

Department of Environment and Heritage Protection

Permit¹

Environmental Protection Act 1994

This environmental authority is issued by the administering authority under Chapter 5 of the *Environmental Protection Act 1994*.

Permit¹ number: EPPG00859813

Santos Reference: PEN105424912

Project Name: Wallumbilla Gas Treatment Facility (WGTF)

Environmental authority takes effect: 10 June 2016

The anniversary date of this environmental authority is **26 August**.

An annual return and the payment of the annual fee will be due each year on this day.

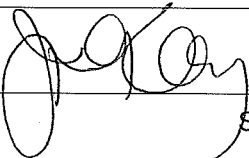
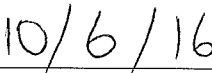
The environmental authority is subject to the attached schedules of conditions.

Environmental Authority Holders	Registered Addresses
Santos GLNG Pty Ltd ACN: 12 131 271 648	Ground Floor – Santos Centre 60 Flinders Street ADELAIDE SA 5000
Total GLNG Australia ARBN: 146 680 524	Level 13 28 The Esplanade PERTH WA 6000
PAPL (Downstream) Pty Ltd ACN: 147 649 205	'ADDISONS' Level 12 60 Carrington Street SYDNEY 2000
KGLNG Liquefaction Pty Ltd ACN: 146 143 311	Level 11 28 The Esplanade PERTH WA 6000

Permit includes licences, approvals, permits, authorisations, certificates, sanctions or equivalent/similar as required by legislation administered by the Department of Environment and Heritage Protection.



Environmentally Relevant Activity	Relevant Tenure
Resource activity that is a petroleum activity which includes the following: - Item 8, Schedule 2A of the Environmental Protection Regulation 2008 – a petroleum activity or GHG storage activity, other than an activity mentioned in any of items 1 to 7, Schedule 2A of the Environmental Protection Regulation 2008, that includes 1 or more activities mentioned in schedule 2 of the Environmental Protection Regulation 2008 for which an aggregate environmental score is stated.	Petroleum Facility Licence (PFL): 25


Signature**Jackie McKeay**Delegate of the administering authority
Environmental Protection Act 1994

Date

Enquiries:Petroleum and Gas
Level 7, 400 George Street, BRISBANE
QLD 4000
GPO Box 2454, BRISBANE QLD 4001
Phone: (07) 3330 5715
Fax: (07) 3330 5634

Additional Information for Applicants

Environmentally relevant activities

The description of any environmentally relevant activity (ERA) for which an environmental authority is issued is a restatement of the ERA as defined by legislation at the time the approval is issued. Where there is any inconsistency between that description of an ERA and the conditions stated by an environmental authority as to the scale, intensity or manner of carrying out an ERA, then the conditions prevail to the extent of the inconsistency.

An environmental authority authorises the carrying out of an ERA and does not authorise any environmental harm unless a condition stated by the environmental authority specifically authorises environmental harm.

A person carrying out an ERA must also be a registered suitable operator under the *Environmental Protection Act 1994* (EP Act).

Contaminated land and notifiable activities

It is a requirement of the EP Act that if an owner or occupier of land becomes aware a notifiable activity (as defined in Schedule 3 and Schedule 4) is being carried out on the land, or that the land has been, or is being, contaminated by a hazardous contaminant, the owner or occupier must, within 22 business days after becoming so aware, give written notice to the chief executive.

Responsibilities under the *Environmental Protection Act 1994*

Separate to the requirements of standard conditions, the holder of the environmental authority must also meet their obligations under the *Environmental Protection Act 1994*, and the regulations made under that Act. For example, the holder must be aware of the following provisions of the *Environmental Protection Act 1994*.

General environmental duty

Section 319 of the *Environmental Protection Act 1994* states that we all have a general environmental duty. This means that we are all responsible for the actions we take that affect the environment. We must not carry out any activity that causes or is likely to cause environmental harm unless we take all reasonable and practicable measures to prevent or minimise the harm. To decide what meets your general environmental duty, you need to think about these issues:

- the nature of the harm or potential harm
- the sensitivity of the receiving environment
- the current state of technical knowledge for the activity
- the likelihood of the successful application of the different measures to prevent or minimise environmental harm that might be taken
- the financial implications of the different measures as they would relate to the type of activity.

It is not an offence not to comply with the general environmental duty, however maintaining your general environmental duty is a defence against the following acts:

- (a) an act that causes serious or material environmental harm or an environmental nuisance
- (b) an act that contravenes a noise standard
- (c) a deposit of a contaminant, or release of stormwater run-off, mentioned in section 440ZG.

More information is available on the Department of Environment and Heritage Protection website www.ehp.qld.gov.au.



Duty to notify

Section 320 of the *Environmental Protection Act 1994* explains the duty to notify. The duty to notify applies to all persons and requires a person or company to give notice where serious or material environmental harm is caused or threatened. Notice must be given of the event, its nature and the circumstances in which the event happened. Notification can be verbal, written or by public notice depending on who is notifying and being notified.

The duty to notify arises where:

- a person carries out activities or becomes aware of an act of another person arising from or connected to those activities which causes or threatens serious or material environmental harm
- while carrying out activities a person becomes aware of the happening of one or both of the following events:
 - the activity negatively affects (or is reasonably likely to negatively affect) the water quality of an aquifer
 - the activity has caused the unauthorised connection of 2 or more aquifers.

For more information on the duty to notify requirements refer to the guideline *Duty to notify of environmental harm (EM467)*.

Some Relevant Offences under the *Environmental Protection Act 1994*

Non-compliance with a condition of an environmental authority (section 430)

Section 430 of the *Environmental Protection Act 1994* requires that a person who is the holder of, or is acting under an environmental authority must not wilfully contravene, or contravene a condition of the environmental authority.

Environmental authority holder responsible for ensuring conditions complied with (section 431)

Section 431 of the *Environmental Protection Act 1994* requires that the holder of an environmental authority must ensure everyone acting under the environmental authority complies with the conditions of the environmental authority. If another person acting under the environmental authority commits an offence against section 430, the holder also commits an offence, namely, the offence of failing to ensure the other person complies with the conditions.

Causing serious or material environmental harm (sections 437–39)

Material environmental harm is environmental harm that is not trivial or negligible in nature. It may be great in extent or context or it may cause actual or potential loss or damage to property. The difference between material and serious harm relates to the costs of damages or the costs required to either prevent or minimise the harm or to rehabilitate the environment. Serious environmental harm may have irreversible or widespread effects or it may be caused in an area of high conservation significance. Serious or material environmental harm excludes environmental nuisance.

Causing environmental nuisance (section 440)

Environmental nuisance is unreasonable interference with an environmental value caused by aerosols, fumes, light, noise, odour, particles or smoke. It may also include an unhealthy, offensive or unsightly condition because of contamination.

Depositing a prescribed water contaminant in waters (section 440ZG)

Prescribed contaminants include a wide variety of contaminants listed in Schedule 9 of the *Environmental Protection Act 1994*.

It is your responsibility to ensure that prescribed contaminants are not left in a place where they may or do enter a waterway, the ocean or a stormwater drain. This includes making sure that stormwater falling on or running across your site does not leave the site contaminated. Where stormwater contamination occurs you must ensure that it is treated to remove contaminants. You should also consider where and how you store material used in your processes onsite to reduce the chance of water contamination.

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Placing a contaminant where environmental harm or nuisance may be caused (section 443)

A person must not cause or allow a contaminant to be placed in a position where it could reasonably be expected to cause serious or material environmental harm or environmental nuisance.

Some Relevant Offences under the *Waste Reduction and Recycling Act 2011*

Littering (section 103)

Litter is any domestic or commercial waste and any material a person might reasonably believe is refuse, debris or rubbish. Litter can be almost any material that is disposed of incorrectly. Litter includes cigarette butts and drink bottles dropped on the ground, fast food wrappers thrown out of the car window, poorly secured material from a trailer or grass clippings swept into the gutter. However, litter does not include any gas, dust, smoke or material emitted or produced during, or because of, the normal operations of a building, manufacturing, mining or primary industry.

Illegal dumping of waste (section 104)

Illegal dumping is the dumping of large volumes of litter (200 L or more) at a place. Illegal dumping can also include abandoned vehicles.

Responsibilities under Other Legislation

An environmental authority pursuant to the *Environmental Protection Act 1994* does not remove the need to obtain any additional approval for the activity that might be required by other State and/or Commonwealth legislation. Other legislation for which a permit may be required includes but is not limited to the:

- *Aboriginal Cultural Heritage Act 2003*
- contaminated land provisions of the *Environmental Protection Act 1994*
- *Fisheries Act 1994*
- *Forestry Act 1959*
- *Nature Conservation Act 1992*
- *Petroleum and Gas (Production and Safety) Act 2004 / Petroleum Act 1923*
- *Queensland Heritage Act 1992*
- *Sustainable Planning Act 2009*
- *Water Supply (Safety and Reliability) Act 2008*
- *Water Act 2000*

Applicants are advised to check with all relevant statutory authorities and comply with all relevant legislation.

An environmental authority for petroleum activities is not an authority to impact on water levels or pressure heads in groundwater aquifers in or surrounding formations. There are obligations to minimise or mitigate any such impact under other Queensland Government and Commonwealth Government legislation.



Environmental Authority Conditions

This environmental authority consists of the following Schedules and Appendices:

Schedule A	General Conditions
Schedule B	Air
Schedule C	Water Management
Schedule D	Land
Schedule E	Environmental Nuisance
Schedule F	Waste
Schedule G	Storage and Handling of Chemicals, Flammable and Combustible Substances
Schedule H	Community Issues
Schedule I	Notification
Schedule J	Definitions



SCHEDULE A — GENERAL CONDITIONS

Authorised Petroleum Activities

- (A1) In the carrying out of the petroleum activity(ies), the number and maximum size for each of the specified petroleum activities listed in *Schedule A, Table 1 – Authorised Petroleum Activities* for each petroleum tenure must not be exceeded.

Schedule A, Table 1 – Authorised Petroleum Activities

Resource Authority Number	Petroleum Activity	Maximum size (where applicable)
PFL25	Natural gas powered electricity generation capacity	50MW
	Gas processing facilities (for each facility)	500 terajoules per day

- (A2) The following **specified relevant activities** are authorised under this environmental authority.
- (i) **ERA 8(3)(a) – Chemical Storage** – storing 10m³ or more of chemicals of class C1 or C2 combustible liquids under AS 1940 or dangerous goods class 3.
 - (ii) **ERA 9(b) – Hydrocarbon Gas Refining** – 200,000,000m³ of natural gas in a year; and
 - (iii) **ERA 14(1) – Electricity Generation** – generating electricity by using gas at a rated capacity of 10MW electrical or more.
- (A3) This environmental authority authorises the carrying out of the authorised petroleum, activities and specified relevant activities subject to the conditions of this environmental authority.
- (A4) This environmental authority does not authorise a **relevant act** to occur in carrying out an authorised activity unless a condition of this environmental authority expressly authorises the relevant act to occur.

Maintenance of Measures, Plant and Equipment

- (A5) Persons carrying out the authorised **specified relevant activities** subject to this environmental authority must:
- (a) Install all measures, plant and equipment necessary to ensure compliance with the conditions of this environmental authority;
 - (b) maintain such measures, plant and equipment in their proper and effective condition; and
 - (c) operate such measures, plant and equipment in a proper and effective manner.
- (A6) No change, replacement or alteration of any plant or equipment is permitted if the change, replacement or alteration materially increases, or is likely to increase, the environmental harm caused by the petroleum activity(ies).

Third Party Audit

- (A7) A **third party auditor** must audit compliance with the conditions of this environmental authority at a minimum frequency of every three (3) years.
- (A8) An audit report must be prepared and certified by the third party auditor presenting the findings of each audit carried out.
- (A9) Any recommendations arising from the audit report must be acted upon by:
- (a) investigating any non-compliance issues identified; and
 - (b) as soon as reasonably practicable, implementing measures or taking necessary action to ensure compliance with the requirements of this environmental authority.

- (A10) A written response must be attached to the audit report detailing the actions taken or to be taken on stated dates:
- (a) to ensure compliance with this environmental authority; and
 - (b) to prevent a recurrence of any non-compliance issues identified.

Contingency Plan for Emergency Environmental Incidents

- (A11) A Contingency Plan for Emergency Environmental Incidents must be developed prior to the carrying out of the petroleum activity(ies).
- (A12) The Contingency Plan for Emergency Environmental Incidents must include, but not necessarily be limited to:
- (a) A clear definition of what constitutes an emergency event for the activity;
 - (b) Response procedures to be implemented to prevent or minimise the risk of environmental harm arising from incidents;
 - (c) Response procedures to minimise the extent and duration of environmental harm caused by an incident;
 - (d) The practices and procedures to be employed to restore the environment or mitigate any environmental harm caused;
 - (e) The resources to be used in response to an incident;
 - (f) Procedures to investigate the cause of any incidents, including releases, and where necessary, implement remedial actions to reduce the likelihood of recurrence of similar events;
 - (g) A receiving environment (surface waters/land) monitoring program, to be implemented in the event of a release to waters/land to examine/assess environmental impacts (for waters this must include upstream and downstream monitoring);
 - (h) The provision and availability of documented procedures to staff attending any incident to enable them to effectively respond;
 - (i) Training of staff that will be called upon to respond to incidents to enable them to effectively respond;
 - (j) Timely and accurate reporting of the circumstance and nature of incidents to the administering authority in accordance with conditions of this environmental authority;
 - (k) Procedures for accessing monitoring points during incidents; and
 - (l) Procedures to notify any potentially impacted stakeholder who may be affected by the event.

Monitoring

- (A13) All monitoring required under this environmental authority must be undertaken by a suitably qualified person.
- (A14) All laboratory analyses and tests required to be conducted under this environmental authority must be carried out by a laboratory that has **NATA accreditation** for such analyses and tests, except as otherwise authorised by the administering authority.
- (A15) Any management or monitoring plans, systems, programs or procedures required to be developed and implemented by a condition of this environmental authority must be reviewed for performance and amended as required but not less than once every three (3) years in accordance with the requirements for the particular plans, systems, programs and procedures in the conditions of this environmental authority.
- (A16) If monitoring conducted in accordance with this environmental authority indicates a circumstance, condition or contaminant level has caused, or has potential to cause,



environmental harm, the holder of this environmental authority must, as soon as is practicable, take the necessary actions to rectify the circumstance, condition or contaminant level so as to avoid or minimise environmental harm.

- (A17) An annual report must be prepared each year and submitted to the administering authority in the form requested by the administering authority. This report must include but not necessarily be limited to:
- (a) the results of calculated ground level concentrations and/or point source air monitoring that is required by the conditions of this environmental authority;
 - (b) if prepared for the subject annual return period, any audit report and written response to said report that is required by this environmental authority;
 - (c) a comparison of the previous 12 **months** monitoring results to both the limits set in this environmental authority and to relevant prior results including data analyses and interpretation to assess the nature and extent of any contamination and the level of environmental harm caused as a result of the contamination and the environmentally relevant activity(ies); and
 - (d) details of any exceedences with the conditions of this environmental authority and the dates and times these exceedences were reported to the administering authority;
 - (e) an outline of actions taken to minimise the risk of environmental harm from any circumstance, condition or elevated contaminant level identified by the monitoring or recording programs as required by condition (A16).

Documentation and Records Management

- (A18) A record of all documents required by this environmental authority must be kept for a minimum of five (5) years.
- (A19) All plans and monitoring programs required by this environmental authority must be certified by a suitably qualified person.
- (A20) All plans and monitoring programs required under this environmental authority must be implemented.

Financial Assurance

- (A21) The holder of this authority must provide a financial assurance in the amount and form required by the administering authority for the authorised petroleum activities.
- (A22) The financial assurance is to remain in force until the administering authority is satisfied that no claim is likely to be made on the assurance.
- (A23) The calculation of financial assurance must be in accordance with the most recent version of the administering authority's Guideline "Financial Assurance under the *Environmental Protection Act 1994*".
- (A24) Prior to any changes in petroleum activities which would result in an increase to the maximum disturbance since the last financial assurance calculation was submitted, the holder of the environmental authority must submit, and the administering authority must have approved, an application to amend the financial assurance.



SCHEDULE B — AIR

Fuel Burning or Combustion Equipment

- (B1) Contaminant releases to air emitted from fuel burning and combustion equipment point sources that are capable of burning at least 500 kg in an hour must be directed vertically upwards without any impedence or hindrance.
- (B2) A register of fuel burning and combustion equipment that is capable of burning at least 500 kg of fuel in an hour must be developed and maintained that includes, as a minimum, the following information for each piece of equipment:
 - (a) fuel burning or combustion equipment name and location;
 - (b) stack emission height (metres);
 - (c) minimum efflux velocity (m/s);
 - (d) mass emission rates (g/s); and
 - (e) contaminant concentrations (mg/Nm³ @ x %O₂ dry gas at 0°Celsius and 1 atmosphere).
- (B3) The information contained in the register of fuel burning and combustion equipment must be certified by the chief executive officer for the holder of this environmental authority, or their delegate, as being accurate and correct.

Fuel Burning or Combustion Equipment located outside Hubs or Populated Areas

- (B4) Prior to the installation and operation of any new fuel burning or combustion equipment that is capable of burning at least 500 kg of fuel in an hour, air dispersion modelling must be carried out to calculate the ground level concentrations of emissions from all existing and proposed fuel burning or combustion equipment under maximum operating conditions (including other industry) within the ambient airshed and identify any potential impacts to air quality within the study area.
- (B5) Ground level concentrations must not exceed the criteria for each air contaminant in *Schedule B, Table 1 – Maximum Ground Level Concentration Criteria*.

Schedule B, Table 1 – Maximum Ground Level Concentration Criteria

Contaminant	Concentration at 0°Celsius	Units	Averaging time
NOx as Nitrogen Dioxide	250	µg/m ³	1 hour
	62	µg/m ³	1 year
NOx as Nitrogen Dioxide	33	µg/m ³	1 year
Carbon Monoxide	11	mg/m ³	8 hour

- (B6) Emissions testing must be carried out within three (3) months post commissioning of any fuel burning and combustion equipment capable of burning at least 500 kg of fuel in an hour to verify the estimates used in the air dispersion modelling.
- (B7) The only type of fuel to be burnt in power generation under normal operating conditions is natural gas.

Fugitive Emissions

- (B8) All reasonable and practicable measures must be taken in the design and operation of the plant to minimise fugitive emissions

Air Sampling Methodology

- (B9) The method of measurement of point source contaminant releases to air must comply with the latest edition of the *Queensland Air Quality Sampling Manual* and/or **Australian Standard 4323** as amended from time to time.



SCHEDULE C — WATER MANAGEMENT

Release to Waters

- (C1) Contaminants must not be directly or indirectly released to any waters except as permitted under this environmental authority.

Stormwater Management

- (C2) Suitable banks and/or diversion drains must be installed and maintained to exclude stormwater runoff from entering the gas treatment facility footprint.

Erosion and Sediment Control

- (C3) Sediment and erosion control measures must be implemented and maintained to prevent soil loss and deposition beyond significantly disturbed land.



SCHEDULE D — LAND

General

- (D1) Contaminants must not be directly or indirectly released to land except as permitted under this environmental authority

Rehabilitation

- (D2) Significantly disturbed areas that are no longer required for the ongoing conduct of the petroleum activities must be progressively rehabilitated within 6 months so that:
- (a) the areas are reshaped to a stable landform
 - (b) the areas are re-profiled to contours consistent with the surrounding landform
 - (c) surface drainage lines are re-established
 - (d) top soil is reinstated.
- (D3) All significantly disturbed land caused by the carrying out of the petroleum activity(ies) must be rehabilitated to meet condition (D2) and the following final acceptance criteria:
- (a) any contaminated land (e.g. contaminated soils, decommissioned dams containing salt) is remediated and rehabilitated
 - (b) rehabilitation is undertaken in a manner such that any actual or potential acid sulfate soils on the area of significant disturbance are treated to prevent or minimise environmental harm in accordance with the *Instructions for the treatment and management of acid sulfate soils* (2001)
 - (c) for land that is not being cultivated by the landholder:
 - i. groundcover, that is not a declared pest species is established and self-sustaining
 - ii. vegetation of similar species richness and species diversity to pre-selected analogue sites is established and self-sustaining
 - (d) for land that is to be cultivated by the landholder, cover crop is reinstated, unless the landholder will be preparing the site for cropping within 3 months of petroleum activities being completed.
- (D4) Monitoring of performance indicators must be carried out on rehabilitation activities until final acceptance criteria in condition (D3) have been met for the rehabilitated area.



SCHEDULE E — ENVIRONMENTAL NUISANCE

Odour, dust and other airborne nuisance

- (E1) The release of odour, dust or any other airborne contaminant(s), or light from the petroleum activity(ies) must not cause an environmental nuisance at any sensitive place.

Nuisance monitoring

- (E2) When the administering authority advises of a complaint alleging nuisance, the holder must investigate the complaint as soon as practicable. The investigation is to include monitoring of environmental nuisance at any sensitive place within a reasonable and practical timeframe as specified by the administering authority.
- (E3) The administering authority must be advised in writing of the results of the investigation (including an analysis and interpretation of the monitoring results) and actions proposed or undertaken to resolve the complaint within five (5) business days of completing the complaint investigation, unless a longer time is agreed to in writing by the administering authority.
- (E4) If the investigation or monitoring in accordance with condition (E2) indicates that emissions exceed the limits set in this environmental authority or are causing environmental nuisance, then:
- (a) the complaint must be addressed including the use of alternative dispute resolution services if required; and / or
 - (b) abatement or attenuation measures must be implemented so that the authorised petroleum activity(ies) does not result in further environmental nuisance.

Noise

- (E5) Noise monitoring and recording required under this environmental authority must include, but not necessarily be limited to:
- (a) LAN,T (where N equals the statistical levels of 1, 10 and 90 and T=15 mins);
 - (b) LAeq adj, 15 mins;
 - (c) background noise level as LA 90, 15 mins;
 - (d) Max LpA, 15 mins ;
 - (e) the level and frequency of occurrence of impulsive or tonal noise and any adjustment and penalties to measured noise levels levels;
 - (f) atmospheric conditions including temperature, relative humidity and wind speed and directions;
 - (g) effects due to any extraneous factors such as traffic noise;
 - (h) location, date and time of monitoring;
 - (i) if the complaint concerns low frequency noise, Max LpZ, 15 mins; and
 - (j) if the complaint concerns low frequency noise, one third octave band measurements in dB(LIN) for centre frequencies in the 10 – 200 Hz range for both the noise source and the background noise in the absence of the noise source.

- (E6) The emission of noise from the petroleum activity(ies) authorised under this environmental authority must not result in levels greater than those specified in *Schedule E, Table 1 – Noise limits at Sensitive Receptors* in the event of a **valid complaint** about noise being made to the administering authority.

Schedule E, Table 1 – Noise Limits at Sensitive Receptors

Time Period	Metric	Short Term Noise Event	Medium Term Noise Event	Long Term Noise Event
7:00 am – 6:00 pm	L _{Aeq,adj} , 15 min	45 dBA	43 dBA	40 dBA
6:00 pm – 10:00 pm	L _{Aeq,adj} , 15 min	40 dBA	38 dBA	35 dBA
10:00 pm – 6:00 am	L _{Aeq,adj} , 15 min	28 dBA	28 dBA	28 dBA
	Max L _{pA} , 15 mins	55 dBA	55 dBA	55 dBA
6:00 am – 7:00 am	L _{Aeq,adj} , 15 min	40 dBA	38 dBA	35 dBA

1. The noise limits in Table 1 have been set based on the following deemed **background noise levels** (L_{ABG}):

7:00 am - 6:00 pm: 35 dBA
6:00 pm – 10:00 pm: 30 dBA
10:00 pm – 6:00 am: 25 dBA
6:00 am – 7:00 am: 30 dBA

- (E7) If the noise subject to a complaint is tonal or impulsive, the adjustments detailed in *Schedule E, Table 2 – Adjustments to be Added to Noise Levels at Sensitive Receptors* are to be added to the measured noise level(s) to derive L_{Aeq, adj}, 15 min.

Schedule E, Table 2 – Adjustments to be Added to Noise Levels at Sensitive Receptors

Noise Characteristic	Adjustment to Noise
Tonal characteristic is just audible	+ 2 dBA
Tonal characteristic is clearly audible	+ 5 dBA
Impulsive characteristic is just audible	+ 2 dBA
Impulsive characteristic is clearly audibly	+ 5 dBA

- (E8) Where **alternative arrangements** are in place with an affected person(s) at a sensitive receptor the noise limits in *Schedule E, Table 1 – Noise limits at Sensitive Receptors* do not apply at that sensitive receptor for the duration for which the alternative arrangements are in place.

Low Frequency Noise

- (E9) Notwithstanding condition (E6), emission of any low frequency noise must not exceed the following limits in the event of a valid complaint about low frequency noise being made to the administering authority:
- (a) 60 dB(C) measured outside the sensitive receptor; and
 - (b) the difference between the external A-weighted and C-weighted noise levels is no greater than 20 dB; or
 - (c) 50 dB(Z) measured inside the sensitive receptor; and
 - (d) the difference between the internal A-weighted and Z-weighted noise levels is no greater than 15 dB.

Noise Sampling Methodology

- (E10) Noise must be measured in accordance with the prescribed standards in the *Environmental Protection Regulation 2008*.

SCHEDULE F — WASTE

- (F1) All general waste must only be removed from the site and sent to a recycling facility or disposal facility licensed to accept the waste under the *Environmental Protection Act 1994*.
- (F2) All regulated waste must only be removed from the site by a person who holds a current authority to transport such waste under the provisions of the *Environmental Protection Act 1994* and sent to a recycling facility or disposal facility licensed to accept the waste.



SCHEDULE G — STORAGE AND HANDLING OF CHEMICALS, FLAMMABLE AND COMBUSTIBLE SUBSTANCES

- (G1) All chemical storages must be stored and handled in accordance with the relevant Australian Standard where such standard is available

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SCHEDULE H — COMMUNITY ISSUES

- (H1) A record of all valid complaints and incidents causing environmental harm, and actions taken in response to the valid complaint or incident must be kept.
- (H2) The following details for all valid complaints received must be recorded:
- (a) name, address and contact number for valid complainant;
 - (b) time and date of valid complaint;
 - (c) reasons for the complaint as stated by the valid complainant;
 - (d) investigations undertaken in response to the valid complaint;
 - (e) conclusions formed;
 - (f) actions taken to resolve the valid complaint;
 - (g) any abatement measures implemented to mitigate the cause of the valid complaint; and
 - (h) name and contact details of the person responsible for resolving the valid complaint.



SCHEDULE I — NOTIFICATION

- (11) The Department of Environment and Heritage Protection Pollution Hotline [telephone 1300 130 372] must be notified as soon as reasonably practicable, but within 48 hours after becoming aware of:
 - (a) any unauthorised disturbance to land; or
 - (b) any unauthorised release of contaminants, other than those circumstances in condition (12).
- (12) The Department of Environment and Heritage Protection Pollution Hotline [telephone 1300 130 372] must be notified as soon as reasonably practicable, but within 48 hours after becoming aware of the following releases (or their mixtures):
 - (a) releases of any volume of contaminants to water; or
 - (b) releases of volumes of contaminants to land greater than 200L of hydrocarbons.
- (13) The notification of emergencies or incidents as required by condition (12) must be submitted to the administering authority using an *Incident Notification (chapter 5a activities)(EM706)*.
- (14) Unless a longer time is agreed to in writing by the administering authority, a written report must be provided to the administering authority within 10 business days of notification under conditions (11) and (12) including the following (where relevant to the emergency or incident):
 - (a) the root cause of the emergency or incident;
 - (b) the confirmed quantities and types of any contaminants involved in the incident;
 - (c) results and interpretation of any analysis of samples taken at the time of the emergency or incident (including the analysis results of any impact monitoring);
 - (d) a final assessment of the impacts from the emergency or incident including any actual or potential environmental harm that has occurred or may occur in the longer term as a result of the release;
 - (e) the success or otherwise of actions taken at the time of the incident to prevent or minimise environmental harm;
 - (f) results and current status of landholder consultation, including commitment to resolve any outstanding issues / concerns; and
 - (g) actions and / or procedural changes to prevent a recurrence of the emergency or incident.



SCHEDULE J — DEFINITIONS

acid sulfate soils means soil or sediment containing highly acidic soil horizons or layers affected by the oxidation of iron sulfides (actual acid sulfate soils) and / or soil or sediment containing iron sulfides or other sulfidic material that has not been exposed to air and oxidised (potential acid sulfate soils). The term acid sulfate soil generally includes both actual and potential acid sulfate soils. Actual and potential acid sulfate soils are often found in the same soil profile, with actual acid sulfate soils generally overlying potential acid sulfate soil horizons.

administering authority means:

- (a) for a matter, the administration and enforcement of which has been devolved to a local government under section 514 of the *Environmental Protection Act 1994* – the local government; or
- (b) for all other matters – the Chief Executive of the Department of Environment and Heritage Protection; or
- (c) another State Government Department, Authority, Storage Operator, Board or Trust, whose role is to administer provisions under other enacted legislation.

AHD means Australian Height Datum and is the datum used for the determination of elevations in Australia. The determination uses a national network of benchmarks and tide gauges and sets mean sea level at zero elevation.

alternative arrangement means a written agreement between the holder of this environmental authority and an affected or potentially affected person at a sensitive receptor for a defined noise nuisance impact and may include an agreed period of time for which the arrangement is in place. An agreement for alternative arrangement may include, but not necessarily be limited to a range of noise abatement measures to be installed at a sensitive receptor and / or provision of alternative accommodation for the duration of the defined noise nuisance impact.

analogue site means an area of land which contains values and characteristics representative of an area to be rehabilitated prior to disturbance. Such values must encompass land use, topographic, soil, vegetation and other ecological characteristics. Analogue sites can be the pre-disturbed site of interest where significant surveying effort has been undertaken to establish benchmark parameters such as the ground truthing assessment which may be required under the environmental authority.

analytes means a chemical parameter determined by either physical measurement in the field or by laboratory analysis.

Australian Standard 1055 means Australian Standard 1055.1:1997 *Description and Measurement of Environmental Noise – General procedures*.

Australian Standard 2885 means Australian Standard 2885.0:2008 *Pipelines – Gas and Liquid Petroleum General Requirements*, Australian Standard 2885.1:2007 *Pipelines – Gas and Liquid Petroleum Design and Construction* and Australian Standard 2885.3:2001 *Pipelines – Gas and Liquid Petroleum Operation and Maintenance*, or any updated versions that become available from time to time.

Australian Standard 4323 means Australian Standard 4323.1:1995 *Stationary source emissions method 1: Selection of sampling positions*.

authorised person means a person holding office as an authorised person under an appointment under the *Environmental Protection Act 1994* by the chief executive or chief executive officer of a local government.

background noise level means the sound pressure level, measured in the absence of the noise under investigation, as the $L_{A90,T}$ being the A-weighted sound pressure level exceeded for 90 percent of the measurement time period T of not less than 15 minutes, using Fast response.

bund or bunded in relation to spill containment systems for fabricated or manufactured tanks or containers designed to a recognised standard means an embankment or wall of brick, stone, concrete or other impervious material which may form part or all of the perimeter of a compound and provides a barrier to retain liquid. Since the bund is the main part of a spill containment system, the whole system (or bunded area) is sometimes colloquially referred to within industry as the bund. The bund is designed



to contain spillages and leaks from liquids used, stored or processed above ground and to facilitate clean-up operations. As well as being used to prevent pollution of the receiving environment, bunds are also used for fire protection, product recovery and process isolation.

business day has the meaning in the *Acts Interpretation Act 1954* and means a day that is not—

- a Saturday or Sunday; or
- a public holiday, special holiday or bank holiday in the place in which any relevant act is to be or may be done.

certification or certified by a suitably qualified and experienced person in relation to a design plan, 'as constructed' drawings or an annual report regarding dams, means that a statutory declaration has been made by that person and, when taken together with any attached or appended documents referenced in that declaration, all of the following aspects are addressed and are sufficient to allow an independent audit at any time:

- exactly what is being certified and the precise nature of that certification.
- the relevant legislative, regulatory and technical criteria on which the certification has been based;
- the relevant data and facts on which the certification has been based, the source of that material, and the efforts made to obtain all relevant data and facts; and
- the reasoning on which the certification has been based using the relevant data and facts, and the relevant criteria.

certify or certification or certified in relation to any matter other than a design plan, 'as constructed' drawings or an annual report regarding dams in this environmental authority means a Statutory Declaration by a suitably qualified person accompanying the written document stating that:

- all relevant material has been considered in the written document; and
- that the content of the written document is accurate and true; and
- that the written document meets the requirements of the relevant conditions of the environmental authority.

clearing for vegetation means removing, cutting down, ringbarking, pushing over, poisoning or destroying in any way including by burning, flooding or draining; but does not include destroying standing vegetation by stock, or **lopping** a tree.

document has the meaning in the *Acts Interpretation Act 1954* and means:

- any paper or other material on which there is writing; and
- any paper or other material on which there are marks; and
- figures, symbols or perforations having a meaning for a person qualified to interpret them; and
- any disc, tape or other article or any material from which sounds, images, writings or messages are capable of being produced or reproduced (with or without the aid of another article or device).

end means the stopping of the particular activity that has caused a significant disturbance in a particular area. It refers to, among other things, the end of a seismic survey or the end of a drilling operation. It does not refer to the end of all related petroleum activities such as rehabilitation. In other words, it does not refer to the 'completion' of the petroleum activity(ies), the time at which the petroleum authority ends or the time that the land in question ceases to be part of an authority.

flowable substance means matter or a mixture of materials which can flow under any conditions potentially affecting that substance. Constituents of a flowable substance can include water, other liquids fluids or solids, or a mixture that includes water and any other liquids fluids or solids either in solution or suspension.

foreseeable future means the period used for assessing the total probability of an event occurring. Permanent structures and ecological sustainability should be expected to still exist at the **end** of a 150 year foreseeable future with an acceptably low probability of failure before that time.



hub means more than one unit of fuel burning or combustion equipment capable of burning fuel at a rate of at least 500 kg/hour individually or combined, located within five (5) km of any other fuel burning or combustion equipment capable of burning fuel at a rate of at least 500 kg/hour individually or combined.

impacts to State significant biodiversity values means to have a negative effect on a State Significant Biodiversity Value as identified by the *Queensland Biodiversity Offset Policy* (Department of Environment and Resource Management, 2011). Examples may include, but are not necessarily limited to:

- clearing, removal or fragmentation of vegetation
- interference or disturbance of fauna habitat

impulsive noise means sound characterised by brief excursions of sound pressure (acoustic impulses) that significantly exceed the background sound pressure. The duration of a single impulsive sound is usually less than one second.

infrastructure means plant or works including for example, communication systems, compressors, powerlines, pumping stations, reservoirs, roads and tracks, water storage dams, evaporation or storage ponds and tanks, equipment, buildings and other structures built for the purpose and duration of the conduct of the petroleum activity(ies) including temporary structures or structures of an industrial or technical nature; including, for example, mobile and temporary camps.

Infrastructure does not include other facilities required for the long term management of the impact of those petroleum activities or the protection of potential resources. Such other facilities include dams other than water storage dams, pipelines and assets, that have been decommissioned, rehabilitated, and lawfully recognised as being subject to subsequent transfer with ownership of the land.

L_{Aeq}, adj, 15 mins means the A-weighted sound pressure level of a continuous steady sound, adjusted for tonal character, that within any 15 minute period has the same square sound pressure as a sound level that varies with time.

L_{A 90}, adj, 15 mins means the A-weighted sound pressure level, adjusted for tonal character that is equal to or exceeded for 90% of any 15 minutes sample period equal, using Fast response

lake means:

- a lagoon, swamp or other natural collection of water, whether permanent or intermittent; and
- the bed and banks and any other element confining or containing the water.

limit of reporting means the lowest amount of an analyte in a sample that can be quantitatively determined with stated, acceptable precision and accuracy under stated analytical conditions (i.e. the lower limit of quantitation).

linear infrastructure means powerlines, pipelines, roads and access tracks.

long term noise event is a noise exposure, when perceived at a sensitive receptor, persists for a period of greater than five (5) days, even when there are respite periods when the noise is inaudible within those five (5) days.

low impact petroleum activities means petroleum activities which do not result in the clearing of native vegetation, cause disruption to soil profiles through earthworks or excavation or result in significant disturbance to land which cannot be rehabilitated immediately using hand tools after the activity is completed. Examples of such activities include but are not necessarily limited to soil surveys (excluding test pits), topographic surveys, cadastral surveys and ecological surveys, may include installation of monitoring equipment provided that it is within the meaning of low impact and traversing land by car or foot via existing access tracks or routes or in such a way that does not result in permanent damage to vegetation.

Max L_{pZ}, 15 min means the maximum value of the Z-weighted sound pressure level measured over 15 minutes.

Max L_{pA}, 15 min means the absolute maximum instantaneous A-weighted sound pressure level, measured over 15 minutes.

medium term noise event is a noise exposure, when perceived at a sensitive receptor, persists for an aggregate period not greater than five (5) days and does not re-occur for a period of at least four (4)



weeks. Re-occurrence is deemed to apply where a noise of comparable level is observed at the same receptor location for a period of one hour or more, even if it originates from a different source or source location.

meter means a device for measuring, or giving an output signal proportional to, quantities of water passed and/or the rate of flow in a pipe.

month has the meaning in the *Acts Interpretation Act 1954* and means a calendar month and is a period starting at the beginning of any day of one (1) of the 12 named months and ending—

- immediately before the beginning of the corresponding day of the next named month; or
- if there is no such corresponding day—at the end of the next named month.

NATA accreditation means accreditation by the National Association of Testing Authorities Australia.

on ground values are the true/actual values located at the area to be significantly disturbed by the petroleum activities.

pest means species:

- declared under the *Land Protection (Pest and Stock route Management) Act 2002*;
- declared under Local Government model local laws; and
- which may become invasive in the future.

populated area includes towns and cities which have a population of 200 or more people and with a minimum density of 40 people / km².

prescribed storage gases has the meaning provided in section 12 of the *Petroleum and Gas (Production and Safety) Act 2004*.

programmed and approved means when the location of infrastructure has been approved by the authorised person(s) with the organisation(s).

rehabilitation means the process of reshaping and revegetating land to restore it to a stable landform and in accordance with the acceptance criteria set out in this environmental authority and, where relevant, includes remediation of contaminated land.

regrowth vegetation map means a map certified by the chief executive as the regrowth vegetation map for the State and showing for the State:

- areas of regrowth vegetation, identified on the map as high-value regrowth vegetation, that—
 - are any of the following:
 - (i) an endangered regional ecosystem;
 - (ii) an of concern regional ecosystem;
 - (iii) a least concern regional ecosystem; and
 - have not been cleared since 31 December 1989; and
- particular watercourses in the Burdekin, Mackay Whitsunday and Wet Tropics catchments, identified on the map as regrowth watercourses; and
- areas the chief executive decides under section 20AI of the *Vegetation Management Act 1999* to show on the map as high value regrowth vegetation.

relevant act means:

- (a) an act that causes serious or material environmental harm or an environmental nuisance;
- (b) an act that contravenes a noise standard;
- (c) a deposit of a contaminant, or release of stormwater run-off, mentioned in section 440ZG of the *Environmental Protection Act 1994*.

remnant unit means a continuous polygon of remnant vegetation (as defined by the QLD Herbarium) representative of a single RE type or a single heterogeneous unit.



remnant vegetation means vegetation, part of which forms the predominant canopy of the vegetation—

- covering more than 50 % of the undisturbed predominant canopy; and
- averaging more than 70 % of the vegetation's undisturbed height; and
- composed of species characteristic of the vegetation's undisturbed predominant canopy cover.

reporting limit means the lowest concentration that can be reliably measured within specified limits of precision and accuracy during routine laboratory operating conditions. For many analytes, the reporting limit is selected as the lowest non-zero standard in the calibration curve. Results that fall below the reporting limit will be reported as "less than" the value of the reporting limit. The reporting limit is also referred to as the practical quantitation limit or the limit of quantitation. For polycyclic aromatic hydrocarbons, the reporting limit must be based on super-ultra trace methods and, depending on the specific polycyclic aromatic hydrocarbon, will range between 0.005 ug/L – 0.02 ug/L.

sensitive place means:

- a dwelling (including residential allotment, mobile home or caravan park, residential marina or other residential premises, motel, hotel or hostel; or
- a library, childcare centre, kindergarten, school, university or other educational institution;
- a medical centre, surgery or hospital; or
- a protected area; or
- a public park or garden that is open to the public (whether or not on payment of money) for use other than for sport or organised entertainment; or
- a work place used as an office or for business or commercial purposes, which is not part of the petroleum activity(ies) and does not include employees accommodation or public roads.

sensitive receptor means an area or place where noise (including low frequency, vibration and blasting) is measured to investigate whether nuisance impacts are occurring and includes:

- a dwelling (including residential allotment, mobile home or caravan park, residential marina or other residential premises, motel, hotel or hostel; or
- a library, childcare centre, kindergarten, school, university or other educational institution;
- a medical centre, surgery or hospital; or
- a protected area; or
- a public park or garden that is open to the public (whether or not on payment of money) for use other than for sport or organised entertainment; or
- a work place used as an office or for business or commercial purposes, which is not part of the petroleum activity(ies) and does not include employees accommodation or public roads.

short term noise event is a noise exposure, when perceived at a sensitive receptor, persists for an aggregate period not greater than eight hours and does not re-occur for a period of at least seven (7) days. Re-occurrence is deemed to apply where a noise of comparable level is observed at the same receptor location for a period of one hour or more, even if it originates from a different source or source location.

significantly disturbed land or significant disturbance to land or significant disturbance means disturbance to land as defined in Schedule 12, Part 1, section 4 of the *Environmental Protection Regulation 2008*.

specified relevant activity means an environmentally relevant activity that, but for being a resource activity, would otherwise be an environmentally relevant activity under section 18 of the *Environmental Protection Act 1994*.

stable in relation to land, means landform dimensions are or will be stable within **tolerable limits** now and in the **foreseeable future**. Stability includes consideration of geotechnical stability, settlement and



consolidation allowances, bearing capacity (trafficability), erosion resistance and geochemical stability with respect to seepage, **leachate** and related contaminant generation.

State significant biodiversity values means those regional ecosystems, essential habitat, wetlands, watercourses, legally secured offset areas and connectivity areas provided in Appendix 1 of the *Queensland Biodiversity Offsets Policy* (Department of Environment and Resource Management, 2011).

suitably qualified person means a person who has professional qualifications, training, skills or experience relevant to the nominated subject matter and can give authoritative assessment, advice and analysis to performance relative to the subject matter using the relevant protocols, standards, methods or literature.

suitably qualified and experienced person in relation to regulated structures means a person who is a Registered Professional Engineer of Queensland (RPEQ) under the provisions of the Professional Engineers Act 2002, and has demonstrated competency and relevant experience:

- for regulated dams, an RPEQ who is a civil engineer with the required qualifications in dam safety and dam design.
- for regulated levees, an RPEQ who is a civil engineer with the required qualifications in the design of flood protection embankments.

It is permissible that a suitably qualified and experienced person obtain subsidiary certification from an RPEQ who has demonstrated competence and relevant experience in either geomechanics, hydraulic design or engineering hydrology.

third party auditor means a suitably qualified person who is either a certified third party auditor or an internal auditor employed by the holder of the environmental authority and the person is independent of the day to day management and operation of the petroleum activity(ies) covered by this environmental authority

top soil means the surface (top) layer of a soil profile, which is more fertile, darker in colour, better structured and supports greater biological activity than underlying layers. The surface layer may vary in depth depending on soil forming factors, including parent material, location and slope, but generally is not greater than about 300 mm in depth from the natural surface.

transmissivity means the rate of flow of water through a vertical strip of aquifer which is one unit wide and which extends the full saturated depth of the aquifer.

unacceptable risk means those risks identified as unacceptable through a risk assessment that substantially conforms with Australian Standard 4360:2004 *Risk Management* or any updated version that becomes available from time to time.

valid complaint means a complaint the administering authority considers is not frivolous, nor vexatious, nor based on mistaken belief.

waters includes all or any part of a creek, river, stream, lake, lagoon, swamp, wetland, spring, unconfined surface water, unconfined water in natural or artificial watercourses, bed and bank of any waters, non-tidal or tidal waters (including the sea), stormwater channel, stormwater drain, roadside gutter, stormwater run-off, and underground water.

watercourse has the meaning provided in Schedule 5, section 12 of the Environmental Protection Regulation 2008 and means a river, creek or stream in which water flows permanently or intermittently—

- (a) in a natural channel, whether artificially improved or not; or
- (b) in an artificial channel that has changed the course of the watercourse.

A watercourse includes the bed and banks and any other element of a river, creek or stream confining or containing water.

year means a period of 12 months.



80th percentile in relation to release limits means that not more than one (1) of the measured values is to exceed the stated release limit for any five (5) consecutive samples where:

- the consecutive samples are taken over a five (5) **month** period; and
- the consecutive samples are taken at approximately equal periods.

END OF PERMIT

