

Notice

Environmental Protection Act 1994

Decision to approve an amendment application

This statutory notice is issued by the administering authority pursuant to section 198(4) of the Environmental Protection Act 1994 to advise submitters of a decision to approve an application to amend an environmental authority, where the assessment level decision is that the amendment is a major amendment.

To Gladstone Conservation Council
Email: gladstoneconservationcouncil@hotmail.com

Our reference: EPPG00711513

Decision to approve an amendment application to the environmental authority for the QGC liquefied natural gas facility on Curtis Island

1 Application details

The application to amend environmental authority EPPG00711513 was received by the administering authority on 3 May 2017 seeking authorisation for:

- a) An increase in the visible smoke that is permitted from flaring events at the liquefied natural gas (LNG) facility; and
- b) The use of a virtual continuous emissions monitoring system.

The application reference number is AR100538.

Land description: Petroleum Facility Licence (PFL) 11.

2 Decision

The administering authority has decided to approve the above mentioned environmental authority (EA) subject to conditions under section 172(2)(a) of the *Environmental Protection Act 1994* (EP Act). All amendments in the EA were agreed to in writing by QCLNG Operating Company Pty Limited (QGC).

3 Reasons for the decision

In making this decision, the administering authority considered the following material and legislation:

- a) The amendment application documents submitted by QGC, including Attachment 1: Amendment of Environmental Authority Application Form, Attachment 2: Supplementary Information, Attachment 3: Air Quality Impact Assessment, Technical Note: Generation of an Online Flare Composition Calculator for Environmental Reporting, and QCLNG Midstream Flaring Management Plan.
- b) The work request responses provided by the Department of Environmental and Science's (the

- department) Technical Support Team.
- c) QGC's response to two departmental information requests.
 - d) The EA conditions contained within the most recent EA EPPG00711513, granted on 31 May 2017 (referred to as the 'original EA' in this notice).
 - e) The report on air quality monitoring undertaken by the department's Air Sciences team.
 - f) The draft EA conditions negotiated between the department and QGC.
 - g) The report titled 'Review of LNG Plant Licence Amendment Application' and additional comments provided to the department by HRL Technology Pty Ltd.
 - h) All information provided to the department as part of the information request responses and additional correspondence with QGC has been considered.
 - i) All information provided to the department by HRL Technology Pty Ltd has been considered.
 - j) All information provided by the department's Air Sciences team has been considered.
 - k) All public submissions provided to the department has been considered.
 - l) In deciding the application, under section 176 of the EP Act, the administering authority must comply with any relevant regulatory requirements, having regard to the application and the standard criteria;
 - m) Section 176 of the EP Act applies as section 232(1) of the EP Act states that Part 5 of Chapter 5 of the EP Act applies to the amendment application as if it were a site-specific application;
 - n) Section 232 of the EP Act applies as the assessment level decision for this amendment application, made on 26 May 2017, determined that the proposed amendment is a major amendment and required public notification;
 - o) The relevant regulatory requirements for environmental management decisions are prescribed in section 51 of the Environmental Protection Regulation 2008 (the EP Regulation);
 - p) The Environmental Protection (Air) Policy (2008) (EPP Air), particularly section 7 and Schedule 1 which references the relevant air quality objectives.
 - q) Under section 203 of the EP Act, the administering authority considers the amendments to the EA to be necessary and desirable to ensure protection of the existing environmental values.

1. QGC's proposed amendment to increase the release of visible smoke

The nature of the decision

- a) Within the original EA (condition B12), QGC was authorised to release up to 30 minutes of visible smoke no more than 14 times per annum (which equated to 7 hours per year in total) outside of normal operating conditions.
- b) As part of this amendment application, QGC requested that the limit be increased from 7 hours to 29 hours of visible smoke per year. This request was not supported by the administering authority and as such, the annual limit of 7 hours has been retained.
- c) Condition B12 has been amended to allow flexibility in relation to the 30 minute time limit for each flaring event. QGC will continue to be restricted to the release of visible smoke for 30 minutes per flaring event except in circumstances where there could be potential plant safety issues. In these circumstances, QGC will be authorised to release visible smoke for up to 90 minutes (refer to condition B13).
- d) The administering authority has included a new condition (B14) which requires QGC to provide records

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demonstrating that ceasing a flaring event could have resulted in plant safety issues.

Reason for the amendment

- a) Section 7 of the EPP Air prescribes environmental values of air to be enhanced or protected. The environmental values relevant to the application are as follows:
 - i) The qualities of the air environment that are conducive to protecting the health and biodiversity of ecosystems;
 - ii) The qualities of the air environment that are conducive to human health and wellbeing; and
 - iii) The qualities of the air environment that are conducive to protecting the aesthetics of the environment, including the appearance of buildings, structures and other property.
- b) Section 8 of the EPP Air states the environmental values for air are protected if the measures for all indicators do not exceed the air quality objectives stated for the indicators or the period stated for the indicators.
- c) The administering authority is satisfied that the proposed amendments will not impact the environmental values listed in Section 7 of the EPP Air as no air quality objectives as listed in Schedule 1 of the EPP Air are proposed to be exceeded.
 - i) This was demonstrated by the modelling undertaken by QGC in its application material.
 - ii) This has also been demonstrated by ambient air quality monitoring undertaken by the department's Air Sciences team. Six monitoring locations were selected based on their proximity to the community of Gladstone and their ability to most accurately capture the air environment of Gladstone as a whole.
- d) As no air quality objectives are to be exceeded from the activity, the administering authority considers that the impacts from visible smoke does not amount to serious or material environmental harm.
- e) The administering authority considers that these amendments do not significantly increase the impacts on the public amenity of Gladstone. Public amenity values are the characteristics that influence and enhance the community's appreciation of a particular area. This is ensured as, despite the ability of QGC to exceed 30 minutes in certain circumstances, the average length of time of flaring authorised remains at 30 minutes and the total authorised period of visible smoke remains at 7 hours per year.

2. Administering authority's inclusion of the reference to 'daylight hours' and its associated definition

The nature of the amendment

- a) The administering authority has included a reference to 'daylight hours' in conditions B12 and B13. A definition of daylight hours has also been included in Appendix 1 of the EA.

Reason for the amendment

- a) 'Visible smoke' was defined in the original EA as a visible suspension in the air measured by a Ringelmann number greater than 2.
- b) The administering authority recognises that the release of smoke at night will not result in a Ringelmann reading of greater than 2. As a result, the release of smoke at night will not meet the definition of 'visible smoke'.
- c) To ensure clarity in the EA, the administering authority has specified that the release of smoke in accordance with conditions B12 and B13 is only restricted during daylight hours.
- d) To allow for accurate determination of when daylight commences and ends, the administering authority

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has referenced the Australian Government Geoscience Australia webpage. This will provide a consistent source of the times for sunrise and sunset.

3. QGC's proposed amendment for a virtual continuous emissions monitoring system (CEMS)

The nature of the amendment

- a) The administering authority has amended the definition for 'CEMS' to authorise QGC to undertake its monitoring and recording of the flaring events via a virtual CEMS.

Reason for the amendment

- a) Under condition B13 of the original EA and its associated table Schedule B – Table 3 – Recording during flaring events, QGC were required to monitor and record flaring events. The stated method for monitoring and recording temperature, vent gas flow rate and vent gas composition was a CEMS.
- b) Generally, a CEMS (either traditional or virtual) is used to record, analyse and monitor the composition of combustion products, temperature, pressure and the flow rate of exhaust streams from continuous industrial processes (such as emissions from power station boilers and turbines) to measure the amount of pollutants generated and to monitor combustion efficiency.
- c) QGC uses an elevated flare system to safely dispose of gases where the combustion process takes place in the unconfined atmosphere above the flare. It is not possible to use a traditional CEMS and instrumentation to measure the combustion products and temperature in the unconfined combustion zone.
- d) QGC proposed a virtual CEMS, which is a method used to determine flare gas composition by utilising the existing monitoring data available for gas temperature and pressure and the use of engineering calculations to determine the flare gas composition. The calculation methodology must be adopted from ISA-75.01.01-2007 Flow Equations for Sizing Control Valves.
- e) The virtual CEMS model proposed by QGC was reviewed by HRL Technology Pty Ltd and the validity of the model and QGC's proposed use of the model has been confirmed as satisfactory.

4. The following amendments were initiated by the administering authority to increase enforceability and measurability of the EA

Amendment of original condition (B11)

- a) The intent of condition (B11) is to prohibit the release of visible smoke during normal operating conditions for more than five minutes in any two hour period.
- b) The administering authority considered it necessary and desirable to amend the condition to ensure enforceability and measurability of the condition. The intent remains the same.

Inclusion of new condition (B14)

- a) The administering authority considers the inclusion of this condition to be necessary and desirable for the following reasons:
 - i) It explicitly lists the records that must be created by QGC when a flaring event occurs; and
 - ii) It ensures that compliance officers of the administering authority can efficiently and effectively determine compliance with conditions (B12) and (B13).

Amendment of Schedule B – Table 3 – Recording during flaring events

- a) The original EA reads "digital EDO recorder" which was an error and should have read 'digital video recorder'.
- b) The administering authority is satisfied that the amendment to Schedule B, Table 3 ensures clarity in

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the EA.

Inclusion of new definition plant maintenance activities

- a) The administering authority considers this definition to be necessary and desirable for the following reasons:
- i) It ensures that it is clear which activities can utilise the extended flaring time of 90 minutes, as authorised in condition (B13); and
 - ii) It ensures that the administering authority can efficiently and effectively determine compliance with condition (B13).

4 Review and appeal rights

You may apply to the administering authority for a review of this decision within 10 business days after receiving this notice. You may also appeal against this decision to the Land Court. Information about your review and appeal rights is attached to this notice. This information is guidance only and you may have other legal rights and obligations.

Should you have any questions in relation to this notice, please contact the department using the contact details provided below.



Signature



Date

Tristan Roberts

Department of Environment and Science
Delegate of the administering authority
Environmental Protection Act 1994

Enquiries:

Energy and Extractive Resources
GPO Box 2454, Brisbane QLD 4001
Email: energyandextractive@des.qld.gov.au

Attachments

Information sheet: Internal review and appeals (ESR/2015/1742)

