ntepa Northern Territory Environment Protection Authority

Onshore Petroleum Activity – NT EPA Advice

MINERALS AUSTRALIA PTY LTD AND JACARANDA MINERALS PTY LTD (MIA1-4) – ENVIRONMENT MANAGEMENT PLAN (EMP) FOR THE ONSHORE PETROLEUM PROJECTS EP144 & 154

BACKGROUND

The Minister for Environment has formally requested under section 29B of the *Northern Territory Environment Protection Authority Act 2012* (NT EPA Act) that the Northern Territory Environment Protection Authority (NT EPA) provide advice on all Environment Management Plans (EMPs) received under the Petroleum (Environment) Regulations 2016 (the Regulations).

That advice must include a recommendation on whether the EMP should be approved or not, supported by a detailed justification that considers:

- whether the EMP is appropriate for the nature and scale of the regulated activity to which the EMP relates (regulation 9(1)(b))
- the principles of ecologically sustainable development (regulation 2(a)), as set out in sections 18 to 24 of the *Environment Protection Act 2019* (NT)
- whether the EMP demonstrates that the activity will be carried out in a manner by which the environmental impacts and environmental risks of the activity will be reduced to a level that is as low as reasonably practicable and acceptable (regulation 9(1)(c))
- any relevant matters raised through the public submission process.

In providing that advice, the NT EPA Act provides that the NT EPA may also have regard to any other matters it considers relevant.

ACTIVITY

Subject	Description
Interest holder	Minerals Australia Pty Ltd and Jacaranda Minerals Pty Ltd (Minerals Australia)
Petroleum interest(s)	Exploration Permits 144 and 154
Environment Management Plan (EMP) title	Onshore Petroleum Projects Environmental Management Plan EP144 & 154
EMP document reference	MIA1-4
Regulated activity	The EMP proposes an exploration program on two exploration permits, 100 km east of Mataranka (EP154) and 210 km northeast of Tennant Creek on the Mittiebah perpetual pastoral lease (EP144). The regulated activity includes: • acquisition of 2D seismic data (31.77 linear km / 12.7 ha of clearing) • civil construction of three well pads (6.75 ha) inclusive of one accommodation camp (1 ha) • drilling of three stratigraphic core drill holes • site decommissioning and rehabilitation.
Public consultation	Public consultation on the EMP was required under regulation 8A(1)(b) was undertaken from 9 August 2022 to 6 September 2022.

NT EPA ADVICE

1. Is the EMP appropriate for the nature and scale of the regulated activity (regulation 9(1)(b))

Information relating to the nature and scale of the regulated activity is provided in the EMP in a clear format. Table 1 provides an overview of the key components of the regulated activity and worst-case scenario values. The proposed work program is scheduled to take place in 2023.

Table 1: Key components of the proposed work program

Component/aspect	Proposed EP144	Proposed EP154
AAPA certificate	C2020/086	C2021/049
Total area of exploration permits	15,050 km^2	5,500 km^2
Total area of surface disturbance	5.5 ha	14.95 ha
Seismic lines	-	31.77 km (12.7 ha)
Access tracks	-	1.8 km (0.72 ha) Note: this is along a seismic track and therefore no additional clearing
Number of well pads	2	1
Number of exploration wells	2 (1 well per well pad)	1
Groundwater extraction license	N/A*	N/A*
Groundwater usage	0.75 ML (total)	0.6 ML (total)
Groundwater extraction bores	Nearby station bores	Nearby station bores
Gravel pits	-	-
Camp	~30 person camp (total)	-
Peak traffic movements	10 vehicles per day	17 vehicles per day
Average traffic movements	5 vehicles per day	10 vehicles per day
Greenhouse gas emissions	~798.34 tCO_2-e	~1,848 tCO_2-e

*proposed groundwater use is less than 5 ML/year, which can be accessed without requiring a groundwater extraction licence.

The proposed exploration program entails the collection of 31.77 km of 2D seismic data on EP154, and the drilling of three exploratory stratigraphic core drill holes using diamond drilling techniques to a maximum depth of 1,000 m, to obtain stratigraphic information across EP144 (2 wells) and EP154 (1 well). The proposed activity locations are approximately 210 km north-east of Tennant Creek (EP144) and approximately 100 km east of Mataranka (EP154).

The proposed work program is short-lived with activities expected to take nine weeks on EP144 and 14 weeks on EP154. The regulated activity includes rehabilitation of disturbed areas, which will continued to be monitored after the activity has finished, on an annual basis until the rehabilitation success criteria in the EMP have been met. Site selection has prioritised the use of existing access tracks such that no new access tracks will have to be established, which minimises the clearing footprint of the project. A detailed baseline assessment was undertaken to identify important vegetation and habitats, and the EMP clearly identifies sensitive receptors in the area and how impacts to those are avoided. The EMP shows an adequate consideration of potential impacts and risks of the regulated activity and proposes appropriate controls, in line with the Code. Areas of particular interest in this EMP are waterway crossings, groundwater sourcing, wastewater disposal, and rehabilitation.

The project area on EP154 has a high abundance of stream crossings. This makes complete avoidance of waterway crossings infeasible, and as such, the seismic program includes crossing of a number of waterways (as shown in Figure 4-11 of the EMP). The baseline assessment undertaken as part of the EMP identified some of the proposed waterway crossing locations to contain significant and/or riparian vegetation. In order to minimise the impact to water crossings and important habitat, Minerals Australia reduced the proposed seismic lines from an initial 43.6 km to

31.77 km. The remaining seismic lines are critical for the success of the seismic program to understand the complex geology of the region.

Water volumes required for the project are relatively low (0.75 ML on EP144, 0.6 ML on EP154) and do not trigger the requirement to obtain a groundwater extraction licence for the activity under the *Water Act 1992* (NT). The interest holder proposes to use nearby station bores to obtain water for their regulated activity. On EP144, this may potentially target the Camooweal Dolostone or Wonarah Formation. On EP154, the majority of aquifers in the project area are discontinuous, local, no longer connected to recharge points or have secondary mineral overgrowth, which has destroyed previously existing permeability and/or porosity. The nearest significant aquifers to EP154 are the Tindall Limestone aquifer 60 km to the west, and a dolostone aquifer located 76 km to the northeast. The EMP commits to recording the source of water, as required by the Code. If a suitable bore cannot be found, the interest holder has committed to sourcing freshwater from an existing licenced provider.

Wastewater associated with the projects consist mostly of drilling fluids and cuttings. The EMP commits to undertaking leachability testing of the drill cuttings and seeking certification for on-site disposal as required by the Code. Due to the program being short-lived, treatment options commonly utilised for drilling fluids and cuttings prior to disposal, such as evaporation and natural biodegradation, may be limited, as these treatments require time. If suitable for on-site disposal, the drill sumps will be backfilled upon completion of drilling. If certification cannot be obtained for on-site disposal, the drill cuttings will be transported using a licensed transporter and disposed of at a licensed facility.

Rehabilitation of the disturbed areas will commence upon finalisation of seismic and drilling respectively. Monitoring of rehabilitation success will require multiple years, and is therefore the longest ongoing activity under this EMP. The proposed rehabilitation approach is assisted natural regeneration in areas that have been cleared, and natural regeneration for the seismic line areas. Assisted natural regeneration combines natural regeneration with soil preparation and weed control. If monitoring demonstrates that natural regeneration is unsuccessful, weed management, erosion remediation, and additional soil preparation combined with reseeding using local provenance seed will be carried out.

Given the nature and scale of the proposed regulated activity, the level of detail and quality of information provided in the EMP is sufficient to inform the evaluation and assessment of potential environmental impacts and risks, and meets the EMP approval criteria under Regulation 9(1)(b).

2. Principles of ecologically sustainable development (regulation 2(a))

2.1 Decision-making principle

The EMP adequately assesses the environmental impacts and risks associated with the regulated activity and outlines appropriate avoidance and mitigation measures. Of the 34 risks identified, 29 are assessed as “low” if carried out in accordance with the mitigations and controls proposed in the EMP. Well pad locations are unlikely to be affected by flooding events as the works will be completed mostly in the dry season, and because the well pads are located outside the 1:100 year flood modelling extent. If works do continue into the wet season, well pads will be bunded as a preventative measure to mitigate impacts from flooding. Additionally, no chemical and wastewater transport will occur during the wet season on unsealed roads, unless:

- the track is traversable and has not been impacted by increased rainfall, such as:
    - there are no washouts along the track
    - there are no bogs or ponding.
- personnel are familiar with spill response procedures and the appropriate spill response materials are available.

These controls have been assessed as adequate.

The majority of the seismic lines will be traversed blade up to minimise environmental impact, with the blade only used for short sections where needed, such as for dense vegetation, erosion channels or holes. Additionally, the EMP commits to not clear trees in their seismic program with a

diameter larger than 25 cm at 1.3 m above ground level. The interest holder has minimised the number of stream crossings by reducing the scope of the seismic program. The proposed seismic activity will occur within a 100 meter buffer area so that micro-siting of the seismic lines can be undertaken to avoid large trees, choose the least impact location to cross watercourses, and reduce clearing requirements. One of the stream crossings for the seismic program that remained after the scope minimisation is in a known Groundwater Dependent Ecosystem. This stream crossing was surveyed as part of the baseline assessment and was found to be an area of sparse trees, and the Melaleuca Woodlands that define the GDE were not recorded at the water crossing location. To minimise impacts to this area, the EMP commits to using an experienced field technician to precede the seismic team to identify a path at this location. Furthermore, the impact to stream crossings is minimised by rehabilitating seismic lines progressively, following behind with the completion of each survey line. This will ensure the land is stabilised as soon as possible after disturbance to reduce the occurrence of erosion, sedimentation, loss of topsoil and weed invasion.

Water for the regulated activity will be obtained from station bores or from a licenced provider. The actual water bore to be used for obtaining water will be determined by the station owners and managers immediately prior to commencing operations. This allows the bores to be chosen so that disturbance to stock operations is minimised. The bore utilised will be recorded as required by the Code, and monthly volumes of groundwater extracted from the bore will be recorded from the gauge on the pump, which will be regularly calibrated by appropriately trained staff. These measures will ensure that, despite the uncertainty of the groundwater source prior to activities commencing, the source and volume of groundwater used for the activities are adequately recorded.

Leachability testing of drill cuttings will be undertaken in accordance with the Australian Standard Leaching Procedure by a NATA accredited laboratory, as required by the Code. The results of this testing will inform the potential disposal options for drill cuttings. The interest holder will engage an EPA-accredited auditor (as defined by section C.4.1.2(f) of the Code) to obtain certification that the drill cuttings is of acceptable quality for disposal to land by the proposed disposal method, and that environmental harm will not result from the proposed disposal. If certification cannot be obtained, the material will be removed from site for disposal at a licenced facility. This measure will ensure that, regardless of the limited treatment options available for the short-lived program, impacts from drill cuttings are minimised to a level that is as low as reasonably practicable (ALARP) and acceptable.

The rehabilitation objectives are to ensure that all significantly disturbed areas are a stable and self-sustaining environment that is close to pre-disturbance levels and requires little or no ongoing management. The program schedule ensures that vegetation is re-spread over disturbed areas as soon as possible following the completion of work, which will facilitate vegetation regrowth and limit erosion. Success criteria for rehabilitation have been developed, and include, in comparison to surrounding land use:

- species richness of 70% or greater
- an equal or greater percentage of groundcover.

A preliminary assessment of rehabilitation monitoring will be conducted six to nine months post rehabilitation works. Early rehabilitation monitoring will be conducted annually post wet season for the first three years to review rehabilitation success and undertake corrective actions where necessary. Long term rehabilitation monitoring will be conducted annually from year 4 and onwards, until the rehabilitation criteria have been met. This approach is adequate to monitor and facilitate rehabilitation success.

The interest holder has demonstrated ongoing stakeholder engagement in the EMP as required by the Regulations with directly affected stakeholders identified. The EMP was also made available for public comments from 9 August 2022 to 6 September 2022.

2.2 Precautionary principle

The NT EPA considers there is a low threat of serious or irreversible damage from the regulated activity. The interest holder's investigations into the physical, biological and cultural environment provide a satisfactory scientific basis to assess potential environmental impacts and risks, and to identify measures to avoid or minimise those impacts and risks and address scientific uncertainty.

The risk assessment clearly demonstrates consideration of risk events in the context of the environment in which the regulated activity is conducted and its particular values and sensitivities, and the spatial extent and duration of the potential impact. Uncertainty in relation to the environmental features was assessed, with no areas of environmental uncertainty identified. Should the program schedule extend beyond the dry season, the risks of conducting the activity over the wet season are well understood, and the EMP demonstrates adherence to the Code. The interest holder has applied the Land Clearing Guidelines in the site selection process, and commits to not clearing large trees for their seismic program. The use of an experienced field technician to precede the seismic team in the sensitive habitat around Blackwater Creek, and the use of existing access tracks, minimise the impact to important habitats, so that threat of serious or irreversible damage from those activities is considered unlikely and potential impacts and risks managed to ALARP and acceptable levels.

Whilst the interest holder commits to a yearly monitoring regime to identify rehabilitation success and undertake corrective actions, the NT EPA recommends a Ministerial condition that requires provision of an annual progressive rehabilitation report as a precautionary measure.

The NT EPA is of the view that the precautionary principle has been considered in assessing the regulated activity and has not been triggered due to the low threat of serious or irreversible damage existing and the presence of a satisfactory scientific basis to assess potential impacts and risks. In addition, the environmental monitoring commitments contained in the EMP are compliant with the Code and provide measureable performance measures to ensure that the environmental outcomes are met. The EMP commits to the preparation and submission of an annual environmental performance report, however the NT EPA recommends a Ministerial condition outlining the timing and form of the submission.

2.3 Principle of evidence-based decision-making

A good understanding of the existing environment is demonstrated through a thorough baseline assessment undertaken in July 2021, which includes a desktop review, an on-ground field assessment of weeds, land condition at analogue sites and waterway crossings, and the presence of significant vegetation and habitats. Flood modelling has been conducted at well pad locations, demonstrating that the well pads are located outside of a 1:100 year flood event. The EMP includes a risk assessment related to traffic impacts, concluding that the estimated operational vehicle movements related to the regulated activity are less than what the region experiences without the project, and therefore are expected to have a minimal impact on traffic. The proposed management measures of chemical and hydrocarbons are satisfactory with secondary containment proposed to be used as well as satisfactory spill response procedures. As a precautionary step the NT EPA recommends a Ministerial condition for this activity relating to the recording of spills.

The proposed environmental outcomes are likely to be achieved based on the best available information on the nature and scale of the activity, and the environment in which the regulated activity will be conducted. The studies undertaken by the interest holder to inform the EMP affords the interest holder with a detailed and reliable knowledge of the potential environmental impacts and risks and the most appropriate measures for mitigation of those impacts and risks.

The NT EPA is of the view that the evidence-based decision-making principle has been considered in assessing the regulated activity and that in the circumstances, decisions can be based on best available evidence that is relevant and reliable.

2.4 Principle of intergenerational and intra-generational equity

The potential environmental impacts and risks associated with the regulated activity can be adequately avoided or managed through the management measures and ongoing monitoring programs proposed in the EMP. The proposed program is of short duration, with disturbed land progressively being rehabilitated. The clearing footprint of the project is minimised through the use of existing access tracks. Total predicted greenhouse gas (GHG) emissions generated by the regulated activity are approximately 2,646 tCO_2-e. The project does not exceed the threshold for

large emitters in the Northern Territory Greenhouse Gas Emissions Management for New and Expanding Large Emitters Policy. This is the first activity for this interest holder.

Protection of cultural interests is achieved through compliance with the requirements of Authority Certificates issued by the Aboriginal Areas Protection Authority under the *Northern Territory Aboriginal Sacred Sites Act 1989* (NT) and the archaeological assessment at the proposed locations of the regulated activity to avoid archaeological heritage impacts.

The NT EPA considers that environmental values will be protected in the short and long term from the activities outlined in the EMP and that the health, diversity and productivity of the environment will be maintained for the benefit of future generations.

2.5 Principle of sustainable use

Exploration activities are necessary to enable commercial appraisal of resources. In the absence of reliable data regarding the shale resource, exploration will take a number of years to complete, in order to assess the viability of the resource prior to production. The use of existing access tracks allows this assessment to take place under a reduced clearing footprint.

Groundwater volumes required for the project are low, and do not trigger the need for a water extraction licence under the *Water Act 1992* (NT). The potential aquifers impacted by the project are the Camooweal Dolostone or Wonarah Formation on EP144, and a potential local aquifer on EP154. The use of groundwater for the exploration program is not expected to impact on other current and future water users due to the remote location and the minimal volume of groundwater required to conduct the regulated activity. If freshwater is to be sourced form a licenced provider, the cumulative impact of use of that resource will already have been assessed as part of the process for issuing a groundwater extraction licence. As described under section 2.4, the interest holder is not considered a large emitter and no greenhouse gas abatement plan was required.

The NT EPA is of the view that the sustainable use principle has been considered in assessing the regulated activity.

2.6 Principle of conservation of biological diversity and ecological integrity

There are two known terrestrial Groundwater Dependent Ecosystems (GDEs) in the project footprint, which are Blackwater Creek and the floodplain of one of its tributaries, both supporting Melaleuca woodlands. Blackwater Creek is crossed by the seismic program in an area of sparse trees, and the ecological assessment did not record the Melaleuca Woodlands that define the GDE at the water crossing location. The project location is not within proximity to a declared ecological community under the *Environment Protection and Biodiversity Conservation Act 1999* (Cth).

The regulated activity poses a low risk to the ecosystem within the Mitchell Grass Downs (EP144), Sturt Plateau (EP154) and Gulf Fall and Uplands (both EPs). The regulated activity does not pose a significant risk to any regional populations of threatened species, given the relatively small area of impact and the very large area of similar habitat within the region. The proposed regulated activity will potentially impact less than 0.005% of available habitat for the threatened species in the region. Eleven threatened species may occur in the EP144 area, with two of those considered to have a high likelihood of occurrence (Grey Falcon, Plains Death Adder). Seven threatened species may occur in the EP154 area, with two of those considered to have a high likelihood of occurrence (Mertens' Water Monitor and Gouldian Finch). Due to the management strategies outlined in the EMP, the relatively small area of potential impact and the short duration, it is unlikely that the regulated activity will pose a risk to the identified threatened species.

Avoidance and mitigation measures identified in the EMP are adequate to minimise risks from, for example, vehicle-strike, dust, erosion and/or spills, to ALARP and acceptable levels, in relation to potential impacts on biodiversity.

The EMP outlines measures to minimise potential impacts on affected environmental values, including the management of threatening processes such as erosion, weeds and fire. The proposed management plans are consistent with the requirements of the Code, the *NT Land Clearing*

Guidelines, and the *Weed Management Planning Guideline: Onshore Petroleum Projects.* Specific precautions to ensure interaction with wildlife is avoided are included in the EMP. These include: inspections for fauna presence, weeds, speed limits on access roads and daily checks of infrastructure.

The NT EPA considers that implementation of, and compliance with, the EMP will ensure the conservation of biological diversity and ecological integrity is not impacted by the regulated activity.

2.7 Principle of improved valuation, pricing and incentive mechanisms

The interest holder is required to prevent, manage, mitigate and make good any contamination or pollution arising from the regulated activity, including contamination of soils, groundwater and surface waters through accidental spills.

All stages of the regulated activity, including disposal of waste, commercial purchase of groundwater, and progressive rehabilitation of all disturbed areas to an acceptable standard, are at the cost of the interest holder. The interest holder is required to provide an adequate environmental rehabilitation security bond to reduce liability for the NT Government. This is based on an assessment by the Department of the estimated rehabilitation cost submitted by the interest holder.

The NT EPA is of the view the principle of improved valuation, pricing and incentive mechanisms has been considered in assessing the regulated activity and is based on the interest holder bearing any environmental costs for the activity.

3. Environmental impacts and risks reduced to a level that is as low as reasonably practicable and acceptable (regulation 9(1)(c))

The interest holder commits to identified measures to avoid or minimise impacts on environmental values, informed by baseline studies. The EMP systematically identifies and assesses environmental impacts and risks associated with the regulated activity. The key potential environmental impacts and risks considered in the EMP are: fire (accidental ignition of fire), threatened species habitat removal (vegetation clearing), significant habitat removal (vegetation clearing), fauna mortality (vehicle strike) and soil contamination (spills).

The EMP demonstrates why the controls to be implemented are considered ALARP and acceptable. Of the 34 environmental risks identified by the interest holder, 29 are considered ‘low’ risk, and therefore are ALARP and acceptable. The remaining five risks are considered ‘medium’ and the interest holder has included mitigations to be implemented such that the risks will be managed at levels that are ALARP and acceptable. Specifically:

1. *Accidental ignition of fire:* a Bushfire Management Plan has been developed and will be implemented. Seasonal conditions and fuel loads will be monitored and fire breaks will be maintained around infrastructure.

2. *Vegetation clearing:* clearing of all large trees will be avoided, notably *Corymbia* and *Eucalypt* species with a trunk diameter of >25 cm at 1.3 m above ground level and all large old hollow bearing trees along the waterways or woodland environments. If an active or suspected Grey Falcon nest is encountered, a minimum buffer of 300 m will be maintained around the active nest.

3. *Vehicle strike*: vehicle movements will be restricted to access tracks and seismic lines, speeds on existing access tracks within the permit will not exceed 60 km/hr. Driving on site will be restricted to daytime hours wherever possible.
4. *Spills:* all loading, unloading and refuelling operations will take place in designated areas, with portable bunding and away from sensitive receptors. The use, storage and handling of fuel, chemicals and oils on site will comply with WHS legislation and be in accordance with the approved safety data sheet. Secondary containment will be used for any hazardous chemicals. In the event of a spill, all contaminated material will be collected and disposed of via a licensed waste facility.

The EMP also considers cumulative impacts to groundwater, flora and fauna, greenhouse gases, traffic and social and concludes these can be managed to ALARP and acceptable levels. The outcome of this project will inform any future development potential and opportunity. Future production of gas will require a new EMP, in which the (cumulative) impacts of the proposed program will need to be addressed. This includes the mitigation of greenhouse gas emissions consistent with the NT Government net zero carbon by 2050 policy, as well as any relevant Australian government requirements.

The NT EPA considers that all reasonably practicable measures will be used to control the potential environmental impacts and risks, considering the level of consequence and the resources needed to mitigate them, and the nature, scale and location of the regulated activity. The NT EPA considers that the environmental impacts and risks will be reduced to a level that is ALARP and acceptable, considering the sensitivity of the local environment, relevant standards and compliance with the Code.

4. Relevant matters raised through public submissions

The EMP was made available for public comment for 28 days from 9 August 2022 to 6 September 2022. Two public submissions were received, both originating from the NT. Both submissions were a unique submission and opposed to onshore petroleum development. Submissions raised substantially similar issues as those addressed through the *Scientific Inquiry into Hydraulic Fracturing in the Northern Territory* (HFI) and subsequent implementation of the 135 HFI recommendations.

Table 2: Issues raised in public submissions

Theme	Issues raised	Response
Climate change	• Impacts from climate change	Emissions have been calculated in accordance with the National Greenhouse and Energy Reporting Scheme (NGERS). The emissions from this project are limited to land clearing, seismic acquisition and stratigraphic drilling activities. The project does not exceed the threshold in the NTG Large Emitter Policy. The contribution of GHG emissions to climate change impacts is considered negligible for this project, given its nature and scale, and short timeframe.
Cumulative impacts	• Consideration of water extraction and greenhouse gases of future plans	The project is limited to geomorphological investigation and does not propose to establish petroleum wells. The outcome of this project will inform any future development potential and opportunity. In this current investigative stage, future plans hold no certainty and therefore are unable to predict cumulative impacts with any level of certainty.
Flora and fauna (environment)	• Adequacy baseline assessment • Impact to creek crossings • Ambiguity about implementation of mitigation measures • Impact to threatened species • Adequacy rehabilitation method	The baseline assessment undertaken as part of the EMP provides an adequate understanding of the threatened species that may occur in the area of the regulated activities. The EMP was updated to include a commitment to not clearing trees in the seismic program with a diameter larger than 25 m at 1.3 m above ground level, and will identify and use the crossing point with least impact, to protect creek crossings and important habitats. The draft EMP was also amended to clarify the commitments for mitigation measures for threatened species. As the area of suitable habitat proposed to be cleared is very small compared to the area of remaining suitable habitat for the identified threatened species, it is considered unlikely the proposed regulated activities pose a significant risk to the threatened species. The rehabilitation plan shows that monitoring of weeds and erosion, and rehabilitation success, will be conducted on a yearly basis, with corrective actions taken where necessary.
Social and cultural	• Impact to sacred sites and artefacts • Lack of stakeholder engagement	A heritage assessment has been undertaken of the project area and the EMP commits to avoiding areas of cultural heritage (sacred sites and archaeological heritage sites). No EMP can be approved without provision of an Authority Certificate issued by the Aboriginal Areas Protection Authority, which sets out any requirements and conditions for preventing impact to sacred sites The EMP includes a stakeholder engagement log, which demonstrates that the interest holder has engaged with a range of stakeholders including direct engagement with the relevant leaseholders, Aboriginal stakeholders and the Northern Land Council. Onshore petroleum activities cannot commence unless the identified stakeholders have been properly engaged. For Aboriginal stakeholders the processes administered by the Land Councils under the *Native Title Act 1993* and the *Aboriginal Land Rights (Northern Territory) Act 1976* assist in ensuring that

		stakeholder engagement is conducted appropriately. Additionally, the interest holder has provided its stakeholders with updated information about the work program during the assessment of the draft EMP.
Water	• Impacts from groundwater use	The water volumes required for this project do not trigger the requirement to obtain a water extraction licence.

5. Other relevant matters

The exact timing of each activity is unknown at the time of preparation of an EMP. The NT EPA recommends the Minister include an approval condition to submit an updated timetable at regular intervals, as well as regular updates during operational periods.

CONCLUSION

The NT EPA considers that, subject to consideration of the recommended EMP approval conditions, the EMP:

- is appropriate for the nature and scale of the regulated activity
- demonstrates that the regulated activity can be carried out in a manner that potential environmental impacts and environmental risks of the activity will be reduced to a level that is ALARP and acceptable.

In providing this advice the NT EPA has considered the principles of ecologically sustainable development.

RECOMMENDATIONS

The NT EPA recommends that should the EMP for Minerals Australia Pty Ltd and Jacaranda Minerals Pty Ltd be approved, the Minister considers approval conditions to achieve the following outcomes:

1. Provision of quarterly timetable updates and weekly activity reports
2. Submission of an annual performance report to the Department to demonstrate the interest holder has met environmental outcomes and complied with the requirements set out in the Regulations, the Code, the ministerial conditions and the EMP.
3. Recording of all spills in an internal register that includes location, source and volume of the spill and corrective actions to ensure subject land is free from contamination to meet rehabilitation requirements.
4. Ensuring no long term impacts to the environment by demonstrating rehabilitation is carried out in the shortest practical time.

PAUL VOGEL AM

CHAIRMAN

NORTHERN TERRITORY ENVIRONMENT PROTECTION AUTHORITY

04 APRIL 2023