Department of Environment and Heritage Protection

Permit[1]

Environmental Protection Act 1994

Environmental authority

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

Permit[1] number: EPPR00504313

Environmental authority takes effect 1 September 2015

The anniversary date of this environmental authority remains as **11 June**. An annual return and the payment of the annual fee will be due each year on this day.

Environmental authority holder

Name	Registered address
Neumann Petroleum Pty Ltd T/A Puma Energy Australia Pty Ltd	Level 1, North Tower, Green Square 515 St Pauls Terrace FORTITUDE VALLEY QLD 4006

Environmentally relevant activity and location details

Environmentally relevant activity	Location(s)
63-(1b)(i) Sewage treatment - Operating sewage treatment works, other than no-release works, with a total daily peak design capacity of more than 100 but not more than 1500EP – if treated effluent is discharged from the works to an infiltration trench or through an irrigation scheme.	1516 Bruce Highway KYBONG QLD 4570 - Lot 1 Plan RP203762

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 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

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,

[1] Permit includes licences, approvals, permits, authorisations, certificates, sanctions or equivalent/similar as required by legislation

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.

Signature	Date
	1 - SEP - 2015

James Mackenzie
Department of Environment and Heritage Protection
Delegate of the administering authority
Environmental Protection Act 1994

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Obligations under the *Environmental Protection Act 1994*

In addition to the requirements found in the conditions of this environmental authority, the holder must also meet their obligations under the EP Act, and the regulations made under the EP Act. For example, the holder must comply with the following provisions of the Act:

- general environmental duty (section 319)
- duty to notify environmental harm (section 320-320G)
- offence of causing serious or material environmental harm (sections 437-439)
- offence of causing environmental nuisance (section 440)
- offence of depositing prescribed water contaminants in waters and related matters (section 440ZG)
- offence to place contaminant where environmental harm or nuisance may be caused (section 443)

Conditions of environmental authority

Location: 1516 Bruce Highway KYBONG QLD 4570 - Lot 1 Plan RP203762

Relevant activity: 63-(1b)(i) Sewage treatment - Operating sewage treatment works, other than no-release works, with a total daily peak design capacity of more than 100 but not more than 1500EP – if treated effluent is discharged from the works to an infiltration trench or through an irrigation scheme.

The environmentally relevant activity conducted at the location as described above must be conducted in accordance with the following site specific conditions of approval.

Agency interest: General	
Condition number	**Condition**
G1	The quantity of wastewater release to the sewage treatment system must not exceed 23,500 litres per **day** averaged over any one (1) month period and must not exceed the total daily peak design capacity of the treatment plant.
G2	All reasonable and practicable **measures** must be taken to prevent the likelihood of environmental harm being caused.
G3	Any breach of a condition of this environmental authority must be reported to the **administering authority** as soon as practicable, or at most, within 24 hours of becoming aware of the breach. Records must be kept including full details of the breach and any subsequent actions undertaken.
G4	Other than as permitted by this environmental authority, the **release of a contaminant into the environment** must not occur.
G5	All information and records required by the conditions of this environmental authority must be kept for a minimum of five years with the exception of environmental monitoring results which must be kept until surrender of this environmental authority. All information and records required by the conditions of this environmental authority must be provided to the **administering authority** upon request and in the format requested.

G6	An **appropriately qualified person(s)** must monitor, record and interpret all parameters that are required to be monitored by this environmental authority and in the manner specified by this environmental authority.
G7	All analyses required under this environmental authority must be carried out by a laboratory that has National Association of Testing Authorities (**NATA**) certification, or an equivalent certification, for such analyses.
G8	**You** must record the following details for all environmental **complaints** received: a) date and time complaint was received; and b) name and contact details of the complainant; and c) nature of the complaint; and d) investigations undertaken; and e) conclusions formed; and f) actions taken.
G9	When required by the **administering authority**, monitoring must be undertaken in the manner prescribed by the **administering authority**, to investigate a complaint not considered by the **administering authority** to be frivolous or vexatious, of **environmental nuisance** arising from the **activity**. The monitoring results must be provided to the **administering authority** upon request.
G10	The **activity** must be undertaken in accordance with written procedures that: 1. identify potential risks to the environment from the **activity** during routine operations, closure and an emergency; and 2. establish and maintain control **measures** that minimise the potential for environmental harm; and 3. ensure plant, equipment and **measures** are maintained in a proper and effective condition; and 4. ensure plant, equipment and **measures** are operated in a proper and effective manner; and 5. ensure that staff are trained in and aware of their obligations under the *Environmental Protection Act 1994*; and 6. ensure that reviews of environmental performance are undertaken at least annually.

Agency interest: Air	
Condition number	**Condition**
A1	Odours or airborne contaminants must not cause **environmental nuisance** at a **sensitive place** or **commercial place**.

Agency interest: Water	
Condition number	**Condition**
WT1	Other than release to the treatment lagoons and wet weather storage pond, contaminants must not be released to any **waters**.
WT2	There must be no releases of wastewater from the storage ponds other than releases to land in accordance with L1.
Agency interest: Noise	
Condition number	**Condition**
N1	Noise generated by the **activity** must not cause **environmental nuisance** to any **sensitive place** or **commercial place**.

Agency interest: Land

Condition number	Condition
L1	The only contaminant permitted to be released to land is treated effluent in accordance with Table 3 – Treated effluent release limits to irrigation area, and the associated requirements.

Table 3. Treated effluent release limits to irrigation area[1]

Quality Characteristics	Release Limit	Limit Type
BOD_5 (mg/L)*	20	Maximum
Suspended Solids (mg/L)*	30	Maximum
pH	6.5-8.5	Range
E.coli (CFU/100ml)	1000	**Median** value with 4 out of 5 samples containing <4000 E.coli organisms per 100mL
Total Nitrogen (mg/L as N)**	60mg/L	Maximum
Total Phosphorus (mg/L as P)**	20mg/L	Maximum

Associated requirements

1. Monitoring must be in accordance with the **administering authority**'s Water Quality Sampling Manual and all monitoring devices must be effectively calibrated and maintained.

   * BOD and Total Suspended Solids are about determining that the plant is achieving design outputs.

   ** Indicators for TN and TP are recommended to be done as grab samples.

L2

The water quality characteristics described in L1 must be monitored at a frequency and location in accordance with Table 4 – Monitoring frequency of water quality characteristics and location.

Table 4 – Monitoring frequency of water quality characteristics and location

Quality Characteristic	Sampling Points	Frequency
BOD_5	Discharge from final treatment pond	Every 3 months
Suspended Solids	Discharge from final treatment pond	Every 3 months
pH	Discharge from final treatment pond	Every 3 months
E.coli (CFU/100ml)	Discharge from final treatment pond	Every 3 months
Total Nitrogen	Discharge from final treatment pond	Every 3 months
Total Phosphorus	Discharge from final treatment pond	Every 3 months
Conductivity (estimated TDS)	Discharge from final treatment pond	Every 3 months
Sodium Absorption Ratio	Discharge from final treatment pond	Every 3 months

L3

Treated effluent released to land must be done in accordance with documentation that ensures:

a) drainage to groundwater and subsurface flows of contaminants to surface **waters** are prevented; and

b) surface pondage and run-off of effluent is prevented; and

c) degradation of soil structure is minimised; and

d) soil sodicity and the build-up of nutrients and heavy metals in the soil and subsoil are minimised; and

e) spray drift or overspray does not carry beyond effluent disposal areas; and

f) effluent disposal areas are maintained with an appropriate crop in a viable state for transpiration and nutrient uptake; and

g) sufficient buffer zones are maintained between irrigation sites and sensitive environmental receptors; and

L4

When weather conditions or soil conditions preclude the release of treated sewage effluent to land, effluent must not be irrigated to land.

<table>
<tr><td>L5</td><td>The holder of this Environmental Authority is responsible for monitoring and analysis and keeping records of the soil characteristics of the wastewater release areas and at the frequency specified in Table 4.
Table 4 – Soil monitoring characteristics
<table><tr><th>Quality Characteristic</th><th>Frequency</th></tr><tr><td>pH</td><td>Every 6 months</td></tr><tr><td>Conductivity</td><td>Every 6 months</td></tr><tr><td>Total Nitrogen</td><td>Every 6 months</td></tr><tr><td>Total Phosphorus</td><td>Every 6 months</td></tr><tr><td>Sodium Adsorption Ratio (1:5 soil/water mix)</td><td>Every 6 months</td></tr></table></td></tr>
<tr><td colspan="2">Agency interest: Third Party</td></tr>
<tr><td>Condition number</td><td>Condition</td></tr>
<tr><td>TP1</td><td>Treated sewage effluent may be removed from the site and used for an alternate lawful purpose, with the written consent of any third party involved.</td></tr>
<tr><td colspan="2">Agency interest: Waste</td></tr>
<tr><td>Condition number</td><td>Condition</td></tr>
<tr><td>W1</td><td>All waste generated in carrying out the activity must be reused, recycled or lawfully disposed of offsite.</td></tr>
</table>

Definitions

Key terms and/or phrases used in this document are defined in this section and **bolded** throughout this document.

Note that where a term is not defined, the definition in the *Environmental Protection Act 1994*, its regulations or environmental protection policies must be used. If a word remains undefined it has its ordinary meaning.

Activity means the environmentally relevant activities, whether resource activities or prescribed activities, to which the environmental authority relates.

Administering authority means the Department of Environment and Heritage Protection or its successor or predecessors.

Appropriately qualified person(s) means a person or persons 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.

BOD_5 means the 5 day biochemical oxygen demand determined using standard tests (e.g. those used by NATA laboratories). This test is not inhibited for nitrification, otherwise would be referred to as "carbonaceous" BOD.

Commercial place means a place used as a workplace, an office or for business or commercial purposes and includes a place within the curtilage of such a place reasonably used by persons at that place.

Day means any 24 hour period.

Environmental nuisance as defined under Chapter 1 of the *Environmental Protection Act 1994*.

Measures has the broadest interpretation and includes plant, equipment, physical objects, bunding, containment systems, monitoring, procedures, actions, directions and competency.

Median means the middle value, where half the data are smaller and half the data are larger. If the number of samples is even, the median is the arithmetic average of the two middle values.

NATA means National Association of Testing Authorities.

Release of a contaminant into the environment means to:

- deposit, discharge, emit or disturb the contaminant
- cause or allow the contaminant to be deposited, discharged, emitted or disturbed
- fail to prevent the contaminant from being deposited, discharged emitted or disturbed
- allow the contaminant to escape
- fail to prevent the contaminant from escaping.

Sensitive place includes the following and includes a place within the curtilage of such a place reasonably used by persons at that place:

- a dwelling, residential allotment, mobile home or caravan park, residential marina or other residential premises; or
- a motel, hotel or hostel; or
- a kindergarten, school, university or other educational institution; or
- a medical centre or hospital; or

- a protected area under the *Nature Conservation Act 1992*, the *Marine Parks Act 1992* or a World Heritage Area; or
- a public thoroughfare, park or gardens; or
- for noise, a place defined as a sensitive receptor for the purposes of the *Environmental Protection (Noise) Policy 2008.*

Total Nitrogen (TN) means the sum of Organic Nitrogen, Ammonia Nitrogen, Nitrite plus Nitrate Nitrogen, expressed as mg/L as Nitrogen. This includes both the inorganic and organic fraction of nitrogen.

Total Phosphorus (TP) means the sum of the reactive phosphorus, acid-hydrolysable phosphorus and organic phosphorus, as mg/L of Phosphorus. This includes both the inorganic and organic fraction of phosphorus.

Waters includes river, stream, lake, lagoon, pond, swamp, wetland, unconfined surface water, unconfined water, natural or artificial watercourse, bed and bank of any waters, dams, non-tidal or tidal waters (including the sea), stormwater channel, stormwater drain, roadside gutter, stormwater run-off, and groundwater and any part thereof.

You means the holder of the environmental authority.

END OF PERMIT