

JOB SAFETY ANALYSIS - (JSA FORM)

ALL PERSONS PERFORMING WORK UNDER THIS JSA MUST COMPLETE THE SIGN-ON SECTION PRIOR TO COMMENCING WORK

Zero Harm - Nobody Gets Hurt

<input type="checkbox"/> OTML <input type="checkbox"/> Contractor:	Department:	Site Name:	Location:
Description of the Job:	Effective Date:	Is there a SWP for this task?	JSA No.: Version No.:
		<input type="checkbox"/> Yes <input type="checkbox"/> No	Eg MW06-ref-???

Team members that developed the JSA			Equipment Name:	Equipment No.:
Name & ID	Skill	Signature	Highest ranked risk with controls:	Work Order No.:
			Equipment/Tools Name:	Equipment/Tools No.:
Isolation Required?	<input type="checkbox"/> Yes (Group or DWA)	<input type="checkbox"/> No	<input type="checkbox"/> Nil Isolation	
Permit / Certificate Required?				
<input type="checkbox"/> None	<input type="checkbox"/> ATW Permit	<input type="checkbox"/> Dual Worker Authority	Control Equipment Required:	
<input type="checkbox"/> Hot Work*	<input type="checkbox"/> Radiation	<input type="checkbox"/> High Voltage Vicinity	*(Fire Extinguisher, Rescue Plan/Equip, Barricading, etc.)	
<input type="checkbox"/> Work at Height*	<input type="checkbox"/> Excavation /	<input type="checkbox"/> High Voltage Access	Hazardous Materials or	
<input type="checkbox"/> Confined Space*	Trenching / Unearthing*	<input type="checkbox"/> High Voltage Test	Special PPE / Tools Required:	
JSA Reviewed By (Team Leader) name/sign:		JSA Reviewed By (ATW Issuer) name/sign:		

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Custodian:	Systems & Data	Approved By:	Manager Safety	Version No.:	2
Issue Date:	09/02/2023	Next Review:	24-Months	Date Printed:	24/03/2023

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POTENTIAL HAZARD/ RISKS WHICH MAY BE COMMONLY PRESENT

People <ul style="list-style-type: none"> Awkward working posture Manual handling (Lifting lowering, pushing pulling) Electrical Circuit energised Can machine be accidentally started Can the machine roll Can I hurt someone? 	Equipment <ul style="list-style-type: none"> Tapping into cooling systems Breaking hydraulics lines or components Set of fire suppression systems Using lifting slings or cranes Jacking machine up Stored energy sources (air, hydraulic, etc) 	Environment <ul style="list-style-type: none"> Hazardous Chemical Rotating components nearby Operator assistance required Noise, Compressed air Tasks performed alone in remote are (in the field) Follow MSDS Chance of spills or pollution? 	Process and procedures <ul style="list-style-type: none"> Using electrical equipment People working below Falling objects Exposure to exhaust fumes/gases Working at height Working near hot surfaces (eg. Turbo or exhaust Isolation) 	Permits <ul style="list-style-type: none"> Hot Work (welding, grinding, oxy, cutting, brazing etc.) Confined Space Entry Work at Height Excavation Live work task Man-lift box
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JSA has been developed from supporting details in the below referenced Key Control Data Sheet documents.

Major Hazard Scenario	Key Control Data Sheet (KCDS) No.:	Major Hazard Scenario	Key Control Data Sheet (KCDS) No.:

Task Step Description / Identified Hazards and Risk Rating (List the steps required to perform the task in the sequence they are to be carried out)

Step #	Job Step / Task Description	Hazards	Controls	Risk Rating (with controls)	Responsibility Operator / Worker	Responsibility Supervisor	In Place (Y/N)	Reviewer Checked	Reviewer Remarks

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Task Step Description / Identified Hazards and Risk Rating (List the steps required to perform the task in the sequence they are to be carried out)									
Step #	Job Step / Task Description	Hazards	Controls	Risk Rating (with controls)	Responsibility Operator / Worker	Responsibility Supervisor	In Place (Y/N)	Reviewer Checked	Reviewer Remarks

Approval based on Risk Rating							
Highest Risk Rating Score (with controls included):				Approval Level required:			
Approval based on Risk Rating Matrix. I have performed all notifications and received approvals relevant to the Task Hazard Ranking.							
Supervisor name:				Supervisor signature:			
						Date:	
Approval is within the Approval Ranking matrix. I have been informed of the risks and controls in place and approve the work to be completed under this JSA.							
Approver name:				Approver Position:			
				Approver signature:			
						Date:	

JSA USERS SIGN-ON SHEET									
(Note: User to sign prior job execution)									
No.	Position	Name	Signature	Date	No.	Position	Name	Signature	Date
1.					17.				
2.					18.				
3.					19.				
4.					20.				
5.					21.				
6.					22.				
7.					23.				
8.					24.				
9.					25.				
10.					26.				
11.					27.				
12.					28.				
14.					30.				
15.					Supervisor (Note: Supervisor to sign after job execution) Supervisor's name: Signature: Date:				
16.									

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JSA REVIEW FOR COMPLIANCE

Comments:

JSA REVISION HISTORY (Where applicable, convert to a SWP)

Version:	Date:	Description:	Reviewed By:	Approved By:

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Likelihood Table

Level	Description	Probability (for defined time activities)	Criteria (read as either/or)
A	<i>Almost Certain</i>	99% chance	The consequence will occur. The consequence is expected to occur many times per annum or happens often.
B	<i>Likely</i>	50% chance	The consequence will occur under some circumstances. The consequence is expected to occur once or twice per annum.
C	<i>Possible</i>	10% chance	The consequence has happened elsewhere The consequence typically occurs once in every 5 years
D	<i>Unlikely</i>	1% chance	The consequence has happened elsewhere. The consequence is expected to occur once in 15 years
E	<i>Rare</i>	0.1% chance	The consequence may occur in exceptional circumstances. The consequence has rarely occurred in the industry and is not expected in the life of the mine.

Risk Rating Matrix

Likelihood	Consequence				
	1	2	3	4	5
A Almost Certain	Moderate (11)	Significant (16)	Significant (20)	High (23)	High (25)
B Likely	Moderate (7)	Moderate (12)	Significant (17)	High (21)	High (24)
C Possible	Low (4)	Moderate (8)	Moderate (13)	Significant (18)	High (22)
D Unlikely	Low (2)	Low (5)	Moderate (9)	Significant (14)	Significant (19)
E Rare	Low (1)	Low (3)	Low (6)	Moderate (10)	Significant (15)

Approval Ranking Matrix

HRI	Risk Level	Notification / Approval Level
21 – 25	High	GM Approval Required (refer to Major Hazard Scenario bowties for risk and control data)
14 – 20	Significant	Area Manager Approval Required
7 – 13	Moderate	Line Manager / Superintendent Supervisor Notification Required
1 – 6	Low	Front-line Supervisor Approval Required

↓ Significant Risks ↓

1 – 6 Low	7 – 13 Moderate	14 – 20 Significant	21 – 25 High
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Consequence Table

Level	Safety	Health	Environmental	Community	Reputation	Production Loss	Financial	Life of Mine Impact	Compliance
1	First Aid Treatment	Reversible health effects of little concern, no known or suspected adverse health effects.	< 1 day	Individual Community Complaint.	Local short-term media attention and negative public reaction.	< 1 shift	No effect on Work Schedule, Product and Quality – less than \$50,000 loss.	Resource loss would have minor impact on life of mine < 1 year.	Minor technical / legal compliance issue that is dealt with on site. Incident requires reporting in routine internal incident report system. Minor breach of internal standards.
2	Medical Treatment.	Health impact requiring medical treatment/intervention, not permanent.	1 day to 1 week	Multiple Community Complaint.	Local prolonged media attention and negative public reaction.	<1 days	Minimal effect on Work Schedule, Product and Quality - \$50,000 - \$500,000 loss.	Resource loss would have consequences on life of mine > 1 but < 5 years.	Technical / legal compliance issue which may attract a low-level administrative response from regulator. Continuing occurrences of minor breaches. Incident requires reporting in routine reports (e.g., monthly) and to OTML corporate. Moderate breach of internal standards.
3	Hospitalisation.	Health impact requiring hospitalisation, not permanent.	1 week to 1 month	Community stops job or task.	Negative reaction by public, or interest groups and short-term national media attention.	1 - 7 days	Serious effect on Work Schedule, Product and Quality - production halted for 1 day to 1 week - \$500,000 - \$5,000,000 loss.	Resource loss would have substantial consequences life of mine > 5 but < 10 years.	Serious breach of regulation. Incident requires immediate (within 48 hours) notification to Government and OTML Corporate). Major breach of internal standards.
4	Single fatality.	Chronic health effects causing illness or partial impact on body function.	> 1 month	Community shuts site.	Widespread public discontent Prolonged adverse national media attention or coronial inquest.	> 7 days	Major effect on Work Schedule, Product and Quality - 1 week to 1 month production suspended - \$5,000,000 to \$20,000,000 loss.	Resource loss would have severe consequences on life of mine > 10 years.	Major breach of regulation resulting in investigation by regulator. Prosecution, penalties, or other action likely.
5	Multiple fatalities.	Life threatening or permanent disability or long-term chronic health effects or illness, major impact on body function.	Permanent environmental impact.	Community outrage resulting in violence, significant damage to company property, attacks on staff.	Widespread public condemnation Long-term media condemnation or formal Government inquiry.	> 1 month	Project suspended for more than 1 month – more than \$20,000,000 lost revenue.	Resource loss would have permanent consequences on life of mine.	Operation suspended; licenses revoked.

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