



RISK PROFILING TOOL

for mine eligibility to nominate a Quarry Manager with a mine specific practising certificate

NSW
Resources
Regulator

Mine name (as listed in ACES):	Mine operator (as listed in ACES):
Inspector/Mine Safety Officer name:	Date of assessment:
Inspector/Mine Safety Officer signature:	ELIGIBLE Score =

TIER 3 QUARRY CRITERIA		YES OR NO	NOTES (IF APPLICABLE)
1	Has five or less workers fulltime equivalent workers (FTE), including the Quarry Manager and contractors, and		
2	Does not carry out any dredging or blasting (explosives) activities on the site, and		
3	Does not extract more than 30,000 cubic metres of extractive material for sale or reuse per year		

** If the site meets the above 3 criteria (yes to each), **do not** complete the rest of the profiling tool. Site is to be marked as a tier 3 quarry and a practising certificate is not required.

HAZARD/VARIABLE IDENTIFIED AND SCORING FOR POSSIBLE RISK		SCORE	NOTES
	Nature and complexity of the operations		Comments
1	Number of full-time equivalent workers engaged in mining operations* at the mine (contractor, part time or full time) (Scale - for each 2 workers, scoring of 1 point, 20 workers or more is a maximum scoring of 10) <small>*Mining operations are defined in the WHS (Mines and Petroleum Sites) Act section 7</small>		
2	Crushing and screening on site (up to a maximum scoring of 10)		

	HAZARD/VARIABLE IDENTIFIED AND SCORING FOR POSSIBLE RISK	SCORE	NOTES
	<p>- Basic mobile crushing and screening plant – up to 5 items (1 point for each item up to 5 for a maximum 5 points)</p> <p>- Large (complex) fixed or mobile crush and screen plant (6 – 10 points depending on number, size and complexity eg, a score of 10 relates to a large, hard rock metalliferous mine etc)</p> <p>Note: A current process flow diagram of the plant may be requested from the mine operator.</p>		
3	<p>Number of pieces of operating heavy mobile plant (such as excavators, loaders, trucks and auxiliary plant (includes EWP, crane, skid steer) up to a maximum scoring of 10 (1 point for each, maximum of 10 where there are 10 or more pieces)</p> <p>Note: sites with extensive and complex on-site maintenance workshops for heavy plant should receive maximum 10 points</p>		
	Nature and complexity of the operations		Comments
4	<p>Multi shift sites (maximum scoring of 10 based on maximum scheduled/actual shifts including back shifts eg. maintenance)</p> <ul style="list-style-type: none"> • Intermittent operations (1 Point) • Mon – Fri - Single shift (2 point) • Mon – Fri & Sat sales only (3 points) • Mon – Fri & Regular weekend prod or maintenance (5 points) • Mon – Fri Two shift operation (can include weekend) (e.g. day & afternoon shift) – 7 points • Continuous shift operations - 24/7 shifts (10 points) 		

	HAZARD/VARIABLE IDENTIFIED AND SCORING FOR POSSIBLE RISK	SCORE	NOTES
5	<p>Continuity and output of mining operations (maximum scoring of 10 based on total excavated material, including overburden and imported material, and not just product): <i>(Based on previous year's figures, unless a known disproportionate increase is going to occur)</i></p> <ul style="list-style-type: none"> • 0 – 100 k tpa (1 point) • 100 - 200 (2 point) • 200 - 400 (4 point) • 400 - 600 (6 point) • 600 - 800 (8 point) • > 800 (10 point) 		
6	<p>Any processing as part of mining operations where heat or auxiliary activities is a primary energy source e.g. asphalt plant, kiln, ball mills, treatment plant (scoring of 10)</p>		
	Principal control plans		Comments
7	Explosives used on site (scoring of 10)		
8	<p>Electricity used on site (up to a maximum scoring of 10):</p> <ul style="list-style-type: none"> • generator/s - total capacity up to & incl 25 KVA, (240V & 415V) – 2 points • generator/s - total capacity over 25 KVA, up to & incl 50 KVA – 3 points 		

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<ul style="list-style-type: none"> generator/s - total capacity over 50 KVA, up to & Incl 250 KVA – 6 points generator/s - total capacity over 250 KVA, up to & incl 500 KVA – 8 points generator/s - total capacity over 500 KVA – 10 points mains supply from a supply authority (240V – 3 points) mains supply from a supply authority (415 V – 9 points) mains supply from a supply authority (high voltage (11,000V) – 10 points) total connected load at the mine exceeds 1,000 kW – 10 points 		
Sub Total (maximum scoring of 80)		

PRINCIPAL HAZARD (SCORING AS PER WRAC OVER PAGE) – TO BE CONSIDERED AS UNCONTROLLED RISK	SCORE	LIKELIHOOD	EXPOSURE	COMMENTS
9				Ground failure
10				Inundation or inrush
11				Roads and other vehicle operating areas
12				Air quality or dust or other airborne contaminant (<i>if > 5% SiO₂ consider 'moderate or above'</i>)

	PRINCIPAL HAZARD (SCORING AS PER WRAC OVER PAGE) – TO BE CONSIDERED AS UNCONTROLLED RISK	SCORE	LIKELIHOOD	EXPOSURE	COMMENTS
13	Fire or explosion				
14	Any other principal hazard				
15	<p>Subtotal (no maximum score – depends on the principal hazards)</p> <p>Other risk factors to consider where an elevated risk profile for the mine may exist (max score of 10 in total):</p> <ul style="list-style-type: none"> • working at height • confined spaces • chemical hazards • hazards from the mining operations that are risks to persons outside of the mine (eg. near to residential area, infrastructure used by people such as road, rail, airports etc) • other: <p>Subtotal (maximum 10)</p>				
	Total (more than 90 supports requiring a certificate of competence but subject to the inspector’s qualitative assessment)				

Qualitative assessment by inspector/mine safety officer (consideration of overall mix of risk factors and hazards associated with the mining operations – no scoring):

Inspector/mine safety officer recommendation: Eligible OR Not Eligible (circle one/highlight) for mine specific quarry manager practising certificate
State reasons for recommendation (with any referencing):

	A	B	C	D	E	Likelihood (frequency of occurrence)		Exposure (number of people exposed to principal hazard)		
1	1	2	4	7	11	A	Rare	Only occur in exceptional circumstances	1	1-2
2	3	5	8	12	16	B	Unlikely	Could occur at some time	2	3-5
3	6	9	13	17	20	C	Moderate	Should occur at some time	3	6-10
4	10	14	18	21	23	D	Likely	Probably occur in most circumstances	4	11-24
5	15	19	22	24	25	E	Almost certain	Expected to occur in most circumstances	5	25+

Examples of scoring for WRAC

Scenario 1	Scenario 2	Scenario 3
<p>Quarry with 15 workers (incl. contractors) where the principal hazard of ground instability is present</p> <p>Likelihood: B Unlikely</p> <p>Exposure: 1 (1 - 2 i.e. actual number of workers to be exposed at location of hazard event i.e. not all the workers at the mine)</p> <p>Risk ranking: (B1) = 2</p>	<p>Quarry with 5 workers (incl. contractors) where the principal hazard of inrush is present (river operation – known flooding)</p> <p>Likelihood: E Almost Certain</p> <p>Exposure: 2 (3 - 5 i.e. actual number of workers to be exposed at location of hazard event)</p> <p>Risk ranking: (E2) = 16</p>	<p>Quarry with 30 workers (incl. contractors) where the principal hazard of air quality is present (crush & screen and high silica)</p> <p>Likelihood: D Likely</p> <p>Exposure: 5 (25+ actual number of workers to be exposed at location of hazard event e.g. everyone on site over a period of time will be exposed to dust)</p> <p>Risk ranking: (D5) = 24</p>

Document control

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AMENDMENT SCHEDULE

Date	Version	Amendment
3/06/2020	2	Addition of tier 3 quarry criteria

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