

 FQM AUSTRALIA NICKEL	<b>Ravensthorpe Nickel Project</b>	Document Owner: FQM Australia Nickel
		Approved By: <span style="background-color: black; color: black;">XXXXXXXXXX</span>

**Licence L8008 Amendment:  
Attachment 6A – Emissions and discharges**

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**Ravensthorpe Nickel Project**

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*Summary of emissions, discharges and controls associated with this amendment application*


Source of emission or discharge	Emission or discharge type	Volume and frequency	Proposed controls	Location
Mobile equipment movements	Dust	Ongoing during equipment and material movements	<p>Dust will be managed in accordance with the existing DWER Licence L8008/2004/3 and existing Dust Management Plan requirements, including:</p> <ul style="list-style-type: none"> <li>- Operate equipment in existing disturbance areas</li> <li>- Dust suppression will be implemented as required (including use of water trucks, control of vehicle speeds)</li> <li>- Minimise material movement during periods of high winds to reduce the potential for dust generation and lift off</li> <li>- Roads/tracks will be maintained and graded as required to minimise dust generation</li> <li>- Inspections of areas will be undertaken to ensure dust controls measures are being implemented and are effective.</li> </ul> <p>These management measures are expected to effectively mitigate the risk of dust emissions.</p>	Refer to figures in attachment 2
Odour	Putrescible wastes	Ongoing during putrescible waste disposal	<p>Landfill will be operated in accordance with the <i>Environmental Protection (Rural Landfill) Regulations 2002</i></p> <p>Landfill is sited far from potential sensitive receptors for odour</p> <p>Regular covering of waste disposed of within landfill trenches</p> <p>Regular inspections of landfill area</p>	Refer to Proposed landfill in figures in attachment 2

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Source of emission or discharge	Emission or discharge type	Volume and frequency	Proposed controls	Location
Processing waste	Seepage from mineral wastes from processing deposited at the TSF. The other process mineral waste streams include: <ul style="list-style-type: none"> <li>evaporation pond salt</li> <li>sulfur filter residue</li> <li>magnesium oxide, and</li> <li>washdown facility silt.</li> </ul>	Ongoing annual limits: <ul style="list-style-type: none"> <li>evaporation pond salt (500,000 tpa),</li> <li>sulfur filter residue (1,000 tpa),</li> <li>magnesium oxide (500 tpa), and</li> <li>washdown facility silt (300 tpa).</li> </ul>	Seepage from TSF1 and TSF2 will continue to be managed and monitored in accordance with the DWER Licence L8008/2004/3, including: <ul style="list-style-type: none"> <li>Conduct groundwater monitoring to monitor for changes in groundwater levels and characteristics in response to the other mineral wastes.</li> <li>Conduct ongoing annual assessment of the groundwater quality against previous modelled predictions</li> <li>Undertake regular inspections for seepage / salinisation</li> <li>Install and operate a seepage collection system to manage potential shallow seepage water and contaminated runoff downstream of the embankment</li> <li>Where groundwater monitoring indicates adverse impacts, an investigation will be conducted by a qualified specialist and addition seepage recovery or may be installed to mitigate impacts as required.</li> <li>WSP Static geochemical characterisation report (Attachment 8B) indicates that material wastes will not adversely impact surrounding groundwater.</li> </ul>	Refer to figures in attachment 2
General and mining wastes	FQMAN proposes to dispose of the following waste	Up to 2,500 tonnes per annual period	Separation from groundwater is >4m from landfill disposal trench locations  Regular covering of waste disposed of within landfill trenches	Refer to figures in attachment 2



EVERY JOB CAN BE DONE SAFELY. THINK ABOUT THE RISK!



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Source of emission or discharge	Emission or discharge type	Volume and frequency	Proposed controls	Location
	types <sup>1</sup> to the Halley's mine void:  Clean fill and uncontaminated fill;  Putrescible wastes;  Inert waste type 1;  Inert waste type 2 (including scrap tyres, plastics and rubber materials from mine and process waste).		Earthen bunds around waste trenches to prevent surface water ingress to waste disposal area.  Tyres and rubber materials are to be disposed of within dedicated trenches separate from general and putrescible waste  Regular covering of tyres and rubber materials  No more than 100 tyres or rubber equivalent is to be left uncovered within a landfill trench  Implement Emergency Response Plan in the event of a fire  Waste trenches have adequate separation from final external surfaces at closure to ensure no waste exposure  Compaction of final waste trenches with a minimum of 1m of cover material  Final waste trenches rehabilitated in accordance with the approved mine closure plan	

# Think!

SAFETY

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