



Works Approval Number	W6266/2019/1
Works Approval Holder	Santos WA Energy Limited
ACN	009 301 964
Registered business address	60 Flinders Street ADELAIDE SA 5000
File Number	DER2019/000215
Duration	20/08/2019 to 19/08/2024
Date of issue	20/08/2019
Prescribed Premises	Category 85 – Sewage facility
Premises	Varanus Island and East Spar Facilities CALM Act Leases 1902/100 and 2064/100 Part Reserve 33902 (Part Lot 500 on Plan 240033) (As depicted by the Premises Map in Schedule 1) VARANUS ISLAND WA 6872

This Works Approval is granted to the Works Approval Holder, subject to the following conditions, on 20 August 2019, by:

MANAGER, PROCESS INDUSTRIES

an officer delegated under section 20 of the *Environmental Protection Act 1986* (WA)

Explanatory notes

These explanatory notes do not form part of this Works Approval.

Defined terms

Definition of terms used in this Works Approval can be found at the start of this Works Approval. Terms which are defined have the first letter of each word capitalised throughout this Works Approval.

Department of Water and Environmental Regulation

The Department of Water and Environmental Regulation (DWER) is established under section 35 of the *Public Sector Management Act 1994* and designated as responsible for the administration of Part V, Division 3 of the *Environmental Protection Act 1986 (WA)* (EP Act). The Department also monitors and audits compliance with licences and works approvals, takes enforcement action and develops and implements licensing and industry regulation policy.

Works Approval

Section 52 of the EP Act provides that an occupier of any premises commits an offence if any work is undertaken on, or in relation to, the premises which causes the premises to become, or to become capable of being, Prescribed Premises, except in accordance with a works approval.

Section 56 of the EP Act provides that an occupier of Prescribed Premises commits an offence if Emissions are caused or increased or permitted to be caused or increased, or Waste, noise, odour or electromagnetic radiation is altered or permitted to be altered from Prescribed Premises, except in accordance with a works approval or licence.

Categories of Prescribed Premises are defined in Schedule 1 of the *Environmental Protection Regulations 1987 (WA)* (EP Regulations).

This Works Approval does not authorise any activity which may be a breach of the requirements of another statutory authority including, but not limited to, the following:

- conditions imposed by the Minister for Environment under Part IV of the EP Act;
- conditions imposed by DWER for the clearing of native vegetation under Part V, Division 2 of the EP Act;
- any requirements under the *Waste Avoidance and Resource Recovery Act 2007*;
- any requirements under the *Environmental Protection (Controlled Waste) Regulations 2004*; and
- any other requirements specified through State legislation.

It is the responsibility of the Works Approval Holder to ensure that any action or activity referred to in this Works Approval is permitted by, and is carried out in compliance with, statutory requirements.

The Works Approval Holder must comply with the Works Approval. Contravening a Works Approval Condition is an offence under s.55 of the EP Act.

Responsibilities of Works Approval Holder

Separate to the requirements of this Works Approval, general obligations of Works Approval Holders are set out in the EP Act and the regulations made under the EP Act. For example, the Works Approval Holder must comply with the following provisions of the EP Act:

- the duties of an occupier under s.61; and

- restrictions on making certain changes to Prescribed Premises unless the changes are in accordance with a Works Approval, Licence, closure notice or environmental protection notice (s.53).

Strict penalties apply for offences under the EP Act.

Reporting of incidents

The Works Approval Holder has a duty to report to the Department all Discharges of Waste that have caused or are likely to cause Pollution, Material Environmental Harm or Serious Environmental Harm, in accordance with s.72 of the EP Act.

Offences and defences

The EP Act and its regulations set out a number of offences including:

- Offence of emitting an Unreasonable Emission from any Premises under s.49.
- Offence of causing Pollution under s.49.
- Offence of dumping Waste under s.49A.
- Offence of discharging Waste in circumstances likely to cause Pollution under s.50.
- Offence of causing Serious Environmental Harm (s.50A) or Material Environmental Harm (s.50B).
- Offence of causing Emissions which do not comply with prescribed standards (s.51).
- Offences relating to Emissions or Discharges under regulations prescribed under the EP Act, including materials discharged under the *Environmental Protection (Unauthorised Discharges) Regulations 2004 (WA)*.
- Offences relating to noise under the *Environmental Protection (Noise) Regulations 1997 (WA)*.

Section 53 of the EP Act provides that a Works Approval Holder commits an offence if Emissions are caused, or altered, from a Prescribed Premises unless done in accordance with a Works Approval, Licence or the requirements of a closure notice or an environmental protection notice.

Defences to certain offences may be available to a Works Approval Holder and these are set out in the EP Act. Section 74A(b)(iii) provides that it is a defence to an offence for causing Pollution, in respect of an Emission, or for causing Serious Environmental Harm or Material Environmental Harm, or for discharging or abandoning Waste in water to which the public has access, if the Works Approval Holder can prove that an Emission or Discharge occurred in accordance with a Works Approval.

This Works Approval specifies the Emissions and Discharges, and the limits and Conditions which must be satisfied in respect of specified Emissions and Discharges, in order for the defence to offence provision to be available.

Authorised Emissions and Discharges

The specified and general Emissions and Discharges from the Works authorised through this Works Approval are authorised to be conducted in accordance with the Conditions of this Works Approval.

Amendment of Works Approval

The Works Approval Holder can apply to amend the Conditions of this Works Approval under s.59 of the EP Act. An application form for this purpose is available from DWER.

The CEO may also amend the Conditions of this Works Approval at any time on the initiative of the CEO without an application being made.

Duration of Works Approval

The Works Approval will remain in force for the duration set out on the first page of this Works Approval or until it is surrendered, suspended or revoked in accordance with s.59A of the EP Act.

Suspension or revocation

The CEO may suspend or revoke this Works Approval in accordance with s.59A of the EP Act.

Definitions and interpretation

Definitions

In this Works Approval, the terms in Table 1 have the meanings defined.

Table 1: Definitions

Term	Definition
AS/NZS 5667.1	means the Australian Standard AS/NZS 5667.1 Water Quality – Sampling – Guidance of the Design of sampling programs, sampling techniques and the preservation and handling of samples
AS/NZS 5667.10	means the Australian Standard AS/NZS 5667.10 Water Quality – Sampling – Guidance on sampling of waste waters
Books	has the same meaning given to that term under the EP Act.
CEO	means Chief Executive Officer. CEO for the purposes of notification means: Director General Department administering the <i>Environmental Protection Act 1986</i> Locked Bag 10 Joondalup DC WA 6919 info@dwer.wa.gov.au
CFU	Colony-forming unit
Commission/commissioning	means the process of operation and testing that verifies the works and all relevant systems, plant, machinery and equipment have been installed and are performing in accordance with the design specification set out in the works approval application
Condition	means a condition to which this Works Approval is subject under s.62 of the EP Act.
Department	means the department established under section 35 of the <i>Public Sector Management Act 1994</i> and designated as responsible for the administration of Part V, Division 3 of the EP Act.
Department Request	means a request for Books or other sources of information to be produced, made by an Inspector or the CEO to the Works Approval Holder in writing and sent to the Works Approval's address for notifications, as described at the front of this Works Approval, in relation to: (a) compliance with the EP Act or this Works Approval; (b) the Books or other sources of information maintained in accordance with this Works Approval; or (c) the Books or other sources of information relating to Emissions from the Premises.
Discharge	has the same meaning given to that term under the EP Act.
DWER	Department of Water and Environmental Regulation
Emission	has the same meaning given to that term under the EP Act.
Environmental Harm	has the same meaning given to that term under the EP Act.

EP Act	means the <i>Environmental Protection Act 1986</i> (WA).
EP Regulations	means the <i>Environmental Protection Regulations 1987</i> (WA).
Implementation Agreement or Decision	has the same meaning given to that term under the EP Act.
Inspector	means an inspector appointed by the CEO in accordance with s.88 of the EP Act.
kL	kilolitre
Licensed Facility	means a facility authorised under the EP Act to accept sewage sludge wastes
m ³	cubic metres
Material Environmental Harm	has the same meaning given to that term under the EP Act.
mg/L	milligrams per litre
NATA	National Association of Testing Authorities
Operate or operation	means the acceptance of raw sewage to the sewage facility for treatment and disposal / discharge via the existing ocean outfall
Pollution	has the same meaning given to that term under the EP Act.
Premises	refers to the premises to which this Works Approval applies, as specified at the front of this Works Approval and as shown on the map in Schedule 1 to this Works Approval.
Prescribed Premises	has the same meaning given to that term under the EP Act.
Primary Activity/activities	Refers to the activities listed in Schedule 2 of this Works Approval.
Serious Environmental Harm	has the same meaning given to that term under the EP Act.
Unreasonable Emission	has the same meaning given to that term under the EP Act.
Waste	has the same meaning given to that term under the EP Act.
Works	refers to the Works described in Schedule 2, at the locations shown in Schedule 1 of this Works Approval to be carried out at the Premises, subject to the Conditions.
Works Approval	refers to this document, which evidences the grant of the works approval by the CEO under s.54 of the EP Act, subject to the Conditions.
Works Approval Holder	refers to the occupier of the Premises being the person to whom this Works Approval has been granted, as specified at the front of this Works Approval.

Interpretation

In this Works Approval:

- (a) the words 'including', 'includes' and 'include' will be read as if followed by the words 'without limitation';
- (b) where any word or phrase is given a defined meaning, any other part of speech or other grammatical form of that word or phrase has a corresponding meaning;
- (c) where tables are used in a Condition, each row in a table constitutes a separate Condition;
- (d) any reference to an Australian or other standard, guideline or code of practice in this Works Approval means the version of the standard, guideline or code of practice in force at the time of granting of this Works Approval and includes any amendments to the standard, guideline or code of practice which may occur from time to time during the course of the Works Approval; and
- (e) unless specified otherwise, any reference to a section of an Act refers to that section of the EP Act.

Conditions

Infrastructure and equipment

1. The Works Approval Holder must install and undertake the Works for the infrastructure and equipment:
 - (a) specified in Column 1;
 - (b) to the requirements specified in Column 2; and
 - (c) at the location specified in Column 3 of Table 2 below.
2. The Works Approval Holder must not depart from the requirements specified in Column 2 of Table 2 except:
 - (a) where such departure does not increase risks to public health, public amenity or the environment; and
 - (b) all other Conditions in this Works Approval are still satisfied.
3. Within 7 days of the completion of the Works specified in Column 1 of Table 2, the Works Approval Holder must provide to the CEO written confirmation (including photographic evidence) confirming each item of infrastructure specified in Column 1 of Table 2 below has been constructed with no material defects and to the requirements specified in Column 2 of Table 2.
4. Where a departure from the requirements specified in Column 2 of Table 2 occurs and is of a type allowed by Condition 2, the Works Approval Holder must provide to the CEO a description of, and explanation for, the departure along with the certification required by Condition 2(b).

Table 2: Infrastructure and equipment requirements table

Column 1	Column 2	Column 3
Infrastructure/Equipment	Requirements (design and construction)	Site plan reference
New Activated Sludge Bioreactor Plus sewage facility	<ul style="list-style-type: none"> • Maximum design capacity of 72m³ of treated effluent per day; and • To be constructed on bunded concrete hardstand 	As shown in Schedule 1: Premises Map
	Infrastructure components including: <ul style="list-style-type: none"> • influent screen; • 2 x balance tanks (combined capacity of 100m³); • bioreactor (for aerobic and anoxic treatment) Tanks A and B; • clarification tank (including sludge skimmer); • treated effluent tank (capacity up to 9kL); • sludge tank (capacity 22.5kL); • super natant transfer tank (capacity 250L); • effluent chlorination system; and • treated effluent distribution system (including flowmeter and effluent sample point) 	

Column 1	Column 2	Column 3
Infrastructure/Equipment	Requirements (design and construction)	Site plan reference
New Activated Sludge Bioreactor Plus sewage facility	Designed and constructed to achieve the following effluent quality: <ul style="list-style-type: none"> Biochemical Oxygen Demand: <20mg/L Total Nitrogen: <50mg/L Total Phosphorus: <12mg/L Total Suspended Solids: <30mg/L Free Chlorine: 0.2 – 2.0 mg/L E. Coli: <10 cfu/100mL) 	As shown in Schedule 1: Premises Map
Treated effluent discharge point	<ul style="list-style-type: none"> A new pipe to be installed from the treated effluent tank to tie into the existing treated effluent discharge pipe 	As shown in Schedule 1: Premises Map

Emissions

5. The Works Approval Holder must not cause any Emissions from the Works authorised through this Works Approval except for specified Emissions and general Emissions described in Column 1 of Table 3, subject to the exclusions, limitations or requirements specified in Column 2, of Table 3.

Table 3: Authorised Emissions table

Column 1	Column 2
Emission type	Exclusions/Limitations/Requirements
Specified Emissions	
Discharge of treated sewage to surface water (ocean)	Subject to compliance with Conditions 8, 9, 10, 11 and 12
General Emissions (excluding Specified Emissions)	
Emissions which arise from undertaking the Works set out in Schedule 2.	Emissions excluded from General Emissions are: <ul style="list-style-type: none"> Unreasonable Emissions; or Emissions that result in, or are likely to result in, Pollution, Material Environmental Harm or Serious Environmental Harm; or Discharges of Waste in circumstances likely to cause Pollution; or Emissions that result, or are likely to result in, the Discharge or abandonment of Waste in water to which the public has access; or Emissions or Discharges which do not comply with an Approved Policy; or Emissions or Discharges which do not comply with prescribed standard; or Emissions or Discharges which do not comply with the conditions in an Implementation Agreement or Decision; or

Column 1	Column 2
Emission type	Exclusions/Limitations/Requirements
	<ul style="list-style-type: none"> Emissions or Discharges the subject of offences under regulations prescribed under the EP Act, including materials discharged under the <i>Environmental Protection (Unauthorised Discharges) Regulations 2004</i>.

6. Upon completion of the Works specified in Table 2, the Works Approval Holder shall Commission the infrastructure referred to in Table 2 for a period not exceeding 3 months.
7. Upon completion of Commissioning the Works specified in Table 2, the Works Approval Holder shall Operate the Works specified in Table 2 for a period not exceeding 3 months.

Conditions - Commissioning and Operations

Infrastructure and equipment (Commissioning and operations)

8. The Works Approval Holder must ensure that the site infrastructure and equipment listed in Table 4 and located at the corresponding infrastructure location is maintained in good working order and operated in accordance with the corresponding operational requirement set out in Table 4.

Table 4: Infrastructure and equipment requirements (commissioning and operation)

Infrastructure/Equipment	Operational requirements	Site plan reference
New Activated Sludge Bioreactor Plus sewage facility	Treated sewage shall only be discharged to the existing ocean outfall at the location depicted in Schedule 1: Premises Map	Refer to Schedule 1: Premises Map
	The integrity of the sewage facility containment infrastructure is maintained	
	Organic sediment (sludge) removed from sewage facility to be stored in enclosed leak-proof containers on a bunded hardstand area prior to disposal to a Licenced Facility	

Monitoring – Discharges to Surface Water

9. During Commissioning and Operation of the Works, the Works Approval Holder shall monitor and record emissions:
 - (a) from the discharge point;
 - (b) at the corresponding monitoring location;
 - (c) for the corresponding parameter;
 - (d) at the corresponding frequency;
 - (e) for the corresponding averaging period;
 - (f) in the corresponding unit; and

- (g) using the corresponding method,
as set out in Table 5.

Table 5: Monitoring of emissions to surface water during Commissioning and Operation

Monitoring location	Parameter	Frequency	Averaging period	Unit	Method
Refer to Schedule 1: Premises Map – Effluent Sample Point and Flowmeter	Volumetric flow rate	Continuous	Daily	m ³ / day	AS/NZS 5667.1 and AS/NZS 5667.10
	pH ¹	Monthly during Commissioning	Spot sample	pH Units	
	Biochemical Oxygen Demand			mg/L	
	Total Nitrogen			mg/L	
	Total Phosphorus			mg/L	
	Total Suspended Solids			mg/L	
	Total Dissolved Solids	Quarterly during Operation		mg/L	
	Free chlorine		mg/L		
	E. Coli		CFU/100mL		
	Anionic surfactants		mg/L		
	Oil and grease		mg/L		

Note 1: In field non-NATA accredited analysis permitted

- 10.** The Works Approval Holder shall submit all samples required by Condition 9 of this Works Approval to a laboratory with current NATA accreditation for the analysis of parameters specified.
- 11.** The Works Approval Holder must ensure that:
- monitoring is undertaken in each monthly period such that there are at least 15 days in between the days on which samples are taken in successive months; and
 - monitoring is undertaken in each quarterly period such that there are at least 45 days in between the days on which samples are taken in successive quarters.
- 12.** The Works Approval Holder must, within 4 weeks after the completion of Commissioning of the Works in accordance with Condition 6, submit to the CEO, a Commissioning Report that includes:
- a summary of the Commissioning activities performed including monitoring results during Commissioning recorded in accordance with Condition 9;
 - a list of any original monitoring reports submitted to the Works Approval Holder from third parties for the Commissioning period;
 - a summary of the treated effluent quality from the sewage facility as installed, against the design specifications set out in Condition 1, Table 2; and
 - where the design specifications have not been met, measures proposed to meet the design specifications, together with timescales for implementing the proposed measures.

Record-keeping

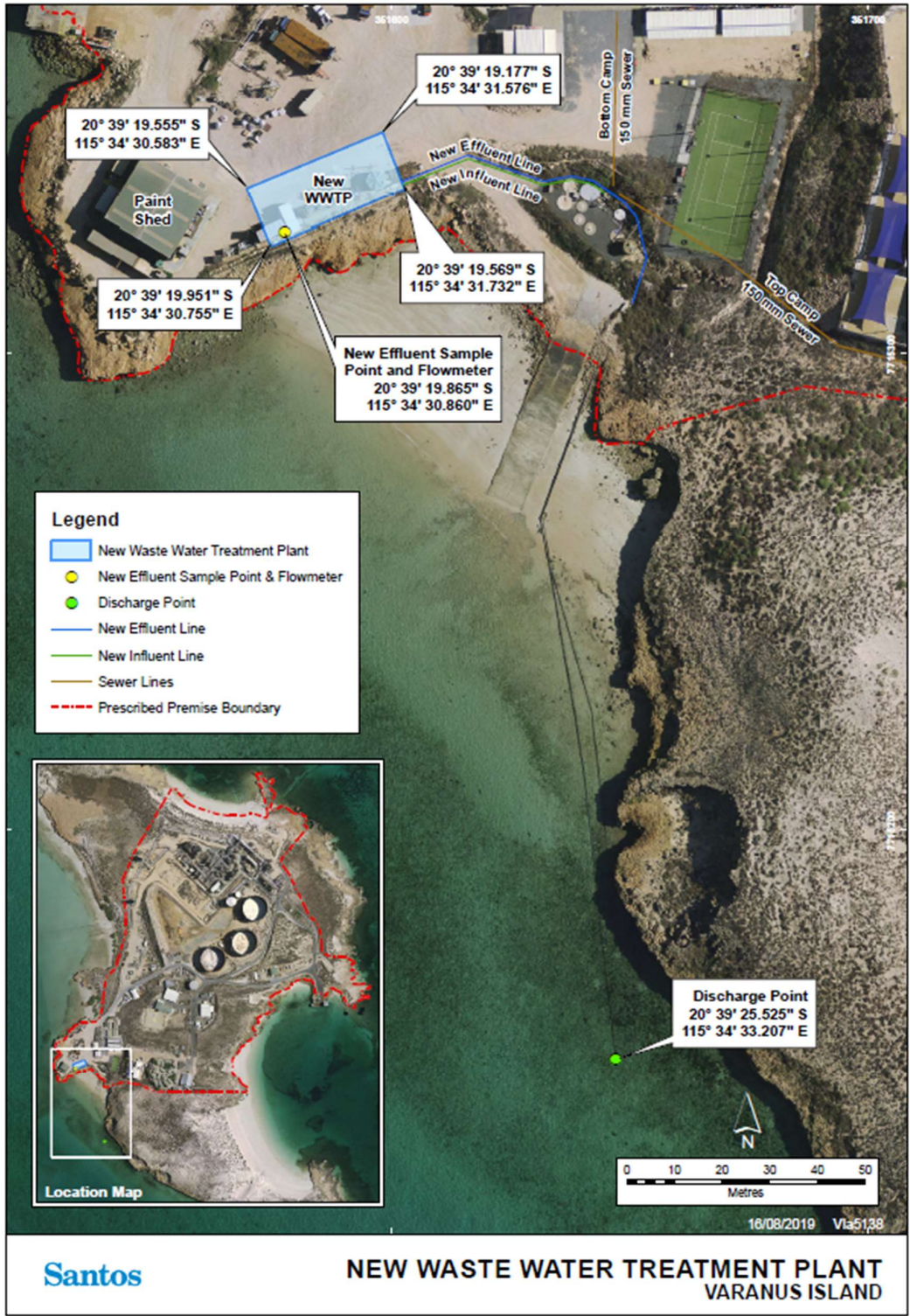
- 13.** The Works Approval Holder must maintain accurate Books including information, reports and data in relation to the Works and the Books must:

 - (a) be legible;
 - (b) if amended, be amended in such a ways that the original and subsequent amendments remain legible or are capable of retrieval;
 - (c) be retained for at least 3 years from the date the Books were made;
 - (d) be available to be produced to an Inspector or the CEO.
- 14.** The Works Approval Holder must comply with a Department Request within 14 days from the date of the Department Request or such other period as agreed to by the Inspector or the CEO.

Schedule 1: Maps

Premises Map – sewage facility location and discharge point

The Premises is shown in the map below. The location of the new sewage facility is labelled “New WWTP”.



Schedule 2: Works and Primary Activities

At the time of assessment, Emissions and Discharges from the Works and Primary Activities listed in Table 6 were considered in the determination of the risk and related Conditions for the Works Approval.

Table 6: Authorised Works

Works		Specifications/Drawings
New Activated Sludge Bioreactor Plus sewage facility, comprising: <ul style="list-style-type: none"> • influent screen; • 2 x balance tanks (combined capacity of 100m³); • bioreactor (for aerobic and anoxic treatment) Tanks A and B; • clarification tank (including sludge skimmer); • treated effluent tank (capacity 9kL); • sludge tank (capacity 22.5kL); • Super Natant Transfer tank (capacity 250L); effluent chlorination system; and • treated effluent distribution system (including flowmeter and effluent sample point) 		Schedule 1: Premises Map and Schedule 2: Site Layout.
Primary Activity		
Classification of Premises	Description	Premises Production or design capacity
Category 85	Sewage Facility: premises- (a) on which sewage is treated (excluding septic tanks): or (b) from which treated sewage is discharged onto land or into waters.	Not more than 72m ³ per day

Site Layout

The infrastructure and equipment to be constructed on the Premises is detailed in the indicative Site Layout below.

