desk?



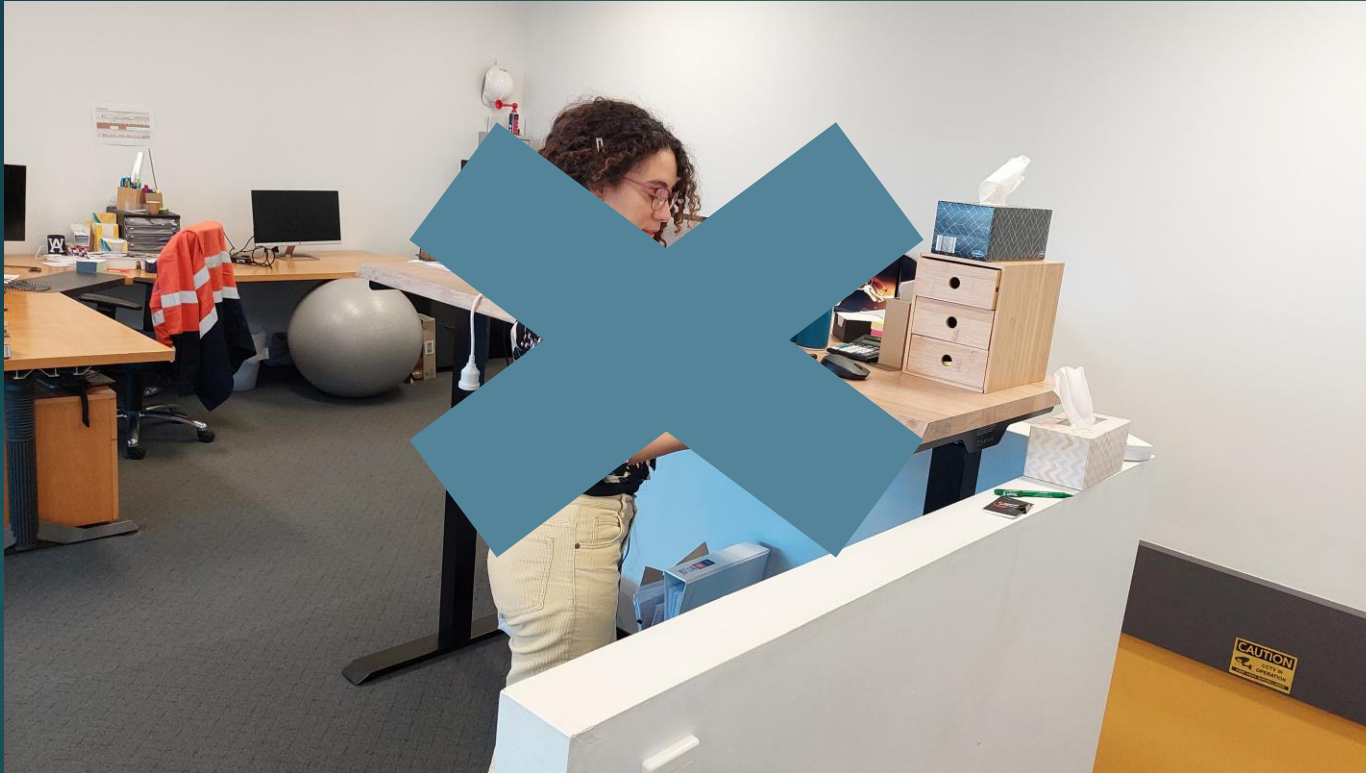
Caitlin is checking the desk because it looks that something is working wrong

Can I push the button to adjust the height of my desk?



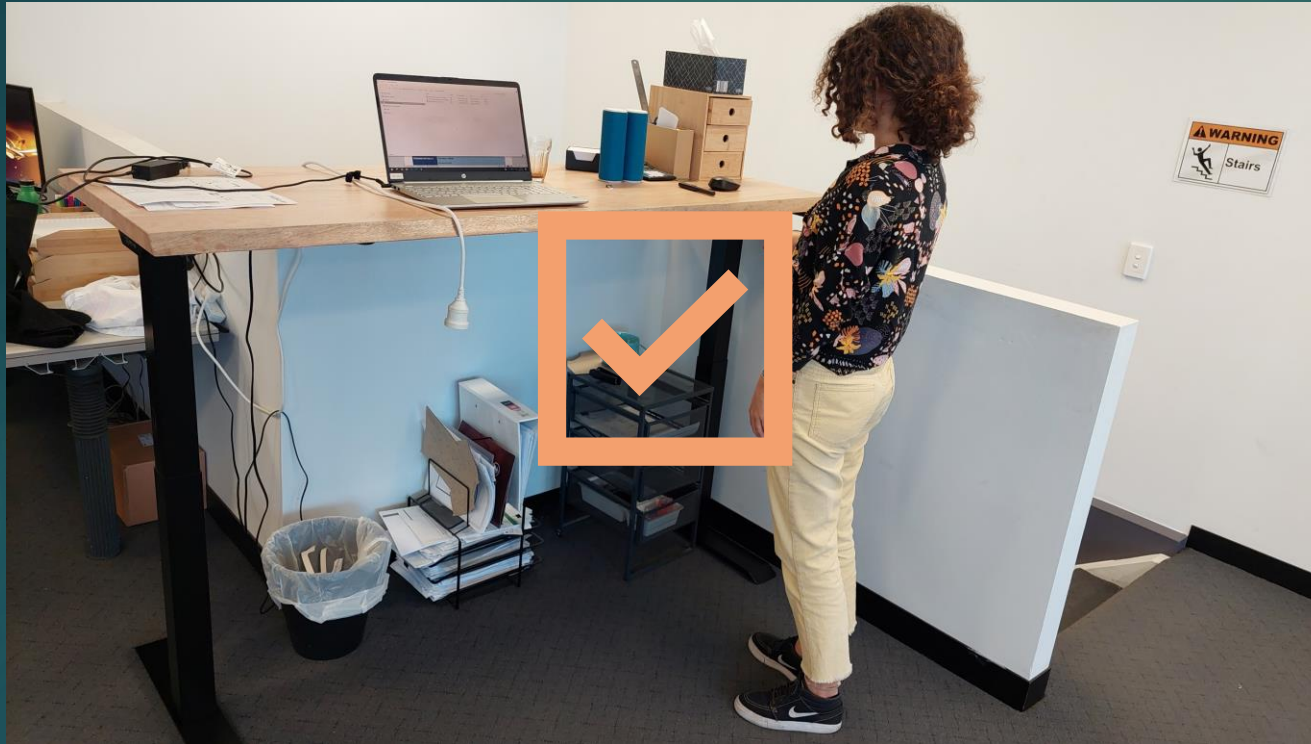
Caitlin wants to check if the desk is comfortable for a nap

Can I push the button to adjust the height of my desk?



No one is around

Can I push the button to adjust the height of my desk?



No one is around
+
Standing in front of the desk
with all the body out from
the desk.



Safety on Site

AUSTRALIAN REQUIREMENTS

VISITORS REQUIREMENTS

PPE to be worn at all times:
hardhat, steel toed boots, high
visibility vest, safety glasses

SITE SAFETY

 **Danger**
Construction work in progress

 **Unauthorised entry
prohibited**

 Under the Health & Safety at Work Act 1974 all persons entering this site must comply with all regulations under this act. All visitors must report to the site office and obtain permission to proceed on to the site or any work area. Safety signs and procedures must be observed and personal protection equipment must be used at all times.

Personal protective equipment must be worn at all times. Failure to do so may result in disciplinary action

Reverse car parking



WORKING ON SITE

PPE MUST be worn at all the times

Minimum PPE Requirements



Hardhats are required in all construction and logistics areas.

Eye Protection is required for all personnel on-site - dark lens for outdoor work and clear lens for indoor and / or night work and for work in pipe racks.

High Visibility vests to be worn by all personnel. Riggers, Banksmen, Spotters / Flagmen, and SHE&S Advisors, etc. will wear different colour vests.

Gloves that are the appropriate type and size for the individual, and that are suitable for the hazard being encountered, are mandatory on the work site.

All personnel will wear long sleeved coveralls on site. Coveralls must be suitable for the work area / activities.

Steel-toed boots will be used by all personnel on site.

Chin straps will be worn with helmets when working at height.

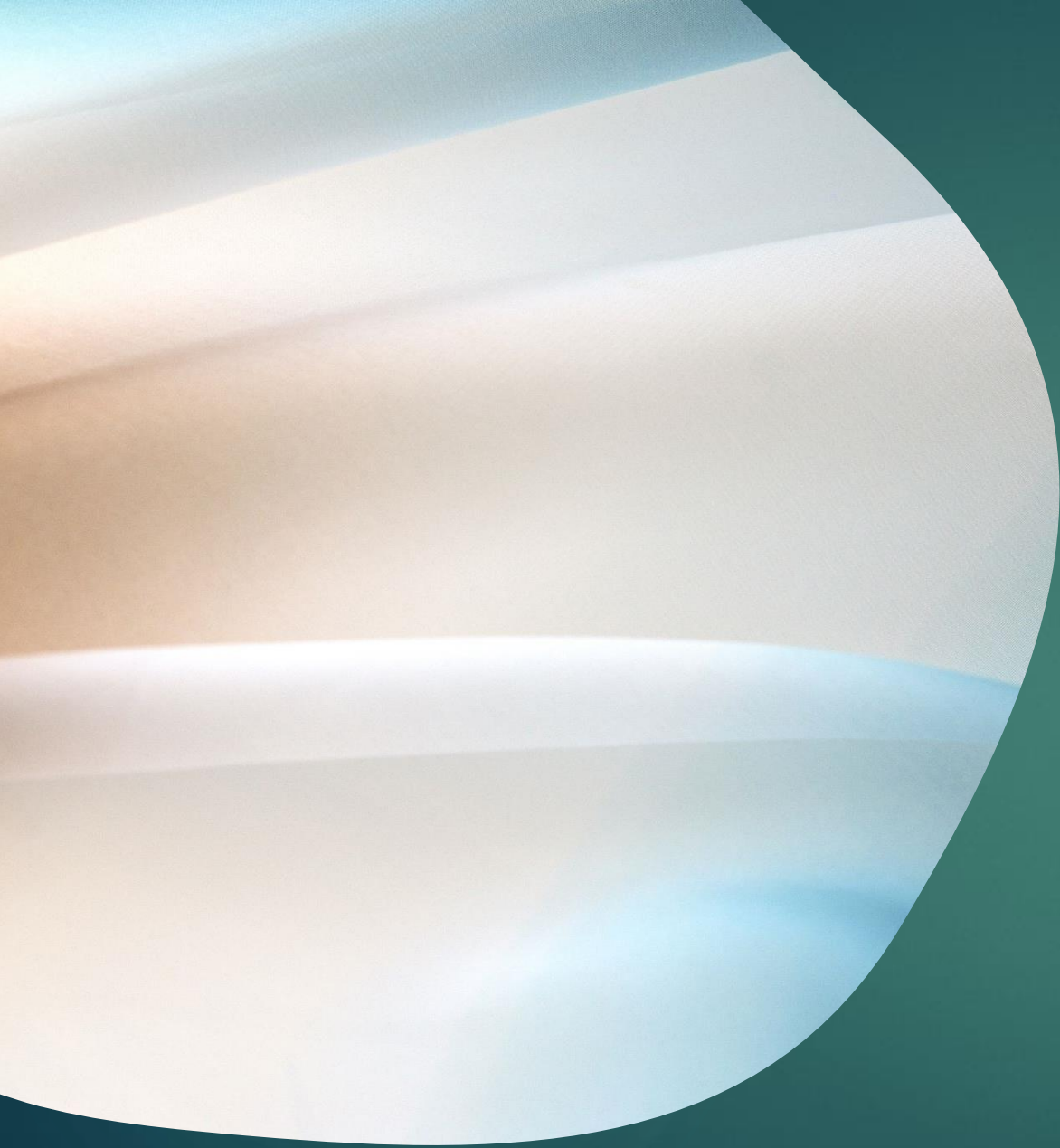
Appropriate and adequate hearing protection for high noise areas. Where indicated or marked for double hearing protection, a combination of ear plugs and ear muffs will be required to be worn.

High Efficiency Particulate Air mask to be used in areas of excessive dust or during periods of sand or dust laden winds (Shamal Season).

For protection against chemical hazards air-purifying respirators will be used.

Face shields in combination with safety glasses are mandatory when using portable or bench grinding machines and the use of jack hammers.

Full Body Harness with double lanyard will be worn when working at heights.



Managing Asbestos in the Workplace



A bit of Chemistry ☺

➤ Asbestos is the generic commercial designation for a group of naturally occurring mineral silicate fibres of the serpentine and amphibole series. Serpentine silicates are classified as ‘sheet silicates’ because the silicate tetrahedra (SiO₄) are arranged to form sheets. Amphibole silicates are classified as ‘chain silicates’ because the tetrahedra are arranged to form a double chain of two rows aligned side by side.

➤ These minerals include:

- the serpentine mineral - chrysotile $[Mg_3Si_2O_5(OH)_4]_n$ → white asbestos

- the amphibole minerals - actinolite $[Ca_2(Mg, Fe^{2+})_5Si_8O_{22}(OH)_2]_n$

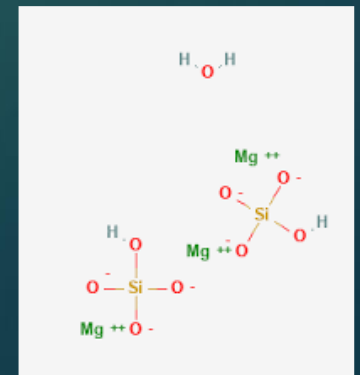
- the amphibole minerals - amosite $[NaFe^{2+}_3Fe^{3+}_2Si_8O_{22}(OH)_2]_n$ → brown asbestos

- the amphibole minerals – anthophyllite $[(Mg, Fe^{2+})_7Si_8O_{22}(OH)_2]_n$

- the amphibole minerals – crocidolite $[NaFe^{2+}_3Fe^{3+}_2Si_8O_{22}(OH)_2]_n$ → blue asbestos

- the amphibole minerals – tremolite $[Ca_2Mg_5Si_8O_{22}(OH)_2]_n$

➤ Asbestos fibres tend to possess good strength properties (e.g. high tensile strength, wear and friction characteristics); flexibility (e.g. the ability to be woven); excellent thermal properties (e.g. heat stability; thermal, electrical and acoustic insulation); adsorption capacity; and, resistance to chemical, thermal and biological degradation.



A bit of history...Wittenoom townsite



Wittenoom is a former town and a declared contaminated site in the Hamersley range in the Pilbara. The area around Wittenoom was mainly pastoral until the 1930s when mining for blue asbestos began. By 1939 major mining began in Yampire Gorge, which was closed in 1943 when mining began in Wittenoom Gorge. In 1947 a company town was built and, during the 1950s, it was the Pilbara's largest town. The peak population, as recorded by the Australian census conducted on 30 June 1961, was 881. During the 1950s and early 1960s, Wittenoom was Australia's only supplier of blue asbestos. **The mine was shut down in 1966 due to its unprofitability, and growing health concerns from asbestos mining in the area**

A bit of history...Wittenoom townsite



- About half of the Blue Asbestos fibre production at Wittenoom was sold to overseas interest and the rest was used in Australia.
- The WA Government agreed to supply all housing requirements, a school, post office, hospital, police station, water supply and to bitumise the seven mile road connecting the town with the mine.
- To accommodate the Mine and Mill workers, tents were erected approximately a kilometre from the Mill.
- Approximately 7000 men and women worked for the blue asbestos mining and milling operations at Wittenoom
- Approximately 13,000 non-workers resided in the Wittenoom township.
- To date more than 2000 of the workers and residents of Wittenoom have died from Asbestos

Australia- 31 December 2003:

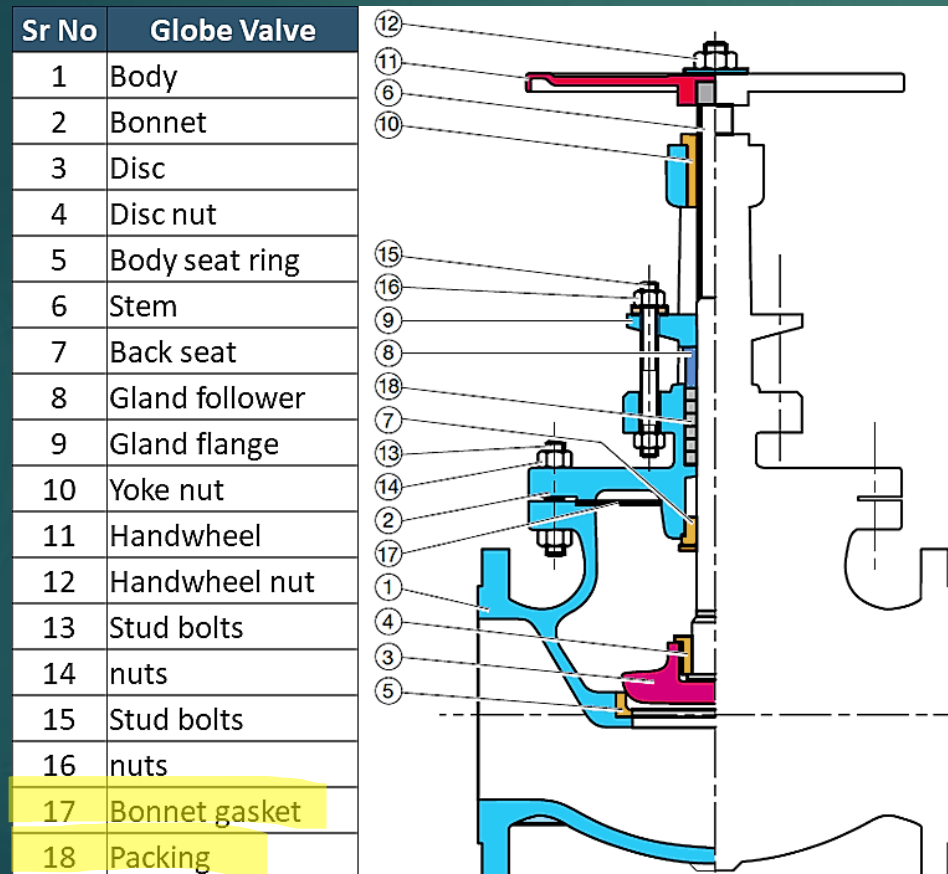
National ban on all forms of asbestos came into effect, including a prohibition on work involving asbestos or ACM in workplaces, importing, exporting asbestos in/to Australia.

This prohibition does not apply if the work involving asbestos is any of the following:

- genuine research and analysis
- sampling and identification in accordance with the WHS Regulations
- maintenance of, or service work on, non-friable asbestos or ACM, fixed or installed before 31 December 2003, in accordance with the WHS Regulations
- removal or disposal of asbestos or ACM, including demolition, in accordance with the WHS Regulations
- transport and disposal of asbestos and asbestos waste in accordance with jurisdictional legislation
- demonstrations, education or practical training in relation to asbestos or ACM
- display, or preparation or maintenance for display, of an artefact or thing that is, or includes, asbestos or ACM
- management in accordance with the WHS Regulations of in situ asbestos that was installed or fixed before 31 December 2003
- work that disturbs asbestos during mining operations that involve the extraction of or exploration for a mineral other than asbestos
- laundering asbestos-contaminated clothing in accordance with the WHS Regulations, or
- where the regulator approves the method adopted for managing risk associated with asbestos

Profluid – Asbestos related Work

- ▶ Service/ maintenance of valves manufactured before 31-12-2023



- Asbestos was a popular additive to gaskets, packing material, and insulation because it is an extremely tough mineral fiber resistant to heat or chemicals.
- Asbestos doesn't break down in the body → inhaled fibers remain in the lungs and can eventually lead to scarring and tumors

HAZARD!!!!

Valve gaskets and packing replacement or insulation removal can create asbestos dust that can be breathed in by workers.

Not only Valves....

- ▶ Industrial Pumps (packing, gaskets, insulation)
- ▶ Turbines (insulation, gaskets)
- ▶ Pipes (packaging, gaskets, insulation)
- ▶ Industrial Boilers
- ▶ Etc

Health&Safety: How to manage asbestos in the workplace?

- WORK HEALTH AND SAFETY (GENERAL) REGULATIONS 2022
- NATIONAL CODE OF PRACTICE FOR THE MANAGEMENT AND CONTROL OF ASBESTOS IN WORKPLACES
- NATIONAL CODE OF PRACTICE FOR THE SAFE USE OF SYNTHETIC MINERAL FIBRES
- NATIONAL CODE OF PRACTICE FOR THE SAFE REMOVAL OF ASBESTOS



Asbestos Management Plan

Requirement: A person with management or control of a workplace must ensure a written asbestos management plan is prepared for the workplace if asbestos or ACM has been identified or assumed present or is likely to be present from time to time at the workplace.

- ▶ Identification of asbestos and ACM, for example a reference or link to the asbestos register for the workplace, and the locations of signs and labels
- ▶ Decisions, and reasons for the decisions, about the management of asbestos at the workplace, for example safe work procedures and control measures
- ▶ Procedures for detailing accidents, incidents or emergencies involving asbestos at the workplace
- ▶ Workers carrying out work involving asbestos, for example consultation, information and training responsibilities.
- ▶ Outline of how asbestos risks will be controlled, including consideration of appropriate control measures
- ▶ Timetable for managing risks of exposure, for example priorities and dates for any reviews, circumstances and activities that could affect the timing of action
- ▶ Identification of each person with responsibilities under the asbestos management plan and the person's responsibilities – procedures, including a timetable for reviewing and, if necessary, revising the asbestos management plan and asbestos register
- ▶ Air monitoring procedures at the workplace, if required



Asbestos Management Plan

Prepared by	Plan Owner	Approved by
Francesca Scala	Profluid Pty Ltd	Jerome Monteiro
Latest Revision No.	Approved Date	Revision Comments
0	18/10/2023	Original Issue



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Document No.:REG-300

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ASBESTOS REGISTER - Date of review: DD/MM/YYYY

Workplace address: U44,110 Inspiration Drive, Wangara 6065 (WA)	
Name and contact of competent person: Francesca Scala, QHSE Manager qhse-manager@profluid.com.au	Workplace owner/Director: Jerome Monteiro, Managing Director j.monteiro@profluid.com.au

Asbestos related documents:	Asbestos Management Plan (PLN-302) National Code of practise for the safe use of synthetic mineral fibres National Code of practise for the safe removal of asbestos
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Consultation:	Safer Together, Work Safe WA
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Date	Job No.	Type of Material	Friable or non-friable asbestos	Condition of Asbestos	Specific location of identified or assumed asbestos	Notes
		Product type (e.g. cement sheet, vinyl tiles). Mineral type (e.g. chrysotile, tremolite, white, brown). Amount of material present (e.g. surface area, length, number of gaskets).		Condition (e.g. stable, poor, unknown). State of deterioration (e.g. minor, severe, weathering, cracks, peeling paint, material lifting to reveal asbestos). Surface coating (e.g. paint, vinyl). Describe if any treatment was used to prevent breakdown.	Describe the location (inside or outside). If inside include room name or number and where in the room? (e.g. floor, east wall, boiler, etc). If outside (e.g. exterior wall, south facing, etc). Reference diagrams or building plans highlighting the location. State if material is labelled and colour coded to distinguish between friable and non-friable.	State if the area is accessible. If area is not accessible, explain why it may contain asbestos. Probability of disturbing or damaging the asbestos (e.g. low, medium or high probability) from activities that would normally be carried out at the workplace. Management recommendations (e.g. restrict access, encapsulate, remove, maintain in good condition). Other details or instructions.



Requirements to conduct an asbestos related work

- 1) Workers must be informed on health risks related to asbestos →
BEGINNING OF THIS TRAINING
- 2) Workers must be trained on correct tools and PPE to use
- 3) Competent person to carry out air monitoring →
- 4) Separate the area from the rest of the workplace: area has to be barricaded and signed with appropriate Asbestos signs.

2) Workers must be trained on correct tools and PPE to use

- ▶ Must don't use high pressure water sprays or compressed air on asbestos or ACM
- ▶ Must don't use any tools/equipment that generate dust.
- ▶ Equipment used must be decontaminated.
- ▶ PPE must be worn at all times during the work in the asbestos removal area.
- ▶ PPE includes clothing (coveralls, gloves and safety footwear) and RPE should be made by material that provide protection against fibre penetration and wool and other materials that attract fibrous dust.

2) Workers must be trained on correct tools and PPE to use: DISPOSABLE COVERALLS

- Must be of a suitable standard to prevent tearing or penetration of asbestos fibres so far as is practicable—
disposable coveralls rated type 5, category 3 (EN ISO 13982–1) would meet this standard
- one size too big, as this will help prevent ripping at the seams, and
- fitted with hood and cuffs, ensuring that:
 - if cuffs are loose, they are sealed with adhesive (cloth or duct) tape
 - coverall legs are worn over footwear as tucking them in lets the dust in
 - the fitted hood is worn over the respirator straps.

Coveralls should:

- not be made of material that is easily torn
- not have external pockets or velcro fastenings because these are easily contaminated and difficult to decontaminate
- never be taken home
- never be reused
- be disposed of as asbestos waste after a single use.

2) Workers must be trained on correct tools and PPE to use: FOOTWEAR AND GLOVES

- ▶ Gloves should be worn when conducting asbestos related work.
- ▶ Best option: single use disposable nitrile gloves.
- ▶ After used, gloves should be disposed as asbestos waste.
- ▶ Safety footwear must be worn when conducting asbestos related work
- ▶ Safety footwear should be laceless, as laces and eyelets can be contaminated and are difficult to clean
- ▶ Safety footwear must be decontaminated before being removed from the asbestos work area or sealed in double bags, the exterior of which is decontaminated, for use only on the next asbestos maintenance task. Alternatively, work boots that cannot be effectively decontaminated should be disposed of as asbestos waste at the end of the work.

2) Workers must be trained on correct tools and PPE to use:

RPE

Work procedure	Required respirator	Filter type
Simple enclosure erection for containing undamaged asbestos materials to prevent damage—no direct handling but possible disturbance of asbestos	Disposable, half-face particulate respirators OR Half-face, particulate filter (cartridge) respirator	P1 or P2
Inspection of the condition of any installed friable asbestos, which appears in poor condition or has been disturbed	Disposable, half-face particulate respirators OR Half-face, particulate filter (cartridge) respirator	P1 OR P2
Maintenance work involving the removal of small quantities of friable asbestos (e.g. replacement of friable asbestos gaskets and insulation)	Full-face, particulate filter (cartridge) respirator	P3

3) Air monitoring

. Control monitoring requirements will vary depending on the type of asbestos being removed, the location and position of the asbestos, if an enclosure is used and whether the asbestos removal work is within a building or outside

Friable asbestos removal—control monitoring is mandatory for all friable asbestos removal. This includes prior to dismantling an enclosure and for the purposes of the clearance inspection.

More than 10 m2 of non-friable asbestos removal—control monitoring is not required but may be carried out by an independent licensed asbestos assessor or competent person to ensure that controls being used to eliminate or minimise exposure to airborne asbestos are effective.

Public location—Air monitoring should be considered where the asbestos removal work is being undertaken in or next to a public location.

OUT OF PROFLUID SCOPE

Air monitoring may be required when:

- it is not clear whether new or existing control measures are effective
- there is evidence (for example, dust deposits are outside the enclosure) the control measures have deteriorated as a result of poor maintenance
- modifications or changes in safe work methods have occurred that may adversely affect worker exposure, or
- there has been an uncontrolled disturbance of asbestos at the workplace.

4) Signage and barricades for asbestos work



□ Requirements for removal and disposal of asbestos

- 1) No licence required can remove: up to 10 m² of non-friable asbestos or ACM ,ACD that is associated with the removal of less than 10 m² of non-friable asbestos or ACM not associated with the removal of friable or non-friable asbestos and is only a minor contamination
- 2) Asbestos sheeting and redundant asbestos-lagged pipes and equipment should be double wrapped in heavy duty polyethylene (polythene) sheeting (minimum 200 µm thickness) and adhesive (cloth or duct) tape applied to the entire length of every overlap to secure the bundles and minimise the risk of the polyethylene sheeting tearing or splitting. Polyethylene sheeting should be new (not recycled) as recycled sheeting can have flaws in it. Once wrapped in polythene, the bundles need to be labelled to indicate they contain asbestos so they can be treated appropriately
- 3) Individual components and wiping rags should be placed in heavy duty plastic bags (200 µm polyethylene, also known as polythene) and marked with the label 'Danger Asbestos – Do not open or damage bag. Do not inhale dust'.
- 4) Each bag should be sealed with adhesive (cloth or duct) tape separately prior to placing it in a second plastic asbestos disposal bag (double packaging)
- 5) Asbestos waste awaiting disposal must be stored in closed containers. The waste drums or bins should be lined with heavy duty polyethylene sheeting (minimum 200 µm thickness), and labels warning of the asbestos waste should be placed on the top and side of each drum or bin with the words, 'Danger: Asbestos Do not break seal' or a similar warning.
- 6) Asbestos waste must be transported and disposed of in accordance with the relevant state or territory Environment Protection Authority (EPA) requirements ASAP.

☐ Requirements for Decontamination

▶ Decontamination of tools/equipment used during asbestos related work:

Use of damp rags or wet wipes to wipe down contaminated areas. Rags should only be used once, although they may be refolded to expose a clean surface. The rags should be used flat and should not be wadded. If a bucket of water is used, the rags should not be re-wetted in the bucket as this will contaminate the water. If the water is contaminated, it must be treated as asbestos waste. Care should be taken to avoid any potential electrical hazards when using this procedure.

▶ Personal decontamination:

- ☐ Remove any visible asbestos dust/residue from protective clothing using a HEPA filtered H-Class industrial vacuum cleaner or wiping down with damp rags or wet wipes. Warning: do not reuse or resoak damp rags or wet wipes.
- ☐ Carefully remove disposable protective clothing and place into bags (RPE must still be worn).
- ☐ Place rags and cloths into heavy duty polyethylene asbestos disposal bags (minimum 200 µm thickness).
- ☐ Take disposable coveralls off and place into disposal bags (RPE must still be worn).
- ☐ Use damp rags or wet wipes to wipe down safety footwear and place rags or wet wipes into asbestos disposal bag
- ☐ Seal all asbestos disposal bags with adhesive (cloth or duct) tape and place each into a second asbestos disposal bag (double bagging).
- ☐ Seal this second asbestos disposal bag and ensure it is labelled/marked as 'Asbestos Waste'.
- ☐ Use damp rags or wet wipes to wipe external surfaces of the asbestos disposal bags to remove any dust before they are removed from the asbestos removal work area.
- ☐ Remove non-disposable PPE and place in container labelled as containing asbestos.
- ☐ Remove RPE and double bag, seal with adhesive (cloth or duct) tape and ensure it is labelled/marked as 'Asbestos Waste'.
- ☐ Ensure the outside of each bag is decontaminated by using a damp rag or wet wipes
- ☐ Place the damp rag or wet wipes into asbestos disposal bags.
- ☐ Dispose of asbestos waste at the appropriate waste facility as soon as practicable.

☐ Requirements for Decontamination and Disposal of PPE

▶ Non-Disposable PPE

Contaminated clothing is laundered in a suitable laundering facility that is equipped to launder asbestos-contaminated clothing

The contaminated clothing should:

- be removed by workers when damp and then thoroughly wetted, placed in impermeable containers or bags the outside of which are decontaminated and labelled to indicate the presence of asbestos before being sent to the commercial laundering facility, and
- not be allowed to dry out before washing.

At the laundry facility:

- the containers and bags holding the asbestos-contaminated clothing should be opened in the washing machine while being further saturated. A minimum P1 respiratory protection must be worn while unloading clothes into the washing machine, and
- the empty containers or bags should be disposed of as asbestos waste. Waste water must be filtered and the filtering medium disposed of as asbestos waste.

EXAMPLE: REMOVAL PF GASKETS AND ROPE SEALS

- ▶ Gaskets and rope seals containing asbestos are generally regarded as friable. If there is any doubt, advice should be sought from a person with knowledge and experience in dealing with asbestos.
- ▶ Gaskets reinforced with asbestos were once used extensively in plant and equipment exposed to high temperatures and/or pressures. These gaskets were typically used between the flanges of pipes.
- ▶ Asbestos rope was often used for lagging pipes and valves and for sealing hatches. It is likely gaskets and rope from plant and equipment will contain friable asbestos. When removing gaskets and rope seals:
 - ▶ – ensure the plant or equipment is shut down and isolated
 - ▶ – dismantle the equipment carefully. Protect any other components with heavy duty polyethylene sheeting (minimum 200 µm thickness)
 - ▶ – ensure the plant and equipment has been made safe (pipework emptied, electrical supply isolated and equipment shut down, etc.)
 - ▶ – unbolt or unscrew the flange or dismantle the equipment
 - ▶ – once accessible, dampen the asbestos with a fine water mist or similar. Continue dampening the asbestos as more of it is exposed/accessible
 - ▶ – ease the gasket or rope seal away with the scraper and place into the asbestos waste container positioned directly beside/beneath it. Keep the area damp and scrape away any residue, and
 - ▶ – consider using a HEPA filtered H-Class industrial vacuum cleaner while scraping.