



## RESPONSE TO SUBMISSIONS

# Discussion Paper: Proposed amendments to the Mining Rehabilitation Fund Regulations 2013 for the administration of minerals in brine operations July 2020

On 26 July 2020, the Department of Mines, Industry Regulation and Safety (DMIRS) released a discussion paper for public comment, outlining the department's review of Mining Rehabilitation Fund (MRF) categories and unit rates pertaining to minerals in brine operations in Western Australia. The public consultation period came to an end on 18 September 2020.

The purpose of the discussion paper was to outline a range of issues pertaining to the emerging minerals in brine industry in relation to inequitably high MRF levy contributions minerals in brine operators may be subject to under the existing regulatory regime. The paper provides analytical findings and includes DMIRS' proposals for regulatory amendments of prescribed categories and unit rates contained in the Mining Rehabilitation Fund Regulations 2013.

DMIRS has undertaken an extensive period of consultation with proponents (comprising potash and salt operators), conducting series of information exchange over technical aspects of their proposed operations to best inform DMIRS' position prior to making the recommendations as outlined in the discussion paper. DMIRS remains committed to communicating with the industry and the public, with aims to introduce regulatory amendments that will result in a more equitable operational environment to support development of the emerging minerals in brine industry in Western Australia.

DMIRS has made note of all public feedback throughout the public consultation period, with this document serving as a summary of public feedback and comments including DMIRS' responses to those comments. DMIRS would like to take the opportunity to thank all stakeholders for their considered feedback and for providing input into the process. During the public comment period, submissions were received from the Association of Mining and Exploration Companies, Kalium Lakes Limited and Salt Lake Potash Limited.

DMIRS' responses to these submissions are outlined overleaf.

Topic	Ref.	Stakeholder	Submission	DMIRS Response
<b>General</b>	<b>1</b>	<b>Association of Mining and Exploration Companies (AMEC)</b>	AMEC states that the State Government has an “opportunity to support the early development of a sustainable and long-term industry by providing fair and equitable fees and policies that reflect the unique nature of the sector”.	DMIRS’ role is to support a safe, fair and responsible future for the Western Australian resource sector, industry and community. DMIRS remains committed to establishing an equitable outcome through proposed amendments to the Mining Rehabilitation Fund Regulations 2013.
	<b>2</b>	<b>Kalium Lakes Limited</b>	“Mineral in brine industry, like all industries have variations in ‘mining’ methodology and unit rates should reflect this in the same way it does in conventional mining. For example, methodologies for lining evaporation ponds could have vastly different rehabilitation costs. There is a need to continue to review the unit rates especially for the evaporation ponds and excess salt stockpiles”.	The amended category and unit rates proposed in the Discussion Paper represent significantly lower rates than those applied to conventional mining operations. DMIRS is considering all industry feedback in response to proposed categories and unit rates that affect minerals in brine operations.
<b>Unique Characteristics of Minerals in Brine:</b> size of operations	<b>3</b>	<b>AMEC</b>	AMEC states minerals in brine operations due to being up to 10-20 times larger in area than conventional mining operations, that their “perception of disturbance” may be disproportionate to actual disturbance.	Under the MRF, operators only need to report the disturbed areas each year. DMIRS notes that there are unique characteristics of minerals in brine operations, for example that the process of rehabilitating evaporation ponds is to remove and remediate embankments only, while the surface does not require rehabilitation. In these instances, only the area of the constructed embankment is required to be reported, hence minimising the heightened reporting burden of larger areas pertaining to minerals in brine operations.
<b>Unique Characteristics of Minerals in Brine:</b> mine life	<b>4</b>	<b>AMEC</b>	AMEC states minerals in brine operations have an average minimum mine life of 30-40 years, “significantly longer than a typical mining operation” and “some of these operations will extend over 100 years in life”. No solar salt projects have ceased operations, supporting this notion of longevity. Prolonged life of mine “means that minerals in brine project proponents will cumulatively pay a lot more in rehabilitation costs than a traditional mining operation would, solely on the size and longevity of the project”. At “current proposed rates, proponents will be liable to pay multiple times over their total forecast mine closure costs in MRF levy rates by the end of the mine’s life, which is contrary to the purpose of the MRF system”.	DMIRS acknowledges that operations that harvest potash and other minerals derived from brine encompass an emerging mining industry with unique operational features and scale that were not anticipated during establishment of the MRF regulatory framework. Conventional mine sites of various commodity groups may also experience prolonged mine life, with exploration and subsequent developments extending original anticipated mine lives over many decades. As identified in the Discussion Paper, the length of payments into the fund will be more appropriately considered as part of the ten-year statutory review of the MRF and is out of scope of this investigation.

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<b>Evaporation Ponds:</b> on-playa and off-playa differentiation; general rehabilitation costs	5	AMEC	<p>AMEC states while DMIRS acknowledges the differences between on-playa and off-playa evaporation ponds, the “low levels of disturbance do not seem to be satisfactorily understood, reflected in the disproportionate rehabilitation costs” and as such these costs are considered “unrealistically high”.</p> <p>AMEC argues that minerals in brine projects should be treated comparatively low with regard to land disturbance values and rehabilitation costs, despite their coverage of large surface areas; particularly as no vegetation clearing nor revegetation is required post-mining.</p> <p>AMEC has requested DMIRS provides further insight into the rationale behind proposed rehabilitation cost calculations that determine DMIRS’ proposed category unit rates.</p> <p>Furthermore, AMEC recommends that DMIRS lower the proposed category unit rates “to reflect the actual level of disturbance that will arise from these unique projects” which “cannot be understated” as being significantly different to conventional mining operations.</p>	<p>DMIRS reiterates that category rates are intended as proxy for establishing a rate for levy calculation rather than being an accurate representation of rehabilitation costs.</p> <p>Further, the Discussion Paper outlines commonalities that can exist between conventional evaporation ponds and those used for concentrating and harvesting salts in brine operations, justifying a rate reflective of such disturbance i.e. a proposed rate half the cost per hectare of a conventional evaporation pond.</p> <p>Examples of commonality include risks associated with construction methods; closure obligations; and other risks such as the size, location and nature of material being handled within these operations that substantially affect the level and intensity of such risks and subsequently the level of attention required to manage, close and rehabilitate the sites.</p>
	6	Salt Lake Potash Limited	Salt Lake Potash is supportive of the differentiation of ‘on lake’ ponds and ‘off lake’ ponds.	Comment noted.
<b>On-playa Evaporation Ponds:</b> embankments rehabilitation costs	7	Kalium Lakes Limited	<p>“In accordance with the advice received by the Minister on the 18th June 2020, only evaporation pond embankments were calculated at \$18,000 (\$/ha), the department have now reviewed the advice and provide a figure of \$25,000 (\$/ha) for the entire disturbed area.</p> <p>Further advice should be given on how MIB operators should be calculating disturbance”.</p>	<p>In the referenced advice provided by the Minister for Mines and Petroleum, the Minister specifically states that with regard to the 2019-20 MRF reporting period, in the absence of a specific category being available for minerals in brine operators at that time, the appropriate category for minerals in brine evaporation ponds is the Category C ‘Other Cleared Land’ category of \$18,000/hectare. The Minister also advised AMEC that “the reportable area is limited to disturbances, and in some circumstances this may mean that only the area of the embankments needs to be reported”.</p> <p>The Minister’s advice to AMEC follows more than six months of consultation between DMIRS, AMEC and industry stakeholders. DMIRS advised operators that due to finalisation of the review of MRF levy rates extending beyond the 2019-20 MRF reporting period, operators may report for the 2019-20 period using the Category C unit rate to minimise uncertainty for minerals in brine operators that have entered into the construction phase of their project.</p>

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				<p>Further, DMIRS advised operators to only report the disturbed area; that operators may construct bunding on lake surfaces to capture and extract resources where only the embankments require rehabilitation and surface of the salt lake remains in-situ, in which case only the area of the embankments is to be reported.</p> <p>DMIRS also stipulated that activities reported under Category C would apply for the 2019-20 reporting period while amendments to MRF Regulations 2013 are finalised and issues of equity affecting minerals in brine disturbance features are resolved. Once regulatory amendments are completed, operators were advised they will be required to report under those appropriate categories.</p>
	8	AMEC	AMEC requests additional information from DMIRS "detailing how the forecasted embankment remediation costs will be incurred, as this information is yet to be provided. These costs will likely have an impact on the potash projects currently in development across Western Australia who are nearing final investment decision".	DMIRS has investigated the relevant disturbances proposed by the minerals in brine industry and has considered industry feedback as well as analysis of estimated rehabilitation obligations and costs conducted by an independent third-party to identify the most appropriate cost category and unit rates.
	9	AMEC	AMEC states that embankment rehabilitation costs, based on stakeholder project costings, are almost one fifth of the \$25,000/ha cost of the proposed rate as outlined in the Discussion Paper. AMEC therefore considers that the proposed rate should be lowered to a "more realistic and reduced rate".	<p>Taking into consideration feedback provided by industry, <b>DMIRS is revising its proposed on-playa evaporation pond embankments category unit rate from \$25,000/ha to \$20,000/ha.</b></p> <p>This is intended to account for a range of operators, rehabilitation techniques and associated remediation costs.</p>
<b>Off-playa Evaporation Ponds:</b> embankments and pond floor rehabilitation costs	10	Kalium Lakes Limited	<p>Kalium Lakes states that the minerals in brine industry/community widely agrees that the scale of evaporation ponds and the proposed MRF category unit rates presented in the Discussion Paper are "significantly inequitable", using as example the company's Mine Closure Planning 'Closure Cost Model' to estimate rehabilitation costs of decommissioning off-playa evaporation ponds.</p> <p>According to Kalium Lakes, Closure Cost modelling demonstrates that DMIRS' proposed costings for off-playa evaporation pond rehabilitation is "significantly greater than the actual rehabilitation estimate" for closure i.e. physically safe to humans and animals; geo-technically stable; geo-chemically non-polluting/non-contaminating; and sustainable land use without State liability.</p>	<p>Taking into consideration feedback provided by industry, <b>DMIRS is revising its proposed off-playa evaporation pond embankments and pond floor category unit rate from \$25,000/ha to \$20,000/ha.</b></p> <p>This is to ensure that the proposed rate is no higher than the anticipated average across closure cost methods modelled and provided by industry (equating to around \$22,500/ha).</p> <p>This is intended to account for a range of operators, rehabilitation techniques and associated remediation costs.</p>

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			<p>Kalium Lakes states that since development of the closure cost model, the broader industry now views potential for pond floor salts as a 'mineral resource' rather than waste product, pending halite market factors and transportation costs. Therefore Kalium Lakes believes it to be in the State (and company's) interest to consider the cheaper Salt Pan method as the "most viable and economic" closure method, whereby evaporation ponds and plastic liners are left in situ and accordingly reduce costs of potential future salt operations.</p> <p>In conclusion, Kalium Lakes states that the State Government has an "obligation to maximise WA's mineral wealth...and the requirement to remove pond floor salts and associated embankments diminishes the future potential economic value of the State's mineral wealth".</p> <p>Kalium Lakes therefore recommends off-playa evaporation pond category unit rates be reduced to an undisclosed figure, as DMIRS' proposed \$25,000/ha is "still significantly greater than Kalium's baseline closure outcome".</p>	
<b>Brine Abstraction Trenches:</b> mine void vs. trench differentiation; rehabilitation costs	11	AMEC	<p>AMEC disagrees with the definition of trenches as 'narrow surface excavations'. It is concerned that the "definitional disparity of what constitutes a trench, and the associated rehabilitation requirements, have resulted in higher than anticipated rehabilitation cost calculations. An abstraction trench should not have the same rate as that of a mine void (Category B), as they are substantially different".</p>	<p>DMIRS agrees that trenches, for the purposes of brine abstraction, do not reflect typical conventional 'mining void' operational features.</p> <p><b>DMIRS is revising its proposed brine abstraction trenches category unit rate from \$30,000/ha to \$20,000/ha.</b></p>
	12	Salt Lake Potash Limited	<p>Salt Lake Potash states that their minerals in brine project is well advanced with regards to trench construction and that DMIRS' proposed category unit rate should be adjusted down to reflect a "more realistic" rehabilitation cost.</p>	<p>DMIRS has investigated the relevant disturbances proposed by the minerals in brine industry and has considered industry feedback as well as analysis of estimated rehabilitation obligations and costs conducted by an independent third-party to identify the most appropriate cost category and unit rates.</p>
<b>Brine Abstraction Trenches:</b> treatment of associated embankments/spill/berm material	13	AMEC	<p>AMEC argues that trench rehabilitation costs, involving pushing the berm material either side of the trench back into the trench, are, based on Western Australian industry experience, six times lower than the \$30,000/ha cost proposed rate DMIRS outlined in the Discussion Paper.</p> <p>The methodology for the use of berm material to prevent surface water from infiltrating the trench, thus acting as a safety barrier, means the trenches are designed to achieve the Department's</p>	<p>Taking into consideration feedback provided by industry, <b>DMIRS is revising its proposed brine abstraction trenches category unit rate from \$30,000/ha to \$20,000/ha.</b></p> <p>Furthermore, DMIRS agrees that <b>spoil/ embankments/berms of brine abstraction trenches are not required to be reported as disturbance</b>, given they contribute to closure objectives i.e. utilising embankments/berms to fill the trench.</p>

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			mining void closure objective, in the construction phase and throughout the operation. The level of perceived risk reflected in the high proposed rate is disproportionate to the actual low level of risk. The category unit rate per hectare of disturbance needs to be adjusted to reflect a more realistic, evidence-based rehabilitation cost.	As such, <b>DMIRS is revising the proposed category description to omit abstraction trench spoil/embankments/berms which subsequently will decrease reportable features.</b>
	14	<b>Kalium Lakes Limited</b>	<p>Kalium Lakes has no objection to the \$30,000/ha category unit rate per hectare of disturbance for brine abstraction trenches, however the company states the inclusion of the spoil/embankment within the proposed rate should be “reviewed” i.e. presumably reduced, as “much like topsoil, it will be utilised in the rehabilitation process rather than being a feature that needs rehabilitation and the levy should reflect the closure requirement”.</p> <p>Kalium Lakes states the embankments assist in meeting the DMIRS’ closure objectives by “creating a barrier protecting humans and animals, due to the size and shape they are geo-technically stable and are unlikely to contaminate or pollute the surrounding environment”.</p>	As above re: embankments/spoil/berm.
<b>On-playa Halite and Excess Salt Stockpiles</b>	15	<b>Kalium Lakes Limited</b>	<p>Kalium Lakes states it will produce substantial quantities of salt by-product as they target sulphate of potash production. At present it is not considered commercial but the company is seeking ongoing market potential from salt product recovery.</p> <p>As such, the company believes that, as part of its closure plan, excess salt will be left in stockpiles on the lake surface, which will be dissolved at such a slow rate that the feature is “considered permeant” i.e. able to pass through the natural salt lake.</p> <p>Kalium Lakes states that no specific earthworks are required as the stockpile “does not represent a safety hazard or require a lower slope angle to support vegetation”.</p> <p>Kalium Lakes states that the proposed category unit rate of \$10,000/ha for rehabilitation of on-playa halite and excess salt stockpiles, based on the company’s “closure objectives” is not equitable and requires “further review”.</p>	<p>DMIRS has investigated the relevant disturbances proposed by the minerals in brine industry and has considered industry feedback as well as analysis of estimated rehabilitation obligations and costs conducted by an independent third-party to identify the most appropriate cost category and unit rates.</p> <p>DMIRS has proposed inclusion of this category such that these features do not pay the higher stockpile rates of Category B (\$30,000) or Category C (\$18,000) in recognition of the lower risk of halite and excess salt in the already saline environments on-playa.</p> <p>In consideration of this, and the costing data provided, DMIRS considers \$10,000 to be an appropriate rate.</p>
	16	<b>Salt Lake Potash Limited</b>	Salt Lake Potash states that their estimated rehabilitation costs for excess salt stockpiles will be lower than DMIRS’ proposed \$10,000/ha. No costing provided.	As above.

Government of Western Australia

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8.30am – 4.30pm

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