

## Approval notice and statement of reasons


### *Petroleum (Environment) Regulations 2016 (NT) (Regulations)*

Interest holder	Imperial Oil & Gas A Pty Ltd ACN 649 305 411
Petroleum interest(s)	Exploration Permit 167 and 168 (EP167, EP168)
Environment management plan (EMP) title	EP167/168 Environment Management Plan
EMP document reference	IMA1-5
Regulated activity	<ul style="list-style-type: none"> <li>• acquisition of 377.5 km of 2D seismic data</li> <li>• clearing of 222 hectares of land for civil works including: <ul style="list-style-type: none"> <li>○ construction of up to 6 well pads (single/multi), 2 camp sites and 6 gravel pits.</li> <li>○ construction of 42.9 km of new access tracks</li> <li>○ construction of 76.7 km of buried low-pressure wastewater flowlines</li> </ul> </li> <li>• construction of up to 48 monitoring and production water bores</li> <li>• drilling of 6 wells (made up of vertical/horizontal wells plugged back and drilled out of vertical/dedicated new horizontal wells)</li> <li>• evaluation, logging, testing and coring of each well</li> <li>• hydraulic fracturing of 6 wells</li> <li>• completion, workover and maintenance of each well</li> <li>• extended production testing of &lt;90 days per well for 6 wells</li> <li>• maintenance and monitoring related to the above activities.</li> </ul>
Is the EMP a new plan submitted under reg 6 or a revision of a current plan submitted in accordance with reg 18, or regs 15 and 17?	This is a new plan submitted under reg 6.
Was the regulated activity referred <sup>1</sup> for consideration whether environmental impact assessment was required?	No
Was environmental impact assessment <sup>2</sup> required?	N/A
Has an environmental approval <sup>3</sup> been issued for the regulated activity?	N/A

<sup>1</sup> This means a referral under the *Environment Protection Act 2019* (NT) (EP Act) and/or the *Environment Protection and Biodiversity Conservation Act 1999* (Cth) (EPBC Act).

<sup>2</sup> This means a requirement for an environmental impact assessment to be conducted under the EP Act and/or the EPBC Act.

<sup>3</sup> This means an approval granted under the EP Act and/or the EPBC Act.

Has an Authority Certificate under the <i>Northern Territory Aboriginal Sacred Sites Act 1989</i> been issued for the regulated activity?	Yes C2022/092
Date an EMP compliant with reg 8 was first submitted under reg 6	13 January 2022
Date within which the EMP was published for comment under reg 8A, if applicable	20 January 2022 – 17 February 2022
Date further information was required and submitted under reg 10, if applicable	16 March 2022 (requested) 3 July 2023 (received) 11 August 2023 (requested) 30 April 2024 (received) 24 September 2024 (requested) 2 October 2024 (received)
Date of resubmission notice under reg 11(2)(b), if applicable	22 March 2022 (requested) 3 July 2023 (received)
Date EMP was resubmitted under reg 11(3), if applicable	24 August 2023 (requested) 30 April 2024 (received) 19 July 2024 (requested) 9 September 2024 (received)
Date a notice setting out a proposed timetable for consideration of the EMP was issued under reg 11(2A), or reg 11(3)(c), if applicable	9 October 2024
Proposed timetable given in notice under reg 11(2A), or reg 11(3)(c), if applicable	23 October 2024
Where provided under s29B of the <i>Northern Territory Environment Protection Authority Act 2012</i> (NT) (NT EPA Act), the dates the Northern Territory Environment Protection Authority (NT EPA) was requested to, and provided, advice on EMP	Date of Minister's request for advice: 25 February 2019 Date of NT EPA Advice: 7 October 2024 NTEPA2022/0010-006~0001
Date of decision	22 / 10 / 2024
Decision maker	 Signature
	Hon Joshua Burgoyne MLA, Minister for Lands, Planning and Environment

## 1 Approval notice

- I approve the EMP under reg 11(3)(a)(i).
- The approval is subject to the following conditions:

**Condition 1:** A Well Operations Management Plan in relation to the activities covered by the EP167/EP168 Environment Management Plan (IMA1-5) must be approved by the Minister for Mines and Energy prior to the commencement of any drilling or hydraulic fracturing activities.

**Condition 2:** Within 90 days of the anniversary of the approval date of the EMP (IMA1-5), and each subsequent year, the interest holder must submit to [Onshoregas.DLPE@nt.gov.au](mailto:Onshoregas.DLPE@nt.gov.au) a completed Annual Environmental Performance Report Template for the preceding 12 month period. The Template must be completed in accordance with the *Onshore Petroleum Annual Environmental Performance Reporting Guideline* as updated from time to time.

## 1 Approval notice

**Condition 3:** When regulated activities occur during the Wet Season as defined in the Code of Practice: Onshore Petroleum Activities in the Northern Territory (the Code), the interest holder must submit to [Onshoregas.DLPE@nt.gov.au](mailto:Onshoregas.DLPE@nt.gov.au) weekly reports with the following information:

- i. daily inspection reports for secondary containment in use and, where relevant, the type and date of corrective actions taken, or date proposed to be taken, in response to issues identified in the daily inspection reports; and
- ii. all dates the regulated activity was stopped due to Wet Season events and the date and time that the regulated activity recommenced, or is proposed to recommence.

**Condition 4:** During drilling activities or hydraulic fracturing activities, the interest holder must submit to [Onshoregas.DLPE@nt.gov.au](mailto:Onshoregas.DLPE@nt.gov.au) a weekly report with the following information:

- i. the daily freeboard available in any drill cutting pits and any wastewater tanks (in cm) and the time of measurement; and
- ii. whether any non-compliances with the EMP were identified in the daily inspections and, if relevant, corrective actions taken, or proposed to be taken, and the timeframe for implementation of corrective actions, in response to the non-compliances.

**Condition 5:** Within 30 days of completing seismic line preparation activities or any new land clearing or other ground disturbing activities (including earth moving, land clearing, installation of gravel pits, establishment of well pads, and establishment of access tracks), the interest holder must submit to [Onshoregas.DLPE@nt.gov.au](mailto:Onshoregas.DLPE@nt.gov.au) geospatial files (as shapefiles and inclusive of metadata).

**Condition 6:** By 31 October of each year, the interest holder must submit to [Onshoregas.DLPE@nt.gov.au](mailto:Onshoregas.DLPE@nt.gov.au) the emissions report required by clause D.6.2<sup>4</sup> of the Code, which must:

- i. calculate emissions in accordance with the National Greenhouse and Energy Reporting (Measurement) Determination 2008;
- ii. document actual annual greenhouse gas emissions from conduct of the regulated activity estimated and reported under the *Commonwealth National Greenhouse and Energy Reporting Act 2007 (NGER Act)* versus predicted emissions in the EMP (IMA1-5);
- iii. demonstrate the actual emissions have been verified by an auditor registered under the Register of Greenhouse and Energy Auditors established under section 75A of the NGER Act;
- iv. include a summary of all regulated activities conducted which have contributed to greenhouse gas emissions during the reporting period; and
- v. account for differences between actual and predicted emissions with reference to all parts of the regulated activity with potential to create greenhouse gas emissions.

---

<sup>4</sup> Clause D.6.2(b) of the Code requires annual actual greenhouse gas emissions to be provided even where emissions are below the NGER Act threshold of 25 ktCO<sub>2</sub>-e for scope 1 and scope 2 emissions reporting

## 1 Approval notice

**Condition 7:** The interest holder must record all accidental releases of liquid contaminant or hazardous chemicals in a site spill register, which records:

- i. the liquid contaminant or hazardous chemical spilled or leaked;
- ii. the GPS co-ordinates of the location of the spill or leak;
- iii. the source and volume of the spill or leak;
- iv. the volume of impacted soil removed for disposal and the depth of any associated excavation; and
- v. the corrective actions taken or proposed to be taken to prevent recurrence of an incident of a similar nature.

**Condition 8:** The interest holder must undertake quarterly groundwater monitoring at each control and impact monitoring bore for a minimum of three years after establishment, unless otherwise advised by the Department of Lands, Planning and Environment (DLPE).

**Condition 9:** The interest holder must undertake groundwater level/pressure monitoring at each impact monitoring bore established, using a logger to record water level at a minimum of every 4 minutes for the duration of the recording period, for 14 days prior to, during, and 28 days after completion of hydraulic fracturing operations at each well pad.

**Condition 10:** Within 60 days of each groundwater monitoring event, the interest holder must submit to [Onshoregas.DLPE@nt.gov.au](mailto:Onshoregas.DLPE@nt.gov.au) the results of groundwater monitoring in the following formats:

- i. Excel data file in the Aquarius template provided by DLPE; and
- ii. Pdf from the analysing laboratory.

**Condition 11:** Within 90 days of the anniversary of the approval date of the EMP (IMA1-5), and each subsequent year, the interest holder must submit to [Onshoregas.DLPE@nt.gov.au](mailto:Onshoregas.DLPE@nt.gov.au) an interpretative report of groundwater quality which includes:

- i. identification of any change to groundwater quality or level attributable to conduct of the regulated activity at the well site(s) and discussion of the significance and cause of any such observed change;
- ii. interpretation of any statistical outliers observed from baseline measured values for each of the analytes listed in Table 6 of the Code;
- iii. a summary of the results including descriptive statistics;
- iv. discussion of any trends observed;
- v. description of the layout of the groundwater monitoring bores and wells, indicative groundwater flow directions and levels in accordance with the Preliminary Guideline Groundwater Monitoring Bores for Exploration Petroleum Wells in the Beetaloo Sub-basin; and
- vi. in the third annual report, site-specific trigger values for groundwater quality and interquartile ranges for analytes at each of the impact monitoring bores established based on the first three years of groundwater monitoring.

## 1 Approval notice

**Condition 12:** Within 14 days of completion of groundwater level/pressure monitoring in each impact monitoring bore, the interest holder must submit to [Onshoregas.DLPE@nt.gov.au](mailto:Onshoregas.DLPE@nt.gov.au) the logger data in Excel format.

**Condition 13:** Within 60 days of completion of well flowback operations for the first well where flowback fluid has been reused, the interest holder must provide to [Onshoregas.DLPE@nt.gov.au](mailto:Onshoregas.DLPE@nt.gov.au) a risk assessment of the returned flowback fluid following the reuse, which must be:

- i. prepared by a suitably qualified person; and
- ii. prepared in accordance with the monitoring wastewater analytes specified in section C.8 of the Code.

**Condition 14:** Prior to commencement of regulated activities, the interest holder must provide DLPE with a rehabilitation plan which has been developed or reviewed by a suitably qualified person.

**Condition 15:** Prior to the flaring of condensate, a bushfire risk assessment in relation to flaring condensate must be undertaken to ensure increased risks of bushfires are managed appropriately.

## 2 Material considered

1. The following material has been taken into account in making this decision:
  - a. EP167/168 Environment Management Plan, dated 2 October 2024 (IMA1-5).
  - b. The principles of ecologically sustainable development referenced in reg 5A and the approval criteria set out in reg 9(1).
  - c. The NT EPA advice provided under s29B of the NT EPA Act.
  - d. The Authority Certificate issued under the *Northern Territory Aboriginal Sacred Sites Act 1989*.
  - e. The Code of Practice: Onshore Petroleum Activities in the Northern Territory (Code) as set out in reg 4A.
  - f. All public comments submitted under reg 8B.
  - g. The estimation of environmental security required for the regulated activity.

## 3 Statement of reasons

1. The EMP meets the approval criterion in reg 9(1)(a), because it contains all the information required by Schedule 1 of the Regulations. reg 9(1)(a)
2. I have taken into account the approval criterion in reg 9(1)(b) by noting the nature and scale of the regulated activity and bearing it in mind during my consideration of the impacts and risks. In particular, I note that: reg 9(1)(b)
  - a. The nature of the regulated activity is as follows:
    - i. Seismic acquisition.
    - ii. Establishment of accommodation camps and civil works associated with establishing well sites, access tracks and flowlines.
    - iii. Installation of impact and control groundwater monitoring bores.
    - iv. Drilling and hydraulic fracturing of new exploration wells.

## 1 Approval notice

- v. Potential establishment of multiple wells per well pad.
  - vi. Exploration and appraisal testing of wells.
  - vii. Construction of on-site wastewater storage.
  - viii. Transportation, handling and storage of bulk chemicals, fuels and wastes.
  - ix. Decommissioning sites and associated infrastructure.
- b. The scale of the regulated activity is as follows:
- i. The total area covered by regulated activities covers 402.4 ha and includes approximately 222 ha of new disturbance.
  - ii. The 2D seismic acquisition involves 377.5 km of seismic lines and requires 120.3 ha of new clearing.
  - iii. The microseismic acquisition involves 3 ha of clearing in total.
  - iv. 42.9 km of new access tracks is proposed, it includes widening of repurposed seismic lines, totalling 11.8 ha of clearing.
  - v. The installation of up to 76.7 km of buried, low pressure flowlines, totalling 30.7 ha of clearing.
  - vi. Extended production testing for up to 90 days per well.
  - vii. Use of 410.9 ML of groundwater with a maximum of approximately 136 ML per annum.
  - viii. Generation of up to approximately 75,000 tCO<sub>2</sub>e per annum and a total of approximately 227,000 tCO<sub>2</sub>e.
  - ix. Requirement for a peak workforce of approximately 94 personnel.
  - x. Peak vehicle movement of 14 light vehicles and 110 heavy vehicle movements per week.
3. The approval criteria in reg 9(1)(c) requires that I be satisfied 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 both: (i) as low as reasonably practicable; and (ii) acceptable. In assessing whether the EMP meets the approval criteria, I note that my decision is a prescribed decision (under reg 5A) for s 6A of the Act, and as such requires me to consider and apply the principles of ecologically sustainable development. In accordance with reg 12(3), I provide the following information about how the EMP meets the approval criteria, and the manner in which I have taken into account the principles of ecologically sustainable development when considering whether or not the plan meets the approval criteria. reg 9(1)(c)
4. The principles of ecologically sustainable development are defined at section 18-24 of the *Environment Protection Act 2019*, and I address each in turn:
- a. The decision-making principle (s 18 *Environment Protection Act 2019*) requires effective integration of long-term and short-term environmental and equitable considerations, and for processes to provide for community involvement in relation to decisions and actions that affect the community. Related to this, I note the following:
    - i. The regulated activity takes a whole of project approach with discrete activities staged over five years. The regulated activity will inform decision-making about longer-term petroleum activities.

## 1 Approval notice

- ii. Public consultation on the EMP was required under the Petroleum (Environment) Regulations 2016, as the EMP proposes drilling and hydraulic fracturing activities. The EMP was made available for public comment for 28 days from 20 January 2022 – 17 February 2022.
- iii. DLPE received 1340 public submissions on the EMP, consisting of 1325 form letters via internet campaigns, and 15 submissions via the advertised DLPE public engagement modes. 18 NT submissions represent approximately 1.3% of the total number of submissions received, noting that 593 submissions (44.2%) were from undisclosed geographical regions. The submissions received did not identify new issues that have not already been addressed in this or previously approved EMPs, or the policies and regulations in effect to manage the onshore gas development. The NTG agencies comments and public submissions were addressed by the interest holder via an updated EMP. Comments made by the NT EPA Onshore Gas Committee have informed the conditions I have set.
- iv. I note the issues raised in public submissions across the following broad environmental themes:

Theme	Overview of issue raised
Chemicals	<ul style="list-style-type: none"> <li>• Impact of toxic chemicals on environment and human health</li> <li>• Adequacy of chemical risk assessment:               <ul style="list-style-type: none"> <li>○ No information about actual hydraulic fracturing and drilling fluid composition.</li> <li>○ No drilling fluids included in chemical risk assessment.</li> </ul> </li> </ul>
Climate Change	<ul style="list-style-type: none"> <li>• Transition towards renewable energy</li> <li>• Contribution to national greenhouse gas emissions (GHG)</li> <li>• Lack of greenhouse gas abatement plan (GGAP)</li> <li>• Greenhouse gas emissions assessment methodology (exclusion scope 1 emissions)</li> <li>• Exclusion of land clearing emissions</li> <li>• Fugitive methane emissions from well</li> <li>• Inconsistent GHG emission numbers</li> </ul>
Flora and fauna (environment)	<ul style="list-style-type: none"> <li>• Adequacy of baseline assessment</li> <li>• Clearing of riparian vegetation communities</li> <li>• Lack of a rehabilitation plan</li> <li>• Erosion and Sediment Control Plan is generic</li> <li>• Impacts to stygofauna</li> <li>• Impacts to threatened species</li> <li>• Impact to insects (from flaring)</li> <li>• Description of vertical interplays between aquifers</li> <li>• Acknowledgement of Territory Conservation Agreement</li> <li>• Soil contamination impacting plant growth through wastewater spills.</li> </ul>
Human health	<ul style="list-style-type: none"> <li>• Impact to nearby residents from nitrogen oxides and volatile organic compounds</li> </ul>
Regulation and compliance	<ul style="list-style-type: none"> <li>• The EMP does not meet the approval criteria – lack of detail, inconsistencies, risks not as low as reasonably practicable (ALARP) and acceptable.</li> <li>• No Authority Certificate for the proposed regulated activity.</li> <li>• Cumulative impacts to consider future activities and habitat loss of threatened species.</li> <li>• Referral under the Environment Protection Act 2019 (NT) (EP Act)</li> <li>• Transparency of the Well Operations Management Plan (WOMP)</li> <li>• Flowlines breaching the Petroleum Act</li> <li>• Fit and proper person test (Empire’s oil and wastewater spill in the US)</li> </ul>
Social and cultural	<ul style="list-style-type: none"> <li>• Adequacy of stakeholder engagement:               <ul style="list-style-type: none"> <li>○ Traditional Owners not consulted</li> <li>○ other authorised land users in the project area not identified</li> <li>○ lack of information provided to stakeholders</li> <li>○ no copies of written responses</li> <li>○ lack of free, prior and informed consent.</li> </ul> </li> <li>• Protection of archaeological sites</li> </ul>

## 1 Approval notice

	<ul style="list-style-type: none"> <li>• Adequacy of archaeological survey (methodology and lack of consultation with Aboriginal traditional owners and custodians)</li> <li>• Lack of social baseline assessment as part of the social impact assessment</li> </ul>
Spills	<ul style="list-style-type: none"> <li>• Contamination of aquifers from spills through sinkholes</li> <li>• Risks of flowline spills through corrosion, soil instability and erosion.</li> </ul>
Traffic	<ul style="list-style-type: none"> <li>• Increased traffic causing increased road deaths and wildlife injuries</li> </ul>
Uncertainty in regulated activity	<ul style="list-style-type: none"> <li>• Numerous errors, inconsistencies and omissions</li> <li>• Flowline installation and decommissioning (how and when)</li> <li>• Location, number and design of proposed wells unknown, making a realistic risk assessment impossible.</li> <li>• Centralised processing of wastewater</li> </ul>
Water	<ul style="list-style-type: none"> <li>• Lack of a groundwater extraction licence.</li> <li>• No Water Allocation Plan in place for the proposed activity area.</li> <li>• Water availability</li> <li>• Drawdown from surface water (lakes and rivers across the country)</li> <li>• Contamination of aquifers through drilling fluid losses</li> <li>• Monitoring of dissolved oxygen (important analyte for stygofauna)</li> <li>• Contamination of aquifers through well integrity failure</li> <li>• Monitoring frequency of groundwater post hydraulic fracturing – quarterly is too infrequent to prevent contamination reaching potentially toxic levels.</li> </ul>
Waste	<ul style="list-style-type: none"> <li>• Wastewater transport through flowlines – lack of description of quantity or composition.</li> <li>• Reuse of flowback fluids</li> <li>• Wastewater quality – no information about composition</li> <li>• Wastewater storage in open ponds – fauna access</li> <li>• Tank pad configuration and management</li> <li>• Wastewater disposal – leaks and spills associated with transportation and reinjection</li> </ul>
Well integrity	<ul style="list-style-type: none"> <li>• Corrosion of wells</li> <li>• Impacts of sulphate-reducing bacteria</li> <li>• Impacts of hypersaline, high-temperature aquifers</li> <li>• Risks of leaky wells</li> </ul>

- v. The NTG agencies' comments and public submissions were addressed by the interest holder via resubmitted EMPs.

## 1 Approval notice

- vi. The specific issues of concern raised in public submissions have been addressed in the NT EPA Advice which I have considered. I recognise the importance the community places overall, on assessment of cumulative impacts, environmental protection and ensuring decisions are based on the principles of ecologically sustainable development. I have taken into account any public submissions in making my decision. The EMP appropriately identifies the risk and potential impacts from the regulated activity and commits to mitigation, management and monitoring measures to address these risks and potential impacts.
  - vii. I am satisfied that the community has had a reasonable opportunity to be involved in processes in relation to this decision.
  - viii. Next, I have considered short-term and long-term environmental impacts of carrying out the regulated activity. Environmental impacts include direct and indirect effects on the physical, biological, economic, cultural and social aspects of the environment, and may include cumulative impacts or occur over time.
  - ix. The information before me suggests short-term environmental impacts are ALARP and acceptable with the proposed mitigations in place.
  - x. The information before me suggests long-term environmental impacts as low as reasonably practicable and acceptable if the regulated activities are undertaken in the manner detailed in the EMP and the conditions of approval.
  - xi. Taking an integrated view of long-term and short-term environmental and equitable considerations, I am satisfied that the considerations on balance and taken together support approval of the EMP.
- b. The precautionary principle (s 19 *Environment Protection Act 2019*) applies when there are threats of serious or irreversible environmental damage, and requires that lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation. I am satisfied that the regulated activity does not pose a threat of serious or irreversible environmental damage.
  - c. The principle of evidence-based decision-making (s 20 *Environment Protection Act 2019*) requires decisions to be made on the best available evidence in the circumstances that is relevant and reliable. I am of the view that the evidence before me satisfies this requirement for the following reasons: I am satisfied that the best available evidence has been obtained because:
    - i. The revised EMP has been developed with consideration of the findings in the Strategic Regional Environmental and Baseline Assessment (SREBA) for the Beetaloo Subbasin.
    - ii. The EMP was developed by persons who have professional qualifications, training, skills and experience on the subject matter of environment, safety, risk management, and petroleum development and operations, as well as experience with working in the Beetaloo Sub-basin.
    - iii. The interest holder and consultants employed a comprehensive process to obtain relevant information including baseline assessments, archaeological assessments and stakeholder engagement and consultation with relevant NT government agencies.

## 1 Approval notice

- iv. The EMP was available for public comment to identify any deficiencies or additional evidence required from 20 January 2022 to 17 February 2022.
  - v. The EMP has undergone review and assessment by a multi-disciplinary team in DLPE and NT government agencies, which has informed my decision on the EMP.
  - vi. The interest holder provided further information to clarify aspects of the EMP and modified the EMP to ensure it meets the requirements of the Regulations and the Code.
  - vii. No concerns regarding the sufficiency of information to support the modified EMP are apparent. I am satisfied that the information before me is comprehensive.
  - viii. I believe the information regarding the proposed regulated activity adequately provides the best available evidence in the circumstances that is relevant and reliable to the evidence-based decision-making process.
- d. The principle of intergenerational and intra-generational equity (s 21 *Environment Protection Act 2019*) requires that the present generation should ensure that the health, diversity and productivity of the environment is maintained or enhanced for the benefit of present and future generations. I have given consideration to the impact on present and future generations as follows:
- i. This criterion requires me to turn my mind to whether the benefits of the proposal disproportionately burden present or future generations, or particular groups or communities of present or future generations.
  - ii. I have considered the use of groundwater and am satisfied that groundwater availability will be protected through the Groundwater Extraction Licence that ensures the proposed use will not result in either short-term or long-term impacts to other groundwater users.
  - iii. I have considered the protection of cultural heritage and am satisfied that conduct of the regulated activity will not impact on preservation of cultural heritage for the benefit of future generations.
  - iv. I have considered the potential benefit for future generations from increased economic activity in the region and am satisfied that exploration is a necessary precursor for economic gains that may be achieved through a viable onshore petroleum industry.
  - v. I have considered whether the health, diversity and productivity of the environment is maintained or enhanced for the benefit of each of these relevant groups and conclude that on the balance, the health, diversity and productivity of the environment is not reduced by the regulated activity for each identified group or community.
  - vi. The environmental burdens of the regulated activity will not disproportionately affect particular stakeholders.
  - vii. I consider that cumulative emissions are not significant when considered in context of 2022 NT and Australian emissions, which were approximately 16.73 million tonnes and 432.6 million tonnes respectively.
  - viii. Cultural values relating to sacred sites will be protected through the application of the Authority Certificate issued to the interest holder under the

## 1 Approval notice

*Northern Territory Aboriginal Sacred Sites Act 1989* and measures for reporting on discovery of archaeological sites during civil and seismic activities.

- ix. Accordingly I do not believe that the carrying out of the regulated activity in accordance with the EMP would have an effect contrary to the principle of inter or intra-generational equity.
- e. The principle of sustainable use (s 22 *Environment Protection Act 2019*) requires that natural resources should be used in a manner that is sustainable, prudent, rational, wise and appropriate. In applying this principle, I have considered the following:
  - i. I note the findings of the Scientific Inquiry into Hydraulic Fracturing (HFI) in the NT that states: “... *in the short to medium term, the Australian National Energy Market is likely to require higher levels of flexible, gas-fired generation, which can provide a reliable, low emissions substitute for ageing coal-fired generation, and essential security services to complement variable renewable electricity generation.*”<sup>5</sup>
  - ii. I note the NT Government’s implementation of all the recommendations of the HFI, including establishment of the NT Government’s Policy Statement on Management of Greenhouse Gas Emissions from the Onshore Gas Industry. This Policy Statement commits to amendment of the NT legislative framework to require a Greenhouse Gas Abatement Plan for all applications for onshore gas production and complements the Australian Government’s reforms to the Safeguard Mechanism.
  - iii. Imperial has obtained a water extraction licence (JS10363). The extraction licence allows the extraction of 250 ML per annum from the Jamison Sandstone Formation. The total anticipated water demand for this regulated activity is 410.9 ML. The anticipated peak water extraction is 135.87 ML per annum.
  - iv. No additional groundwater extraction licences are currently required for the regulated activity.
  - v. I note that the EMP has assessed the cumulative impacts of groundwater extraction.
  - vi. Accordingly, I am satisfied that the concept of sustainable use of natural resources has been taken into account.
- f. The principle of biological diversity and ecological integrity (s 23 *Environment Protection Act 2019*) requires that biological diversity and ecological integrity should be conserved and maintained. I have applied this principle as follows:
  - i. I believe the information I have regarding the existing biodiversity and ecosystems that are to be affected by the regulated activity; the effects that are likely; and the mitigation measures reasonably available, is sufficient.
  - ii. The regulated activity does not pose a significant risk to any regional populations of threatened species. No critical habitat was identified during the ground-truthing surveys of the project area, but 14 threatened species potentially occur in the wider landscape.

---

<sup>5</sup> Refer section 9.7.4 of the *Scientific Inquiry into Hydraulic Fracturing in the Northern Territory*; p 233. Available at: <https://frackinginquiry.nt.gov.au/inquiry-reports?a=494286>

## 1 Approval notice

- iii. The avoidance and mitigation measures identified in the EMP are adequate to reduce risks associated with potential impacts on biodiversity, such as noise, dust, erosion and spills to be ALARP.
- iv. The EMP outlines measures to minimise impacts on affected environmental values including the management of threatening processes such as erosion, weeds and fire. Where relevant, management measures for threatening processes are consistent with the requirements of the Code, NT Land Clearing Guidelines and 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, speed limits, above ground tanks and daily checks of infrastructure.
- v. The conservation of biological diversity and ecological integrity is vital to the achievement of ecologically sustainable development. Given the fundamental nature of this consideration, I have given central importance to whether I am satisfied the approval criterion in reg 9(1)(c) has been met.
- vi. It is often the case that the conservation of biological diversity and ecological integrity is vital to the achievement of ecologically sustainable development. By their nature, ecosystems are complex and interdependent systems and relationships; this needs to be considered in relation to what preserves their integrity. Biological diversity also represents a wealth of potential natural resources that may provide options for present and future generations. I have borne this in mind when considering the weight to be given to the evidence before me regarding the potential impacts of the regulated activity on biodiversity and ecological integrity.
- vii. The measures to conserve and maintain biological diversity and ecological integrity in the EMP are appropriate, given the nature and scale of the regulated activity.
- viii. If carried out in accordance with the EMP, the risks of the regulated activity to the conservation of biological diversity and ecological integrity are considered to be mitigated to an acceptable level.
- g. The principle of improved valuation, pricing and incentive mechanisms (s 24 *Environment Protection Act 2019*) requires that environmental factors should be included in the valuation of assets and services, through application of the 'polluter pays' principles, consideration of full life cycle costs of providing goods and services, and pursuing environmental goals in the most cost-effective way. I have applied the principle as follows:
  - i. The pollution and waste that will be generated by the regulated activity in the general course of its operation includes: domestic waste, drilling waste, hydraulic fracturing waste, wastewater and emissions.
  - ii. I am satisfied that both hazardous and non-hazardous waste will be disposed of in accordance with the requirement of the *Waste Management and Pollution Control Act 1998* and the *Radiation Protection Act 2004* by the interest holder at its own cost, as outlined in the relevant sections of the Environment Management Plan and Waste and Wastewater Management Plan.
  - iii. In relation to the risks of a pollution event that may occur unintentionally during the operations of the regulated activity, I consider that the following

## 1 Approval notice

measures are in place to ensure the interest holder bears the costs of containment, avoidance, and abatement:

- (1) Impacts and risks associated with contamination of soil, surface water and groundwater, which are managed through meeting mandated requirements for well integrity and clean-up of spills and leaks and remediation of impacted soil; and
  - (2) Impacts and risks associated with loss of containment of wastewater, which are managed through containment measures.
- iv. In relation to full life cycle costs, it is expected that the regulated activity will have a life cycle of five years, and at the end of this cycle the interest holder will take action to remove any residual pollution and waste as detailed by the EMP.
  - v. All interest holders are required to provide an environmental security related to the activities in an EMP, prior to commencement of activities.
  - vi. The Spill Management Plan includes commitments to remediate spills and leaks, so as to reduce the risk of long-term contamination of the environment and avoid environmental impact legacies.
  - vii. With these measures in place, I am satisfied that the EMP ensures that environmental costs are not left as externalities to be paid for by Territory taxpayers or the local community. They will be fairly paid for by those who stand to benefit from the regulated activity, such as the interest holder, and consumers who choose to purchase the interest holder's products. To the extent there are some costs to the Territory, I am satisfied that this is appropriate given the broader economic benefits.
  - viii. In relation to options to pursue environmental goals in relation to the regulated activity, I have taken into account that these goals should be pursued in the most cost-effective way.
  - ix. I believe approval of the EMP with the conditions I have imposed is consistent with the principle of improved valuation, pricing and incentive mechanisms.
- h. The NT EPA did not require the EMP to be referred under the *Environment Protection Act 2019*, as the regulated activity does not have the potential to cause a significant impact on the environment. reg 9(3)
  - i. The NT EPA reviewed the EMP for the regulated activity against the approval criteria in regulations 9(3)(a) and 9(3)(c) of the Regulations and other matters the NT EPA considered relevant, and has provided advice about the EMP.
  - i. The NT EPA has provided the following in relation to the regulated activity and the EMP:
    - i. In accordance with my request under s 29B of the NT EPA Act, the NT EPA reviewed the EMP against the approval criteria in regulation 9(1) of the Regulations and other matters the NT EPA considered relevant, and has provided advice about the EMP. Relevantly:
      - (1) The NT EPA recommended that should the EMP be approved, it be subject to a number of conditions to achieve 13 outcomes. The NT EPA's recommendations have informed the conditions of this approval. All conditions are outlined in section 1 (2) of this Approval Notice.

## 1 Approval notice

- (2) The NT EPA concluded that the EMP for the regulated activity, subject to the recommendations, is appropriate for the nature and scale of the regulated activity and demonstrates that the regulated activity can be carried out in a manner that environmental impacts and environmental risks of the activity will be reduced to a level that is as low as reasonably practical and acceptable.
- ii. I have considered the NT EPA's advice and recommendations and these have been incorporated where relevant into this statement of reasons and the conditions in the Approval Notice.
- j. The existing environment along with its particular values and sensitivities is appropriately identified in section 4 of the EMP, and to the extent I do not agree or there is some uncertainty, I have imposed conditions to address the relevant risk or risks. reg 9(1)(c)
- k. I agree with the risk assessment set out in Appendix 4 of the EMP, and to the extent I do not agree I have imposed a condition or conditions to address the relevant risk or risks.
- l. The interest holder's risk assessment is applicable to activities in all seasons and the outcomes are reflected in the EMP that includes, for example, a weed management plan; fire management plan; waste and wastewater management plan; rehabilitation management plan; emergency response plan; human health and environmental risk assessment; and spill management plan. The EMP also includes the required elements for the ongoing management of erosion and sediments. This is consistent with the requirements of the Code that allows for the regulated activity to occur in the wet season months when contingency planning is provided and minimum freeboard in wastewater infrastructure is maintained.
- m. The anticipated environmental impacts are appropriately identified in Appendix 4 of the EMP. The regulated activities are a whole-of-project scope which allowed cumulative effects to be identified and assessed. In EMPs for subsequent stages (if they proceed) the interest holder will need to continue to address cumulative effects.
- n. The EMP demonstrates how the interest holder will comply with relevant requirements of the Code in undertaking these regulated activity. This includes reference to applicable Australian and international standards that have been adopted for regulated activity, as applicable. The EMP cross references relevant sections of the Code that apply to the mitigation and management measures to enable the reviewer to identify and confirm that the proposed activities comply with the Code, as applicable. The EMP provides water management commitments and management plans that meet the requirements of the Code.
- o. I am satisfied that the interest holder has conducted ongoing stakeholder engagement in accordance with the Regulations. The EMP provides details of stakeholder engagement that meets Regulation 7 and Schedule 1, Clause 9 of the Regulations (Section 8 and Appendix 11). Stakeholder engagement records (Appendix 11) demonstrate that stakeholders did not raise objections about environmental impacts of the proposed activity that required specific changes from the interest holder. The EMP provides details of written feedback and input from stakeholders as part of the stakeholder engagement records. The risk assessment in the EMP details the potential environmental impacts of the activity

## 1 Approval notice

and proposed environmental outcomes to manage impacts on social and cultural surroundings.

- p. I recognise the importance the community places on the protection of water, human health management of chemicals and waste, stakeholder engagement, social impacts and regulation and compliance. The EMP appropriately identifies the risks and potential impacts from the regulated activity and commits to mitigation and management measures to address these risks and potential impacts.
- q. There are no environmental impacts or environmental risks relating to the proposed regulated activity that I consider to be unacceptable.
- r. Overall, having regard to the above, I am satisfied that the EMP is appropriate for the nature and scale of the activity, and demonstrates that the regulated activity is to be carried out in manner by which the environmental impacts and environmental risks are reduced to a level that is:
  - i. as low as reasonably practicable; and
  - ii. acceptable.