

..... **Mine**

# Alluvial Gold Mine Health and Safety Management Plan

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**Health and Safety Policy**  
**(Can be laminated and displayed at site)**

**We will provide a healthy and safe place for all persons on site.**

We will take all reasonable actions to prevent illness and injury to workers by:

- Providing safe methods of work or procedures, and
- Training workers and provide supervision and enforcement of safe work procedures, and
- Providing fit-for-purpose, well maintained plant and equipment.

We will consult and provide opportunities for worker participation.

We will ensure that everyone at our mine is aware of their responsibility to contribute to a healthy and safe workplace.

Signed (Mine Operator): \_\_\_\_\_

Signed (Mine Workers): \_\_\_\_\_

Date: \_\_\_\_\_

## **Responsibilities**

**These are the responsibilities that a mine operator has under the legislation as the appointed Manager.**

### **Mine Manager/Owner**

- Ensure, as far as is reasonably practicable, the health and safety of all workers
- Develop, document, implement, and maintain a health and safety management plan that enables compliance with the Health and Safety at Work Act 2015 (HSWA) and the Health and Safety at Work (Mining and Quarrying Operations) Regulations 2016 (HSWR)
- Identify all hazards and ensure there are controls in place that reduce the risk to as low as reasonably practicable
- Train workers so that they are competent to perform their duties
- Provide for adequate planning, organisation, leadership and control of operations
- Provide adequate supervision, inspection and control of operations.

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# Mine Record

**(This form should be filled out each week the site is operating – record any activities that occur at the site)**

Week ending:
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Activities (Hazards identified/actions taken, new or irregular tasks, Inspections conducted)

Maintenance		
Plant serviced	Service type	Details

Induction/Training		
Date	Person inducted	Details

Mobile Plant pre-starts completed			
Excavator:	Completed:	Yes	No
Front end Loader:	Completed:	Yes	No
Bin Truck:	Completed:	Yes	No
Other:	Completed:	Yes	No
Other:	Completed:	Yes	No

Name		Position	
Signature		Date	

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## Workplace Inspection Checklist

<b>Name of Site</b>		<b>Date and time</b>	
<b>Name of Person</b>		<b>Weather</b>	

Item	Observation	Result * / ✓	Comments/Actions
<b>1.0</b>	<b>SITE ENTRY AND PARKING</b>		
1.1	Signage is adequate, clean and easy to read		
1.2	Traffic flow is working adequately		
1.3	Parking is adequate and visible to visitors		
<b>2.0</b>	<b>AMENITIES</b>		
2.1	Adequate facilities (water, toilet etc.)		
<b>3.0</b>	<b>MOBILE EQUIPMENT</b>		
3.1	Lights, horn, reversing beeper are working		
3.2	Steps and handrails are in good condition		
3.3	Seat and seatbelt are in good condition		
3.4	Cabin is clean and free of dust and dirt		
3.5	Pre-starts have been carried out		
<b>4.0</b>	<b>CRUSHING AND SCREENING PLANT</b>		
4.1	Guards are adequate and in place		
4.2	Emergency stop/lanyards are accessible and tested		
4.3	Adequate access to crushers and screens for maintenance		
4.4	Housekeeping, spillage, leaks are controlled		
4.5	Electrical cabinets are locked		
4.6	Portable electrical equipment is tested and tagged		
<b>5.0</b>	<b>ROADS, RAMPS AND DUMPS</b>		
5.1	Road condition: graded surface, no spillage, potholes		
5.2	Access to the site is adequately sign posted		
<b>6.0</b>	<b>OPEN PIT/EXCAVATION</b>		
6.1	Safety exclusion zone is in place		
6.2	Hazards are clearly identified		

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**Mobile Pre-start Checklist**  
 (Complete each time you use the excavator)

<b>Vehicle</b>		<b>Date</b>	
<b>Operator</b>		<b>Service Hrs</b>	

<b>Legend</b>	✓ = Standard met	✗ = Action required	N/A = Not applicable to this site
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	M	T	W	T	F	S	S	Comments / Faults
<b>Engine</b>								
Radiator hose and clamps								
Radiator core condition								
Vee-belt condition & adjustment								
Fan hub bearings								
Oil / water leaks								
Air intake hoses and clamps								
Air cleaner indicator level								
Mountings								
Battery condition								
<b>Drive Train</b>								
Transmission oil leaks								
Wheel hub oil leaks								
Wheel nuts and locks								
Front and rear drive line condition								
Tyre condition/damage								
<b>Vehicle System</b>								
Steering linkages (refer OEM)								
Emergency steering (refer OEM)								
Articulation bearings & retainers								
Main frame cracks								
Air leaks								
Drain air tanks								
Hydraulic operation								
Hydraulic oil leaks								
Park brake operation (refer OEM)								
Service brake operation (refer OEM)								
<b>Cab</b>								
Seatbelt (fitted and working)								
Steps/grab rail								
General cab condition								
Lights (head, tail & dash)								
Warning lights & gauges								
Control linkages								
Air conditioner operation								
<b>Operator initials:</b>								

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## Pre-start Checklist (Processing Plant)

**(Complete each time you start the plant)**

<b>Item</b>		<b>Date</b>	
<b>Operator</b>		<b>Service Hrs</b>	

<b>Legend</b>	✓ = Standard met	✗ = Action required	N/A = Not applicable to this site
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	M	T	W	T	F	S	S	Comments / Faults
Check engine and hydraulic oil levels leaks								
Check for hydraulic leaks								
Clean or change engine air filters								
Vee-belt condition & adjustment								
Check water coolant and top up as required								
Oil leaks								
Check grease nipples are working								
Check all rollers/ bearings are running freely								
Battery condition								
Remove loose material around belt rollers								
Check tracking of all belts								
Check tension on screens								
Check locking pins and wedges								
Check tail drum shafts and bearings linkages (refer OEM)								
Ensure conveyors are free of debris								
Ensure all guards are in place								
Check for air leaks								
Check skirting rubbers								
<b>Operator initials:</b>								
<b>Fault/Action Required:</b>					<b>Assigned to:</b>			<b>Completed Date:</b>

# Safe Operating Procedure for Isolation of Plant and Equipment

**(This procedure should be followed whenever you are working on plant and equipment)**

**Objective:**

The aim of this procedure is to ensure that all energy sources that supply power to plant or equipment have been rendered safe (isolated) prior to maintenance being conducted.

This procedure covers all energy sources on site:

Electricity	Batteries	Pneumatics (air)	Mobile Plant
Hydraulics	Motor (diesel & petrol)	Steam	Gravity

**Energy sources shall be isolated as follows:**

All worker/s that undertake any maintenance task are to isolate the equipment they are working on before commencing the task.

Each worker must install his or her own lock and personal isolation tag. The name of the worker must be written on this tag before isolation.

1. Inform all persons in the work area that maintenance is to be conducted on the equipment and it will be isolated.
2. Locate the MAIN SWITCH, VALVE OR KEY of the energy source (always isolate the main switch as some stop / start devices do not provide adequate protection).
3. Turn the energy source completely off or remove the key.
4. Fit your lock and personal isolation tag to the main switch or valve.
5. Test for zero potential (dead) - go to the start button and attempt to start the equipment. If the equipment does not start on this test it is safe to start work.
6. When and only when the task has been completed, each worker is to remove his lock and personal isolation tag.
7. Locks and personal tags can only be removed by the person placing the tag. Any person who removes a lock or personal tag placed by another person faces immediate disciplinary action.
8. The SSE may remove a lock and personal tag placed by another person only after contacting the person who placed the tag and receiving all clear to remove the tag.
9. In the event that the person who placed the tag is not contactable, the SSE will conduct a thorough examination of the plant / equipment to satisfy themselves that it is safe to remove the tag and that it is safe to operate.
10. When all locks and tags are removed and persons accounted for, the person responsible for the task shall test the plant / equipment for safe operation.

If an inspection is to be undertaken of plant / equipment and the person completing the inspection may come into contact with the energy source or moving parts, then the equipment must be isolated.

Worker/s are trained in isolation and issued with a copy of this procedure on induction.

**Out of Service Tags:**

Out of Service Tags shall be placed on:

- Faulty or dangerous equipment, and;
- Equipment that is to be kept out of service for operational reasons.

Equipment that has been tagged Out of Service shall not be started or operated. An Out of Service Tag shall not be used as a substitute for a full isolation.

**Do Not Operate Tags:**

Do Not Operate Tags shall be placed on:

- machinery that is currently being serviced

# Emergency Response Plan (ERP) - STOP THINK ACT

(Fill out this form and display it at the site)

Emergency – Life or Property – Dial 1 1 1			
Site Address and Coordinates			
Emergency Assembly Area			
Fire extinguisher and First Aid Kit			
Nearest Medical Centre			
Emergency Signal and Emergency Procedure			
<ul style="list-style-type: none"> <li>• Continual sounding of vehicle horns and or notification over Radio Telephone (where available), and/or alert others by shouting “emergency...emergency...emergency”</li> <li>• Dial 111 for Emergency Services, Ambulance, Fire, Police</li> <li>• Give details of emergency and service required</li> <li>• Give the location including a rapid number if applicable</li> <li>• Give a contact phone number</li> <li>• Have personnel wait for the services at a prominent location upon arrival</li> <li>• Report incident to management immediately (contact details below)</li> <li>• In the event of an incident/accident or near miss onsite report to management immediately then complete the Accident report &amp; Investigation form</li> </ul>			
In the event of			
Fire	<ul style="list-style-type: none"> <li>• Alert others of the fire by shouting or by radio telephone if available</li> <li>• Only attempt to control a fire with extinguisher if it is safe to do so</li> <li>• Otherwise evacuate to assembly area and call the fire service</li> </ul>		
Earthquake	<ul style="list-style-type: none"> <li>• If you are in your vehicle - remain in it</li> <li>• If inside a building, stand next to a wall</li> <li>• If outside - stand clear of overhead lines</li> <li>• Evacuate to the assembly area</li> <li>• Call emergency services if required</li> </ul>		
Serious Accident Electrocution	<ul style="list-style-type: none"> <li>• Ensure personal person safety first</li> <li>• Only isolate power if safe to do so</li> <li>• Contact emergency services</li> <li>• Provide basic first aid until emergency services arrive, if safe to do so</li> <li>• Evacuate to assembly area</li> <li>• Secure accident scene</li> </ul>		
Guiding Emergency Services			
A person is to instruct someone to meet emergency services at a prominent location upon arrival (where possible).			
Contact Phone Numbers			
Mine Operator		Police/Fire/Ambulance	111
Mine Manager		Power faults	0508 325 328
Operator		Emergency Spills BP	0800 805 111
Operator		National Poisons Centre	0800 POISON (764 776)
First Aiders are		Pollution Spills	0800 765588



# Letter to Emergency Services

Date: \_\_\_\_\_

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Dear Officers

I am writing this letter to inform your station of our extractive operation, and we are operating within your station zone. The attached page lists the following information:

1. name of operation and manager
2. type of operation
3. written directions to the operation, a map and site plan
4. contact telephone numbers and names
5. extraction taking place
6. plant and equipment used to win and process the product
7. the maximum number of persons that may be on site at the time of an emergency
8. equipment on site to assist in the event of an emergency

The site is open (days) \_\_\_\_\_. When open the hours of operation are \_\_\_\_\_ to \_\_\_\_\_.

We would also like to extend an invitation to all station officers to visit the site for an inspection of the operation and review emergency procedures. We hope this information may assist officers in the event of an emergency and we look forward to further communication with your station.

I may be contacted by telephoning \_\_\_\_\_ for further information or to arrange a site visit.

Yours sincerely

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## **Notice to Emergency Services and Neighbours**

**(Use this form to advise emergency services or neighbours of your activity in the event that you may need their help. Useful for one-man sites)**

Details of Mine Operations:	
Type of Operation:	
Location:	
Site Manager:	Contact Number:
Employee(s):	Contact Number(s):
Maximum number of people on site:	
Type of Work undertaken:	
Plant and Equipment on site:	
Emergency equipment:	
Hazardous Substances on site:	
Special Information:	
Signed by Mine Operator:	Date:

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**Report of an accident/incident or near miss**

<b>Particulars of incident</b>		
Date:	Time:	Location:
<b>Type of incident (please circle below)</b>		
Injury	Illness	Environmental
Notifiable Event	Other:	
Reported by:		Phone:
Role in the event:		Email:
<b>The injured person</b>		
Name:		Phone:
Age:	Address:	
<b>Witness(s)</b>		
Name:		Phone:
Name:		Phone:
Name:		Phone:
<b>Describe the incident (space overleaf for diagram if needed)</b>		
<b>Describe any illness or injury. What part of the body is affected and how?</b>		
<b>Describe any property damage. What damage was caused and how?</b>		

<b>Analysis: What do you think caused or contributed to the incident?</b>	
<b>Prevention: What action has been taken to prevent a reoccurrence?</b>	
<b>Have all preventative actions been reviewed by the Directors, and implemented?    Yes        No</b>	
<b>Director Signature:</b>	<b>Date completed:</b>
<b>Treatment</b>	
A & E Hospital:	Doctor:
Type of treatment provided:	
<b>Notification and investigation WorkSafe Phone: 0800 030 040 (24 hours)</b>	
WorkSafe NZ advised by:	Date:
Investigation conducted by:	Date:
Risk Register updated by:	Date:

**Diagram:**

**In the event of a notifiable event, you must complete an Incident Investigation and submit it to WorkSafe NZ**

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## Training Plan

<b>Name of person</b>		<b>Employment start date</b>	
<b>Position</b>		<b>Reporting to</b>	

<b>Name of Course / Job Task</b>	<b>Qualification Gained</b>	<b>Date Completed</b>	<b>Worker Sign-off</b>	<b>Manager Sign-off</b>	<b>Refresher / Review Date</b>

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## Site Safety Rules

**(It is a good idea to have a written set of site rules like this to give to visitors and new people to site etc.)**

### Thank you for visiting our site

While you are visiting our mine, we are responsible for your health and safety.

These site rules summarise the work practices that apply to our mine.

1. The person responsible for your supervision is \_\_\_\_\_.
2. A first aid kit is located \_\_\_\_\_ and \_\_\_\_\_ is trained in first aid.
3. In the case of an emergency, go to \_\_\_\_\_ and follow the emergency procedure.
4. You can only visit those areas as directed by the company representative.
5. You must wear personal protective equipment (PPE) as indicated by the signs on site or as indicated by this safety plan.
6. You must report to \_\_\_\_\_ when you arrive on site (ph): \_\_\_\_\_.
7. Please be aware of mobile plant at all times.
8. Our company policy on children entering the site is \_\_\_\_\_.
9. Please be aware of and stay away from any excavation or water body.
10. If you see any hazards on site, please report them immediately to \_\_\_\_\_.

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**Health and Safety Staff Meeting**

<b>Meeting taken by:</b>	
<b>Date:</b>	<b>Location:</b>
<b>Staff Present (Names)</b>	<b>Signature</b>
<b>Topics Discussed</b>	
<b>Matters Arising to be Addressed</b>	
<b>Next Meeting</b>	

# Risk Assessment Matrix

Consequence			
Economic	Safety	Environment	Scored
More Than \$500,000 Prosecution or significant restrictions on operational activities against company Negative publicity	Multiple fatality (e.g. fatal) Loss of life, permanent disability or multiple serious injuries	Toxic release onsite/office with detrimental long-term effects	5 - Catastrophic
More than \$100,000 and less than \$500,000 Prosecution against the company Negative publicity	Extensive injures or single fatality Serious injury (injuries) requiring specialist medical treatment or hospitalisation	Infringement fine, Abatement Notice, off site release entering private property or storm water, major negative effects or cultural significance	4 - Major
More Than \$10,000 and less than \$100,000 Major enforcement against company	Medical treatment (e.g. Hospitalisation or short or long-term disability)	Adverse inspection report, onsite release requiring outside help to clean up. Damage to items of ecological or cultural significance	3 - Moderate
More than \$1,000 and less than \$10,000	Minor injury requiring First Aid treatment (e.g. minor cuts, bruises, bumps) One week off work	Onsite release requiring containment	2 - Minor
Minor damage, waste, re-work or vandalism of asset or product. < \$1,000	No treatment required	On site release immediately cleaned up < 1 litre	1 - Superficial

Likelihood - Select a category from the table below					
Consequence	1 – Rare	2 – Unlikely	3 – Possible	4 – Likely	5 – Almost Certain
Select category from the Consequence table ←	Will occur in exceptional circumstances	Not likely to occur within the foreseeable future, or within the project lifecycle	May occur within the foreseeable future, or within the project lifecycle	Likely to occur within the foreseeable future, or within the project lifecycle	Almost certain to occur within the foreseeable future, or within the project lifecycle
5 - Catastrophic	Med (5 M)	Med (10 M)	High (15 H)	Critical (20 C)	Critical (25 C)
4 - Major	Low (4 L)	Med (8 M)	Med (12 M)	High (16 H)	Critical (20 C)
3 - Moderate	Low (3 L)	Med (6 M)	Med (9 M)	Med (12 M)	High (15 H)
2 - Minor	Very Low (2 VL)	Low (4 L)	Med (6 M)	Med (8 M)	Med (10 M)
1 - Superficial	Very Low (1 VL)	Very Low (2 VL)	Low (3 L)	Low (4 L)	Med (5 M)

Assessed Risk Level	Actions to Consider
Very Low	Undertake the activity with the existing controls in place and continue to monitor.
Low	Additional controls may be needed. Continue to monitor.
Med	Controls will need to be in place before the activity is undertaken. Continue to monitor.
High	Mitigate and implement controls to that reduce threat to medium level or below. Full risk assessment and work method procedures are required to be prepared before any works proceed. Continue to monitor.
Critical	All practical steps should be taken to Eliminate the risk. Where elimination is not practical, develop a detailed hazard or risk assessment with controls to that reduce threat to medium level or below. Full risk assessment and work method procedures are required. Continue to monitor.



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## Risk Assessment

<b>Mine Name:</b>	<b>Scope of works:</b>					<b>Author:</b>	<b>Date:</b>			
<b>Reviewed by</b>	<b>Print name</b>	<b>Signature</b>		<b>Date</b>	<b>Revision #</b>	<b>Approved by</b>		<b>Date</b>		
Mine Operator										
Mine Manager										
<b>Review and monitoring:</b>				<b>Date for Review:</b>						
<b>Supporting documents (tick)</b>			<b>Permits to work and/or induction to the site (tick)</b>		<b>Basic personal protective equipment (tick)</b>					
Traffic management plan	Safety data sheets		Induction to the work site	Hot works	Hard hat	Hi-vis		Safety boots		
SOP	Lock out padlock and out of service tags		Lifting plan	Other:	Gloves	Safety glasses		Earmuffs		
<b>Equipment required (tick)</b>					<b>Other</b>					
Crowbar	Hammer	Tool kit		Other:	Signage		Spill Kit			
Spade	General tools		Grease gun		Comments					
<b>Hazard Controls: Eliminate, Substitute, Isolate, Engineering, Admin, PPE - Consequence (C) + Likelihood (L) = Risk Ranking Score</b>										
What is the Hazard?	What can the Hazard do?	Risk Ranking Before Controls			Controls for the Hazard Substitute, Isolate, Engineering, Admin, PPE	Further Actions and/or Controls Needed	Risk Ranking After Controls			How will this be monitored?
		C	L	Risk Score			C	L	Risk Score	

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**Risk Assessment**

Hazard Controls: Eliminate, Substitute, Isolate, Engineering, Admin, PPE - Consequence (C) + Likelihood (L) = Risk Ranking Score										
What is the Hazard?	What can the Hazard do?	Risk Ranking Before Controls			Controls for the Hazard Substitute, Isolate, Engineering, Admin, PPE	Further Actions and/ or Controls Needed	Risk Ranking After Controls			How will this be monitored?
		C	L	Risk Score			C	L	Risk Score	