



# BCD Resources (Operations) NL Tasmania Mine

## Site Surface Safety Induction



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## **WELCOME**

Thank you for joining our team at BCD Resources. We wish you well in your job and its tasks. Whether you are a contractor, casual, or full time employee you have brought with you many valuable skills that we want you to continue using to ensure our site is safe and productive. BCD Resources are committed to the ongoing training and development of site personnel.

Please make recommendations to improve our processes and safety via your Supervisor, Safety Representatives, toolbox meetings, and Hazard reporting system (e.g. Hazard Card).

## **OVERVIEW**

Having carried out deep exploration drilling from the surface, 300-metre level and the 375-metre level, and intersected significant gold mineralisation, BCD Resources is now progressively developing ore drives, opening up stopes and continuing underground exploration.

Underground access is by winder down the Hart shaft from the surface (dimensions 5.0 metres by 3.0 metres) to the 375 metre level. The decline commences South of the 375 plat and has a gradient of 1 in 8. Fresh air to the underground workings is via the Hart Shaft and a fresh air rise which is located adjacent to the Chinese restaurant in the main street.

## **INDUCTION PROCESS**

You should have already completed a generic mining industry induction within the last 2 years, through the TIMI generic induction. If not then please speak to the inducting officer about this before continuing.

This "Surface Induction" builds on the information already provided through the TIMI generic mining industry induction. The information in this "BCD Resources Surface Induction" provides either more detail than is provided in the generic industry induction or provides information specifically applicable to working at BCD Resources.

It is not necessarily intended that this Induction be fully completed at one sitting. The information has been organised so as to cover the more critical information first. You will be required to successfully complete the competency assessment for Part 1 before proceeding to work at the site. The Inducting Officer and your Supervisor will then discuss with you a schedule for completing the other areas of the induction and training and development profile.

The information covered by the site induction can be accessed via the Web and is supported by a handbook which is for you to keep and refer to during your time at BCD Resources. It uses the TIMI system to provide the information and conduct the assessment.

Your Inducting Officer or Supervisor will have you log on to the TIMI Web page at a computer workstation.

## **OFF SITE INDUCTION PROCESS FOR CONTRACTORS**

Much of the Induction Process, including assessment, can be done before workers come to the site. In this instance speak with your Manager/Supervisor who accepts the responsibility for ensuring correct identification of yourself as the person being inducted and supervision of the off-site induction process.

### **ASSESSMENT PROCESS**

Assessment is done by logging onto the TIMI Assessment Web page. If you have done the "TIMI - Generic Induction" then you will already have your TIMI Identification Card / Login Details for logging on.

If you have not undertaken the TIMI generic induction then the Inducting Officer will assist you to enrol in TIMI.

The assessment can be done "as you go" or you can wait until you have been through all the information.

### **ORIENTATION**

The BCD Site induction process also requires the worker to view the BCD Resources Safety DVD and to undertake a site orientation.

### **AFTER SUCCESSFUL INDUCTION**

Further training in specific procedures and participation in JSA's will be conducted as needs arise, depending on the nature of tasks undertaken and work areas and where relevant to your training profile.

### **SAFETY POLICY**

We aim to achieve at all our workplaces a proactive Safety culture with zero injuries or significant incidents; we will strive to continually provide a work environment that ensures the Health and Safety of all Personnel.

This is based on the following principles:

- No business objectives take priority over Health, Safety and the Environment.
- All visitors, service providers and personnel working at a BCD Resources workplace are to abide by all policies and rules that have been formulated in the interest of Health, Safety and the Environment.
- It is expected, and your legal responsibility that you stop or refuse to complete a task if you believe it is hazardous and/or beyond your capabilities.
- Engagement of all personnel through effective communication and consultation processes to promote a collective approach to Health and Safety.
- We seek continual improvement through encouraging reporting of all Incidents, Hazards and Near Hits, so we can identify, assess and then either eliminate or control all hazards to Safety, Health and the Environment.

- We are committed to the continual review and updating of Procedures, Training, Health Surveillance, and Monitoring for all Personnel and the Environment.
- Compliance with Legal obligations is to be used as a minimum requirement for our Health, Safety and Environmental standards.

## **BCD GOALS, EXPECTATIONS & CODES OF PRACTICE**

BCD Resources is committed to carrying out its activities in a safe, supportive, ethical, respectful, lawful and efficient manner, where health, safety and the environment take priority over our business objectives!

### **Goals**

BCD Resources is committed to carrying out underground mining and processing activities in a safe and efficient manner. Our goal is to improve the general and economic wellbeing of the employees, company, community and other stakeholders.

### **Expectations**

In striving for our goals we have the following expectations:

- No business objectives take priority over Health, Safety and the Environment.
- We treat others as we wish to be treated
- We work as a team to achieve results
- We engage all site personnel through effective communication and consultation.

### **Code of Conduct**

All members of the BCD Resources team agree that the Code of Conduct reflects the way we behave and operate as an organisation.

### **We Are Diligent**

Site Personnel must carry out their roles in a professional and conscientious manner. This involves:

- Exercising care for oneself and others in all activities.
- Always adhering to company policies and procedures.
- Endeavouring to achieve highest standards of performance and adhering to professional codes of conduct where applicable.
- Taking responsibility for all issues for which we have control.
- Reporting of all incidents, including inappropriate behaviour.

## **We Respect Each Other**

Site Personnel must treat others equally and with respect.

This involves:

- Courtesy and fairness in dealing with others.
- Encouraging cooperation and appreciating different points of view.
- Avoiding behaviour such as harassment, bullying or intimidation.
- Respecting the privacy of others and confidentiality of information

## **We Respect the Law**

Site Personnel must be aware of, and comply with laws and regulations relevant to the company's operations.

## **We Respect Our Community and Environment**

Site Personnel must be aware of the natural environment and the small community in which they work and the Company operates.

This involves:

- Developing and promoting good community relationships
- Representing the Company well in all dealings both onsite and offsite
- Using best endeavours to limit the environmental footprint that the mine leaves behind.

## **We Act With Integrity**

Site Personnel must act with integrity at all times and must:

- Avoid conflicts of interest, and ensure that all business transactions are conducted solely in the best interests of the company.
- Not use confidential information obtained in the course of your duties in an improper manner.
- Use resources including property and equipment in an appropriate manner.
- Not engage in external activities and public comment that relate to your employment with BCD Resources for personal gain.
- To use best endeavours to promote the Company's interests

*This Code of Conduct is supported by Site policies.*

## **FITNESS TO WORK INCLUDING DRUGS & ALCOHOL**

Site personnel or prospective employees who use recreational or social drugs of abuse must review their habits to conform to the company's drug and alcohol policy i.e. nil present in body!

*“No site personnel shall have their safety or health compromised whilst working on, or visiting a BCD Resources site.”*

Accordingly, BCD Resources is committed to providing a site free from the adverse effects of illicit drugs and alcohol.

BCD Resources actively pursues an illicit drug and alcohol free site by implementing the following procedures:

- Pre-employment drug and alcohol screening tests
- Self-test
- Post incident drug and alcohol screening tests
- Mandatory daily alcohol self tests and random drug testing

**Note:** Random testing will be conducted at the beginning or during shifts.

***The possession or use of illicit drugs or alcohol will not be tolerated on the mine site.***

All personnel working for BCD Resources are subject to random drug and alcohol testing when at work.

A positive result or refusal to submit to testing will result in disciplinary action.

Entering any company worksite while under the influence of alcohol or any drug will not be tolerated. If in the opinion of management you have been determined as having reported to work under the influence of illicit drugs or alcohol, you shall not be permitted to remain in or on the mine and disciplinary action will follow.

**Note:** Legislation requires that you notify your employer if taking (or failure to take) medication is likely to affect your safety or that of someone else.

## **PRESENTING FOR WORK**

All persons employed by BCD Resources worksites are required to comply with these health and safety rules:

*“All personnel reporting for work must be capable of carrying out assigned duties in an alert and efficient manner. Employees who are under medical treatment must inform their doctor of the nature of their job, and enquire if the treatment will produce side effects that might affect their operating ability. If so advised, they must notify their Supervisor immediately.”*

If you feel unwell for any reason, report immediately to your Supervisor or Shift Boss. Discuss medication and effects with the OH&S Department. They have a drug compendium available to review your medication.

## SECURITY

Staff can be contacted any time for security and asset protection assistance.

**Note:** At the Mill site, a Tag Board system operates for people entering and leaving the site.

Site personnel have the right to request any person entering or leaving our site to make their vehicles, belongings and personal effects available for close security inspection. This can be requested at any time.

**Please respond politely to requests from Staff, as these people are only protecting BCD Resources assets and jobs.**

## ENTERING THE WORK AREA

Before entering the work area, you should know the layout, including the location of all exits and escape ways, safety showers, eye wash units, escape ways, telephones, fire extinguishers and first aid kits. Ensure that all entrances and exits are safe and unobstructed. Make sure that the workplace is safe, clean and tidy before starting work.

Check on chemicals storage and use, and the location of Material Safety Data Sheets. Become familiar with the protective systems/devices in your working area.

Pay strict attention to ALL safety signs.

Safety showers and eye wash units should be checked for correct operation each day. Also, it is good practice to ensure you are aware of any changes or maintenance work being undertaken in the work area - check with the area operator before entering.

## RISK MANAGEMENT

In cases where an unacceptable level of risk is identified, it is highly likely that an incident will occur. In these situations, work should not continue until the hazard has been reduced or eliminated.

Risk Control is achieved by identifying workplace hazards and taking an active approach to minimise or eliminate them.

This can be done by utilising/following the "Hierarchy of Control":

1. Elimination
2. Substitution
3. Isolation
4. Engineering
5. Administration
6. Personal Protective Equipment (PPE)

Risk assessment is defined in the Workplace Health and Safety Regulations 1998 as: "the evaluation of the **probability** and **consequences** of injury or illness arising from exposure to an identified hazard"

**Probability** refers to the actual chance/likelihood of injury occurring

**Consequences** refers to the severity of injury

## **HAZARD IDENTIFICATION & REPORTING**

A hazard is anything (including work practices or procedures) that has the potential to harm the health or safety of a person.

Site personnel have a critical role in identifying hazards because you are the ones “out there” doing the work.

If you identify a hazard and can take action to address it without putting you or others at risk then you should do so.

If you cannot safely address the hazard then this needs to be reported to your Supervisor.

In the first instance this can always be done verbally. BCD Resources have introduced a simple reporting card to encourage all site personnel to identify and report potential hazards on this site.

The card is completed and handed to your Supervisor, who if unable to fix on shift passes it up the line.

The card is entered into our Hazards reporting system and also the weekly compliance report.

Once the hazard has been appropriately addressed, it is taken back to the originator for sign off by them.

This ensures that the person who first raised the hazard is comfortable with new controls or rectification work.

**On leaving work in any part of the Mill or Mine, you must report the state of that part of the workings either to the person who relieves you or to your immediate Supervisor.**

**FRONT**  
**HAZARD CARD**

BEACONSFIELD MINE JV

Card No. \_\_\_\_\_

Originator	_____
Department	_____
Date	_____
Handed To	_____

Description of Hazard	_____
Short Term Steps Taken	_____
	_____
	_____

Original Risk Score	Temporary Fix Score	Is The Risk Permanently Controlled?	Yes	No
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**RISKmatrix** 2

CONSEQUENCE	LIKELIHOOD				
	1. Rare	2. Unlikely	3. Possible	4. Likely	5. Almost Certain
1. Insignificant	1	2	3	4	5
2. Minor	2	4	6	8	10
3. Moderate	3	6	9	12	15
4. Major	4	8	12	16	20
5. Catastrophic	5	10	15	20	25

CONSEQUENCE	LIKELIHOOD	1	2	3	4	5
1. Insignificant Minor injury Low financial loss	1. Rare	1	2	3	4	5
2. Minor More than minor injury Medium financial loss	2. Unlikely	2	4	6	8	10
3. Moderate Injury to several people High financial loss	3. Possible	3	6	9	12	15
4. Major Serious injury to one or more people Major financial loss	4. Likely	4	8	12	16	20
5. Catastrophic Fatality Huge financial loss	5. Almost Certain	5	10	15	20	25

**15-25** Very High Risk:  
Immediate corrective action or barricading required. Discontinue activity until risk reduced.

**9-15** High Risk:  
Urgent correction required. Attend to as soon as possible.

**4-8** Moderate Risk:  
Correction required. Responsibility to be allocated

**1-4** Low Risk:  
Manage through routine procedures

**BACK**

Card Accepted By \_\_\_\_\_

Date Action To Be Completed By \_\_\_\_\_

Risk Control Team Members \_\_\_\_\_

Can the Hazard be (done)		
Eliminated ?	Yes	No
Substituted ?	Yes	No
Isolated ?	Yes	No
Engineered ?	Yes	No
Administered ?	Yes	No
Protected by PPE ?	Yes	No

Hazard Control Measures Implemented: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Date \_\_\_\_\_ Final Risk Score \_\_\_\_\_

Auditing Recommendation \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Card Acceptor Sign Off: \_\_\_\_\_ Date: \_\_\_\_\_

Originator Sign Off: \_\_\_\_\_ Date: \_\_\_\_\_

**STEPBACK CARDS**

StepBack cards are designed so that site personnel can review a task or situation for their own or others personnel safety. These cards are not designed to replace Job Safety Analysis's or Safe Work procedures but to be used to check validity of procedures.

StepBack cards are an incident prevention method aimed at encouraging safe work practices and addressing unsafe acts by questioning yourself or others before beginning a task even if a procedure exists.

Do you ever do something you knew was unsafe because you've "always done it that way?" Maybe you stood on a chair to change a light bulb. Maybe you feel as though this is all right because you've "always done it this way".

This is not "thinking safely". The fact is that most injuries *don't* occur the first time a person commits an unsafe act. Most injuries occur after an unsafe act has been repeated many times over.



RISKfinder		1	
Step back 2 meters & 2 minutes and ask yourself:		Decision	
1. Is everything what you expect to see ?	Yes	No	
2. Is the job to be done according to instruction, procedure or a plan ?	Yes	No	
3. What are the physical hazards and are they controlled ?	Yes	No	
4. Is the necessary PPE being used?	Yes	No	
5. Do I have the tools/equipment and resources I need?	Yes	No	
6. Have I checked that other activities around me won't interfere?	Yes	No	
	OK	Fix	

Now use the RISKcalculator to assess the risk.

## StepBack Process

Prior to commencing a job, use your StepBack card and ask yourself these questions:

### 1. Is everything what you expect to see?

When you approach the job do not assume that all is okay, look around above and below.

Even if persons are currently working there do not assume they have seen all possible hazards.

If the answer is YES continue, if NO use the risk matrix to assess the risk and then look at the risk actions to decide what needs to be done.

### 2. Is the job to be done according to instructions, procedures or a plan?

Is there a current procedure and have **you been trained** in it, has a Job Safety Analysis been completed if no procedure.

Be aware that even if a procedure exists things are not always exactly as a procedure describes.

It may be that the procedure needs updating. If the answer is YES continue, if NO use the risk matrix to assess the risk and then look at the risk actions to decide what needs to be done.

**3. What are the physical hazards and are they controlled?**

Have you checked around you for hazards, i.e. safety clips on hose fittings, vehicle wheels not facing walls, Proper isolation of equipment and appropriate permits completed.

If the answer is YES continue, if NO use the risk matrix to assess the risk and then look at the risk actions to decide what needs to be done.

**4. Is the necessary PPE being used?**

Do you have the necessary PPE, if grinding safety glasses are not enough, goggles should be worn.

If using chemicals consult or request the MSDS sheets (Material Safety Data Sheets) for PPE, First Aid and emergency information.

If the answer is YES continue, if NO use the risk matrix to assess the risk and then look at the risk actions to decide what needs to be done.

**5. Do I have the tools/equipment and resources I need?**

Before starting a job, think what do I need to start and finish this job safely, accidents will happen if you take short cuts or whilst you are away arranging further equipment etc.

If the answer is YES continue, if NO use the risk matrix to assess the risk and then look at the risk actions to decide what needs to be done.

**6. Have I checked that other activities around me won't interfere?**

Don't just look around you, confirm that work on another level, platform or landing will not interfere with your work or your work won't create a hazard for them.

You may need to barricade or place signage so people know you are working in the area.

If the answer is YES continue, if NO use the risk matrix to assess the risk and then look at the risk actions to decide what needs to be done.

## **THE RISK MATRIX**

The risk matrix is a simple way of determining approximate risk when performing a task. When calculating a risk, be realistic do not exaggerate otherwise everything can be very high.

First determine the **likelihood** of an incident happening. Consider how frequently a person is exposed to the hazard; how many people are exposed to the hazard; how long are people exposed to the hazard for.

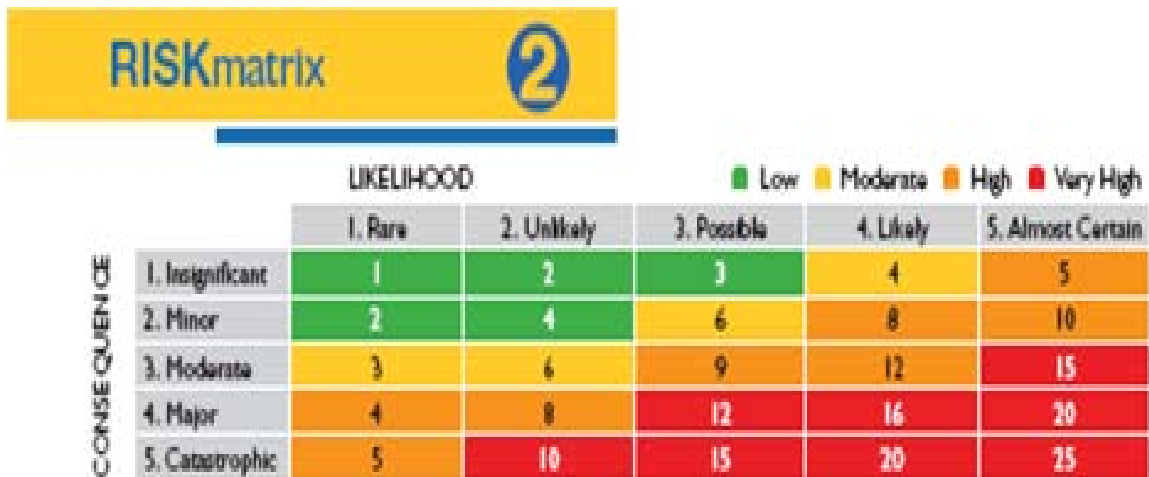
Do you know of it happening before, elsewhere or it could be somewhere in between remotely possible and possible.

Then you need to decide on the possible **consequence** of the accident if it happened. Once again you need to be realistic.

On the risk matrix, come down the relevant **likelihood** column and come across the relevant **consequence** row. The risk score is given where they intersect.

For example if you believed that (in most circumstances) a particular hazard will probably (**likely**) result in serious injury to one or more people (**major**) then the risk score is **16** which is **very high**.

Once you have decided on a risk score consider what Action is required next.



CONSEQUENCE			LIKELIHOOD		
1	Insignificant	Minor Injury Low financial loss	1	Rare	May occur in exceptional circumstances (10 years)
2	Minor	More than minor injury Medium financial loss	2	Unlikely	Could occur at some time (5 Years)
3	Moderate	Injury to several people High Financial loss	3	Possible	Should occur at some time (Once a year)
4	Major	Serious injury to one or more people Major financial loss"	4	Likely	Will probably occur in most circumstances (Monthly)
5	Catastrophic	Fatality Huge financial loss	5	Almost Certain	Expected to occur in most circumstances (Daily)

The RISKaction asks you to consider one of seven actions.

**RISKaction 3**

Apply one or more of the following ACTIONS

1. PROCEED with caution
2. ASK SOMEONE for help with the task
3. REDUCE THE RISK (apply procedure, PPE, etc)
4. DO THE JOB another way
5. Discuss with your SUPERVISOR
6. Change the CONDITIONS of the task
7. AVOID the task/procedure altogether

1. PROCEED with caution (Do not put yourself or others at risk)
2. ASK SOMEONE to help with the task or give advice.
3. REDUCE THE RISK (apply procedure, JSA, PPE etc)
4. DO THE JOB another way. (You may need to do a Job Safety Analysis)
5. Discuss with your SUPERVISOR
6. Change the CONDITIONS of the task (You may need to do a JSA)
7. AVOID the task/procedure altogether.

If you are still unhappy doing the task, then stop. If required, barricade the area, post a guard or notify others. Seek help, do no more until you are happy that the task or conditions are safe.

### **JOB SAFETY ANALYSIS (JSA)**

Job Safety Analysis (JSA) is a process whereby hazards associated with each step of a job are identified. The hazards are assessed and control measures are put in place to minimize the risk to personnel, the environment, and property. The types of jobs that require a JSA are:

- Jobs that have a history of, or a potential for injury or incidents.
- Safety critical tasks
- New jobs
- Jobs that have changed
- Jobs involving new personnel performing the tasks
- High risk jobs
- Jobs which do not have a Safe Work Procedure in place

A JSA should be completed by the person(s) doing the job in conjunction with person(s) familiar with the job area and hazards.

### **EMERGENCY MANAGEMENT & PROCEDURES**

You never know when an emergency situation will arise, but you must be prepared for it! Emergency procedures should be firmly etched into your mind, as the middle of an emergency is not the time to be enquiring what to do. So, know what to do - before it happens!

Know the location of telephones in the areas where you work, and the internal telephone numbers required in case of emergency.

**Emergency Phone: 5 5 5** (but 222 will also work)

If dialling from a mobile phone then contact the Office on 6383 6500.

Apart from site supplied VHF radios no other radios or personal phones are permitted within the immediate vicinity of the brace area or explosives storage waiting to be transported underground.

Where contractors have two-way radios fitted to their vehicles, you are required to ensure their radio is turned off before entering these areas.

**These can prematurely detonate electric detonators and interfere with the Winder microprocessors, which can cause a shut down.**

	Mine Office & Surface	Mill
<u>Evacuation Alarm</u>	A fire alarm will automatically sound should it detect smoke. This alarm can be manually activated in Reception.	<p>A continuous alarm sounds. This alarm can be activated at any of:</p> <ul style="list-style-type: none"> <li>• Outside the control room</li> <li>• Inside the control room</li> <li>• Outside the office block at the workshop, SW side</li> <li>• Inside the Bacox titration hut</li> <li>• At main gate.</li> </ul> <p><b>Note:</b> The alarm is tested every Tuesday between 12.00pm and 12.15pm.</p> <p>In addition there is a further alarm if there is an LPG leak in the gold room. This alarm has an 'on/off/on/off' signal.</p>
<u>Muster Points</u>	<ul style="list-style-type: none"> <li>• In front of mine change rooms</li> <li>• At the main gate</li> </ul>	<ul style="list-style-type: none"> <li>• Main car park outside the main gate.</li> <li>• "B" gate – road that runs along the south side of the plant (walking access only).</li> </ul> <p><b>Caution:</b> Take note of the wind directions socks and choose the safest and most appropriate muster point which will not be in the path of any dangerous fumes, gases, smoke or liquids flowing down drains. Also bare in mind any hazards in your route of travel when selecting the safest muster point.</p>

## EMERGENCY, ACCIDENT OR CHEMICAL ALERT REPORTING

- Any person recognising an emergency, accident or chemical alert must immediately adhere to the following procedure.
- Take necessary precautions to protect yourself and your workmates from danger. If in any doubt as to the nature of the hazard, evacuate immediately. Warn others.
- If possible make the area safe and eliminate any dangers to yourself, others and the casualty. Initiate DRABCD if safe to do so, or evacuate casualty to safety if safe to do so.
- If area is unsafe, secure the incident zone to prevent entry to the area.
- Notify the winder driver or PHONE 555 or 222 and be prepared to answer all questions clearly and concisely. Do not hang up until instructed. Do not panic; accurate information is essential.

- Remain by the telephone for verification — only call again if safe to do so.
- If safe, return to casualty.
- Use all available personnel to assist with duties.

If area is unsafe, initiate evacuation procedure.

**Emergency Phone: 555** (but 222 will also work)

## REPORTING ACCIDENTS

Any incident that has or may have caused injury, must be reported to your Supervisor.

It is your job and legal obligation to not only tell somebody, but to also put it in writing so it can be reviewed and preventative measures put in place.

Incident reports need to be completed for all lost time, medical treatments and workers compensation injuries.

- **Write up all self-treatments and medication taken by you in the ‘First Aid Treatment Book’ located in the First Aid Rooms. First aid boxes are provided for private and work related injuries and problems. Even a headache is to be recorded if you have taken tablets. Each time you are given or take something, write it up.**

**Note:** During your site orientation you will be shown where the first aid kits are. Many Site Personnel have been trained as first aiders.

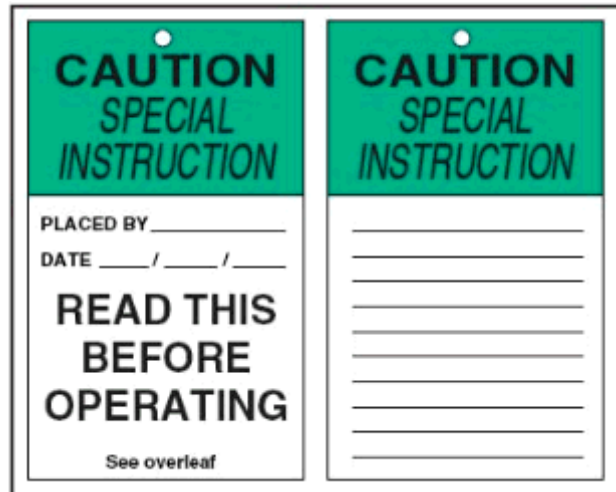
**Any incident** where an injury has occurred, an injury could have occurred (near miss), item requires further action, work done to fix it, or is a potential hazard, requires the use of an ‘Incident Report’ to be completed by you and your supervisor.

You need to give the basic facts before a full investigation can be started. The senior management group reviews these within 24 hours of presentation.

An assessment will determine the level of investigation required with the purpose of the investigation being to find the causes and implement corrective actions.

## TAGGING, ISOLATION & PERMITS

In addition to the “Out of Service” tags and “Personal Danger” tags covered in the TIMI inductions, here at BCD Resources we use ‘Caution - Special Instruction Tags’ and, also at the mill, ‘Permit To Work Tags’ and ‘Permit Controller Tags’.



“Caution — Special Instructions” are placed by Maintenance and provide information to Operators. Read the information and abide by the recommendations.

## POSITIVE LOCKOUT

The Mill has a policy of “positive lockout”, which is physically locking out with locks where isolation is required. When working at the mill site Isolation Locks are used instead of Danger Tags. These locks will be supplied for day use or full time use. Because of the amount of equipment and services that might require positive lockout there is a “Group Isolation” safe work procedure which works together with a ‘Permit to Work’ safe work procedure.

## PERMIT TO WORK (PTW)

*Definition:* A pump or gearbox will require a work order and **Permit to Work** to be issued for replacement out in the plant. However, subsequent over haul of that same equipment in the workshop does not.

Electrical work requiring hazardous process isolations will come under the permit system, however PLC changes that take place in the background or similar work will not.

Electricians will be responsible for their own isolations in the MCC’s, substations, transformers and High Voltage areas and should be noted on the permit to work if issued.

## Maintenance Tasks

All maintenance tasks that involve the isolation of equipment, potential energy sources or hazardous conditions and substances in the field require a PTW. Where a PTW requirement is unclear consult the Permit Controller.

## Electrical Tasks

Tasks involving electricity as the only hazard will not require a permit provided that the licensed electricians conducting the task are the only ones exposed to that hazard, or any other hazard inadvertently generated as a result of that task. Safe work practices must be maintained. Where electrical tasks involve process or mechanical elements a PTW will be required.

## **Process Tasks**

Where process and metallurgical personnel conduct tasks that would normally be described as maintenance tasks a PTW will be required. The Permit Controller must be mindful of PTW requirements for tasks assigned to less experienced process technicians, or when they themselves are not directly involved, to ensure correct isolation practices are employed.

**Permit to work will be used in conjunction with other permits such as confined space entry, hot work or “dig” permits by all personnel but does not replace the need for additional measures or actions required for those permits.**

**Note:** Where there is any digging to a depth greater than 300mm (or even putting star pickets into the ground to this depth) then a “dig” / excavation work permit is required. At the Mill, contact the Electrical Department who has site plans of underground services.

## **CONFINED SPACE ENTRY**

Particularly at the Mill site (and to a lesser extent at the Mine Surface and underground) there are numerous places determined as a confined space (for example, tanks, hoppers and bins).

These have been signed but if you believe the work area you intend going into would be defined as a confined space then “StepBack”, do not enter, and speak to the Team Leader so this can be determined. Any confined space entry is subject to procedures. See the Team Leader.

## **SODIUM CYANIDE EMERGENCIES**

Sodium Cyanide is used in the gold extraction process. Cyanide may be present as a solid or in solution or may be released as hydrogen cyanide gas.

## **PLANT EVACUATION FOR UNTRAINED PERSONS**

The Mill has a safe work procedure for “Handling Sodium Cyanide Emergencies” (PRO\_SWP\_3319) which you will be taken through in detail after your initial induction.

There are also other specific safe work procedures involving cyanide mixing which you will be taken through if relevant to your job. The purpose of the information provided below is to make you aware of the immediate hazards, health risks, first aid treatment and responses action.

Besides the high risk of cyanide poisoning leading to respiratory distress and possible fatality it should be known that:

- The vapour or liquid will cause irritation of the mucous membranes in the eyes, nose and throat, and may also cause skin irritation.
- Hydrogen cyanide gas in concentrations of between 6% and 41% are highly flammable.
- Welding in areas of cyanide fumes may cause flash fires. Ensure no fumes are present prior to starting HOT work

## **Cyanide emergencies may arise as mill workers: -**

- Handle dry cyanides – you can breathe in or ingest the cyanide dust without proper protection.

## **HYDROGEN CYANIDE EMERGENCIES**

- Accidentally heating the cyanide dust or solid, which releases vapours. (Spilling cyanide on the forklift exhaust)
- Inhaling smoke with vapours from a cyanide fire incident. Burning cyanide boxes and bags also releases cyanide fumes. All boxes and bags are to be returned intact to Orica.
- Highly acidic mine water in the cyanide mixing tank may release vapours.
- If any strong acid comes into contact with the cyanide solid or liquid, vapours are released.
- Using a Carbon Dioxide fire extinguisher may release vapours.
- Fire fighting water from raw process tank may cause fumes to be evolved.
- All persons require proper training in its safe handling, use and emergency procedures prior to approaching and handling cyanide.

## **PERSONAL HYGIENE**

- Personal hygiene is a must. **DO** wash hands thoroughly before eating, drinking, smoking or using the toilet.

## **FIRE FIGHTING**

Cyanide solids are Non-flammable but may evolve toxic gas when added to water or upon contact with moist air, acid salts, or carbon dioxide.

**ANY FIRES – Activate Mill evacuation alarm, consider evacuation downwind for 800 metres immediately.  
Phone “0-000” and ask for fire**

**Phone 555 (or 222) and ask for mine rescue assistance.**

## **SPILLAGE**

Establish a 25 metre buffer zone.

Position yourself upwind.

If you have not been fully trained in the emergency procedures then contact the Supervisor immediately!

## **MILD POISONING**

- General weakness, heaviness of arms and legs
- Difficulty with breathing
- Headache, nausea, giddiness and vomiting
- Breath may smell of bitter almonds
- Irritation of the nose, mouth, throat and eyes.

## **SEVERE POISONING**

- Nausea and vomiting
- Gasping for breath
- Loss of consciousness
- Convulsions
- Cessation of breathing followed by cardiac arrest.

**If you experience any of the above symptoms then speak to a trained first aider immediately!**

## **PERSONAL PROTECTIVE EQUIPMENT (PPE)**

There are some additional (or different) PPE requirements to the information provided through the TIMI General Induction.

On termination of employment, all protective equipment on issue (excluding boots) must be returned.

### **Hard Hats**

Hard Hats are to be worn on in all designated areas.

Hard hats are to be changed every 2 years (from date of issue), so make sure you check the date of issue inside your helmet. If your helmet is dropped or knocked heavily it should be replaced immediately.

When getting a new helmet from the store, ensure you write your name and the date of issue on the inside.

**Note:** Whilst the “working life” of a helmet under AS/NZS 1800:1998 is 3 years for the helmet and 2 years for the harness, the requirement at BCD is for the whole helmet to be changed every 2 years.

### **Eye Protection**

Approved eye protection must be worn in all designated areas. For Eye Protection any prescription lenses must be hardened and have side shields fitted. BCD has a policy for the provision of prescription safety lenses and frames; see the OH&S Department.

## Safety Footwear

The requirements for safety footwear is that, apart from safety gumboots worn underground, safety footwear must be lace up with good ankle support unless medical and maintenance conditions provide exemptions.



## Safety Harness & Lanyards

The "TIMI – Generic Induction" talks about a fall height of 2.4 metres. The Working at Heights policy at BCD Resources is deemed that whenever a person or object has the potential to fall more than 1.8m, a safe system of working shall be adopted.

If a person believes that they are at risk of falling at a lesser height then it should be deemed as Working at Heights and appropriate measures taken. This may include the use of safety harnesses and lanyard.

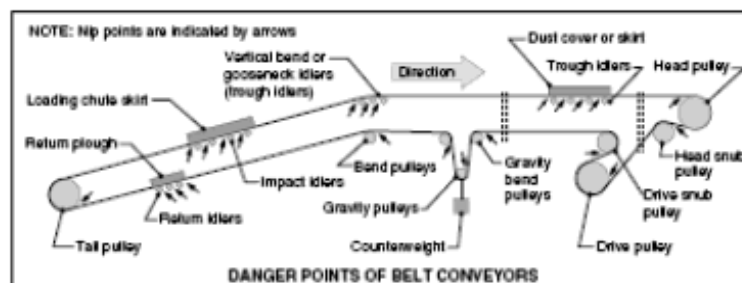
Remember people can be hurt falling distances of less than 2 metres. Risk control measures such as use of a full body harness and lanyard need to be determined by JSA. External and internal training will be provided.

## CONVEYORS

All conveyors generally travel at belt speeds quicker than a person can run. They have immense power to carry ore and therefore have the potential to cause serious injury to personnel.

- Test the safety stops daily if you are the operator
- Keep clear of all moving conveyor parts
- Observe for tramp metal or mining drill rods and ground support caught in the conveyors
- Ensure the tail, head, tensioning and change of angle roller to belt guards are in place. These are points of in-running 'nip" or crushing points

**Look closely at the following diagram conveyor 'nip' points and danger areas**



- Always stop the conveyor to remove any debris.
- Always stop and isolate the conveyor prior to removing any guards or carrying out maintenance procedures.
- When walking or operating under overhead conveyors, always check for 'jams' or material that is likely to fall.

- Observe for joins and loose wire in the conveyor that may catch your clothing. Report these to your Supervisor.
- Do not wear loose clothing, jewellery or long hair around conveyors, or any rotating machinery

## RADIATION

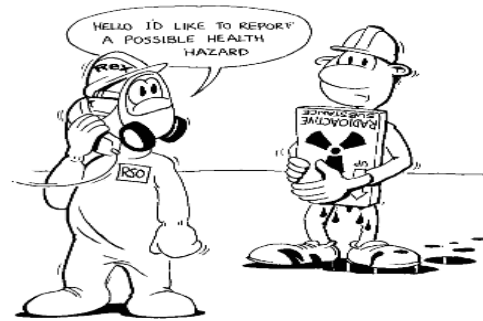
Industrial gauges containing a radioactive source are used in the following areas:

At the Mill:

- Bacox feed, above reactor one
- ISA Unit Concentrate cell
- ISA Cleaner Concentrate

At the Backfill Plant:

- Transfer line between the tanks
- Discharge line



Radiation warning signs are placed near all gauges. You will be shown these radiations sources on your site familiarisation tour.

The recommended annual dose limit for a member of the public is 1 mSv (millisievert) and for a radiation worker, it is 20 mSv. This limit does not include exposure to background radiation.

All BCD personnel are regarded as members of the public for radiation protection purposes, and therefore, the 1 mSV per year limit applies.

Under normal circumstances it would be highly unlikely for BMJV personnel to receive a radiation dose nearing the 1 mSv limit given that the radiation gauges are located in rarely occupied area.

A “job safety analysis” (JSA) is performed prior to any work being carried out near a radiation gauge. The JSA would identify a

## GRINDING

The following equipment information is in addition to other machinery and equipment covered by the TIMI generic induction.

- protect your eyes by wearing a face shield whenever you use a grinding machine. Safety glasses must also be worn under a face shield.
- examine all grinding wheels for cracks or gaps before use. Do not use a grinder if the stone appears to be running untrue.
- when using a hand grinder keep a firm grip on the handpiece to prevent it from “running” away.
- protect other people from flying particles by using suitable screens, or by warning them that you are going to use a grinder.

- the tool rest of a pedestal grinder must be adjusted to no further than 6 mm (1/4 inch) from the grinding wheel.
- stand to the side when starting pedestal grinders.
- do not use gloves when working with a bench/pedestal grinders. Keep the rest as near to the stone as possible and keep the glass shields below the horizontal position.
- do not start grinding until all unprotected persons have left the area.

## **EXPLOSIVE POWER TOOLS & EQUIPMENT**

No person is permitted to use an explosive powered tool on the BCD worksite unless authorised to do so. Proof of training and certification will be required.

## **SLINGS & LIFTING EQUIPMENT**

Only persons trained in the use of slings and lifting tackle are allowed to sling a load. The lifting gear must comply with Australian Standards and be inspected prior to any lift, and again before returning after use.

Damaged gear must not be used and be taken out of service and tagged out for closer inspection by one of our Suppliers who conducts inspections to the standards.

Do only used lifting slings that have a lifting tag on them for doing lifting. Do not use lifting slings for any purpose but lifting.

## **FLEXIBLE HOSES**

Always blow hoses out with compressed air to remove dirt and water before connecting them to equipment and carefully check both the hose and coupling for damage.

All hoses **MUST** be connected with Minsup or 'snap-on' couplings that are secured by safety clips **before** air or water is turned on.

When you have finished with a hose, it should be coiled up and hung on pins to prevent a tripping hazard and damage from vehicles driving over it. Couplings should be secured to prevent dirt entering the hose.

Mill personnel are to check suppliers and bulk tanker hose fittings prior to decanting or flow pumping acids, alkali, cyanide and lime, etc. so as to prevent cross contamination and possible chemical reaction or gas evolution.

## **STOCKPLIES, ORE BINS & SILOS**

During loading operations from the face of a stockpile, never walk closer to the toe of the pile, than half the height of the pile — it may collapse suddenly.

Never go closer than five metres to the crest of the loading face of a stockpile; - it may collapse beneath you.

Never enter or work under any bin unless you have been authorised to do so by the Mill or Mine Manager and ensure that:

- All conveyors are securely tagged and locked out
- Feed to and from the bin or pass has been stopped and DANGER signs and isolations have been placed to ensure that the feed cannot be restarted
- You are wearing a safety harness and lanyard
- No bins or silos are to be entered unless personnel are holders of a current confined space licence and the confined space entry procedure is followed.

## **OH&S CONSULTATION & COMMUNICATION**

Site Personnel are encouraged to consult with BCD Resources on health and safety at any time, and in particular raise any safety issues with Supervisors. Also available to consult with are Employees' Safety Representatives whose photos are displayed on notice boards, and the Australian Workers Union (AWU). The more formal means of consultation and communication include:

- Toolbox meetings
- Shift handover & pre shift meetings
- Participation in JSAs
- Regular information sessions
- Safety Committee Meetings
- The Safety Systems Weekly Compliance Report. This report is posted at various points and provides a summary of information such as:
  - Incidents and progress with their investigation
  - Inspections
  - Training
  - Weekly safety theme
  - Medical Treatment & Lost Time Injury Performance
  - Rock fall, rock noise and seismic activity reports
  - New or changed JSAs

## **TRAFFIC MANAGEMENT**

Vehicle accidents are a significant contributor to workplace injuries. Employees may not operate any vehicle or piece of mobile equipment unless they are suitably trained/licensed and authorised to do so. Ensure you know the rules!

## **Surface Mobile Equipment**

**Surface mobile equipment shall have the following minimum safety specifications:**

Operated by a person with a current drivers license or nationally accredited course relevant to that vehicle i.e. Forklift

- Seat belts for all occupants
- Adequate lighting (e.g. headlights, tail, turn, brake, flashing light or hazard lights)
- Reversing alarms (Vehicles taken offsite exempt i.e. OH&S ute)
- Horn
- Effective windscreen wipers
- Mirrors
- Effective guarding on accessible moving parts.
- Fire extinguishers and in some cases AFFF fire suppression systems.
- Isolation switches on designated vehicles
- Comply with MDG15 (Guideline for Mobile and Transportable Equipment for Use in Mines – NSW Sept. Of Primary Industry) and other relevant standards.

Layout of cabins should take into consideration the ergonomics of seating, operator controls, and retrofitted devices.

### **Procedural Requirements**

- Seat belts shall be used in all cases for all occupants.
- Vehicles entering the mill and mine brace areas are required to have operational a flashing beacon (if fitted) or operating hazard lights. This is to give pedestrian's visual warning of vehicles in the vicinity.
- A formal risk-based selection and acceptance process shall be in place for all new (to site) and modified surface mobile equipment prior to commencement of work on site.
- Prestart checks for all site based vehicles as per underground vehicles and procedures.
- Procedures shall be in place to ensure surface mobile equipment only operates on sufficiently stable surfaces and on gradients that are within the limits of safe operation.
- Dust control for roads, for haulage operations shall be in place. Consideration to be given to extreme wet weather and the issue of over-watering roads.

- A maintenance and inspection program shall be in place for site based surface mobile equipment.
- Vehicle removed from site on a daily basis are required to have vehicles regularly serviced.
- Maximum site speed limits are marked and operators should drive to conditions not the maximum speed limit.

### **Speed Limit & Limited Access**

- Restricted access has been implemented to stop the flow of unauthorised vehicles into restricted areas.  
These areas include the Mill site and ROM pad, Mine site brace area and ROM pad.  
The speed limit, once entering restricted areas within mine and mill drops to 8kph with the requirement to turn on flashing beacon (if fitted) or hazard lights.
- Road signage e.g. stop signs are in place and must obeyed.
- Haul road over Cabbage Tree Hill between the mine site and Holwell Road has a maximum speed limit of 45kph.
- Holwell road is 100kph.
- Rifle range road from Holwell Road to the mill ROM pad gates is 60kph then drops to 35kph then drops further to 20kph as you pass through the car park. Areas are sign posted.

### **Surface Haul Trucks**

Surface haulage trucks operate between the Mine and Mill Room pad. Drivers of these vehicles are subject to normal heavy vehicle licenses and road rules.

### **Haul Road**

The section of road from Holwell Road over Cabbage Tree Hill is owned and maintained by BCD Resources and experiences heavy traffic from trucks. If this road is used all vehicles must comply with all safety signs including no overtaking while on this road.

### **Power Lines**

Power lines cross the lease in several areas on and between the mill and mine sites these are marked with signs showing clearances.

It should be noted that these clearances are a guide only and any person moving large machinery or loads around site should be aware and have heights of power lines measured using electronic equipment, not tape measures.

## **Mobile Phones**

No person will operate a mobile phone whilst driving. Except if the vehicle is fitted with a hands free kit. Even if fitted personnel are encouraged to pull over and park safely to answer or make the phone call.

## **Loading & Unloading of Vehicles**

- When site personnel are loading or unloading vehicles, only persons licensed and trained in the use of that vehicle can operate it i.e. forklift
- When loading or unloading vehicles the operator is to ensure that no person stands behind or near the load in case the load is dropped or knocked off the transport vehicle. This is the responsibility of the operator who should consider barricading off the area with wickets, tape or posting a guard.

## **Securing Loads**

When a delivery of materials comes to site the delivery driver may only partially unload his vehicle. Whilst the vehicle is under the driver's control, it is our duty of care to speak to the driver should you believe a load is not properly secured or the weight distribution is no longer appropriate. In this instance, mechanical means/assistance may be required to redistribute the load. This may include material loaded from this site for removal.

**Note:** Load restraint chains are not to be used for any other purpose other than restraining loads.

Some examples of this may be:

- Materials unloaded from one side of truck. The load is now uneven.
- Failure to properly re-secure load including timber used for spacing.
- Scrap metal or rubbish skips not being covered prior to removal from site.

## **Vehicles that leave BCD lease**

- Will be registered
- Be fitted with a fire extinguisher and first aid kit
- Be in a roadworthy condition.

## **Vehicle & Pedestrian Interaction**

At BCD Resources it is hard to segregate pedestrians and vehicles as both are needed to operate and access the same work areas.

Where possible, areas should be designed to allow for pedestrian access only i.e. bollards or hand rails. Dome mirrors, drop bars etc. should be considered for blind corners or where vehicles such as forklifts come out of buildings.

- Speed limits, Mirrors, flashing lights, reflective clothing etc. are used to help minimise any incident between vehicles and pedestrians.
- If a job is to be done that is outside normal procedure then a JSA should be done to consider potential hazards e.g. trucking material in and out of processing plant.

## INCIDENTS

An incident report must be filled out for all incidents involving site personnel either onsite or offsite whilst conducting company business. This includes any incident which has, or may have caused injury or illness, or has caused a first aid injury.

Personnel may be required to undergo drug and alcohol testing as per the BCD Resources Drug and Alcohol Policy if involved in an incident. This also includes contractors or delivery vehicle drivers whilst onsite.

## SMOKING IN THE WORKPLACE

The Company's general philosophy is to encourage employees to give up smoking.

### Smoking is prohibited in:

- All offices
- Crib rooms
- All vehicles.



If a non-smoker asks you to stop smoking in their work area, **you must comply immediately.**

## EMPLOYEE ASSISTANCE PROGRAM (EAP)

Personnel whose work attendance, performance or safety are, or may be, significantly affected by the problems in daily living, may benefit from the Employee Assistance Program.

### Purpose

BCD Resources offers **confidential** support for emotional, financial and other personal matters. This has been put in place to assist site personnel and their families deal with challenges both inside and outside of the workplace. Personnel who have less distractions and worries at work will be safer, happier and more productive.

## **Scope**

This program may also extend to site personnel's immediate family members. Each case is recognised as having unique requirements.

Examples of assistance can be sought for counselling and guidance for but not limited to:

- Grief and bereavement. Losses and life change.
- Marriage and Family relationship building.
- Individual behaviour and conflict counselling.
- Crisis intervention and coping with unique circumstances.
- Budgeting and Financial concerns
- Substance misuse: drugs or alcohol. (also gambling problems)
- Issues arising from performance appraisal.

## **Procedure**

**EAP will be available to personnel through various methods:**

### **Self Referral**

Personnel may (at any time) access the Company's counselling service for support. In this case the person can make direct confidential contact and the Company will pay the cost of up to three visits.

### **Referral from the OH&S Department or Management**

EAP can also be accessed after a discussion between the site employee and the OH&S Manager. This is treated as confidential. The Company will pay the cost of up to three visits. Further visits at company expense are possible, after further discussions with the OHS Manager.

### **Tarp's (Trigger Action Response Plans)**

An incident may occur onsite which requires referral to the TARP's for Personnel Support.

#### **This incident may be from a:**

- Near Miss/hit
- Seismicity
- Person involved in an incident
- Witness to an incident
- Any other incidents, where a person or persons may experience significant distress

## Referral arising from a Performance Improvement Plan

- EAP may be offered during a person's performance review as a means of addressing possible underlying causes of a performance issue.
- While a person can refuse to attend a counselling session, the offer is made to assist in improving performance.
- If a person refuses to attend and the performance problem continues then that person may be deemed to have not taken all reasonable steps to address the issue.

In these circumstances a report may be required with regard to attendance and issues addressed. This would be jointly prepared between you and your counsellor.

## Counsellors

EAP counsellors are well qualified and experienced. On some occasions they may further refer personnel to other specialized counsellors to meet specific needs.

## Counsellor Location

The location of the EAP counselling service is in Launceston and easily accessible. Counsellors may, by agreement, visit personnel at the worksite or in proximity to it in the Beaconsfield area.

Where a request for a counsellor in another location is required the EAP counsellors will be happy to assist the person to access a suitable counsellor.

## Program Costs

Although methods of accessing the EAP program vary, the costs of each program will be covered to the following extent:

Three sessions at no cost

(Any further sessions by discussion and agreement with the OHS manager)

For further information and brochures contact - OH&S Manager - ext. 135  
or 0418 998166

or make Direct Contact:

Counselling service is provided by:

**The BLUE DOOR - 165 York Street Launceston**

- **David Hunnerup    0409 207926**
- **Deborah Klye        0409 948172**
- **Andrew Harris       0405 783217**

After hours and weekend consultations are available

## ENVIRONMENTAL MANAGEMENT

The BCD Resources Safety Policy also reflects our commitment to the Environment. Mining operations have the potential to cause environmental impacts.

BCD Resources could lose its Mining License due to excessive noise, vibration, dust by or contaminating the town or environment. Therefore risks require identification and mitigation.

It is everybody's responsibility to ensure that the operation has as little impact as possible.

Fundamental points are:

- If you notice anything unusual report it to report it to your Supervisor / Team Leader. For example unusual discharge in waterways (all water from the mine and mill sites drain into the tailings dam Middle Arm Bay, part of the Tamar Estuary) or excessive amounts of dust or air pollution and cracks in bunding.
- Prevention is better than cure! For example, put waste oil storage containers in the bunded storage area; spills or discolouration to water from the mine or mill.
- If there is a hydrocarbon spill (e.g. oil spill) do clean up using the pads, pillows and peatsorb found in the yellow spill kits. These are yellow wheelie bins that are found around the mine and mill sites and in relevant areas at the underground.
- Manage waste
  - Reduce
  - Reuse
  - Recycle - glass, paper/cardboard, plastic, aluminium, tyres, scrap steel, oil
  - Place in appropriate disposal bins
- Waste oils are stored in 1000 litre containers, in bunded areas and then pumped into a truck and removed off site by a Contractor.
- Oils containers must be kept in bunded area. Bunding is important because it stops the ground water becoming contaminated.
- Report any spills oils pills to your Supervisor immediately. In the event of a spill it will probably be necessary to fill out and incident report form.
- Setting fire to waste on site is prohibited.
- Do report any excessive noise or vibration.
- Clearing of vegetation requires approval.
- Pets are banned on site.