



The Manager
Water Corporation of Western Australia
PO Box 100
LEEDERVILLE WA 6902

Dear Sir/Madam

ENVIRONMENTAL PROTECTION ACT 1986 – AMENDMENT TO LICENCE

Licence: L8108/2004/4

Premises: Perth Seawater Desalination Plant

Further to my letter dated 20 November 2014, please find enclosed your amended *Environmental Protection Act 1986* licence.

If you have any questions or objections relating to the licence, please do not hesitate to contact the enquiries officer above on (08) 9333 75221 for clarification or discussion of any grievances you have.

If you are concerned about, or object to any aspect of the amendment, you may lodge an appeal with the Minister for the Environment within 21 days from the date on which this licence is received. The Office of the Appeals Convenor can be contacted on 6467 5190 to find out the procedure and fee.

Members of the public may also appeal the amendments. The Appeals Registrar at the Office of the Appeals Convenor can be contacted after the closing date of appeals to check whether any appeals were received.

Yours sincerely

Ed Schuller
Officer delegated under Section 20
of the *Environmental Protection Act 1986*

18 December 2014

copy to: City of Kwinana

TL0571 v2.0



LICENCE FOR PRESCRIBED PREMISES *Environmental Protection Act 1986*

LICENCE NUMBER L8108/2004/4

FILE NUMBER DEC3812-02

LICENSEE AND OCCUPIER OF PREMISES

Water Corporation of Western Australia
629 Newcastle Street
LEEDERVILLE WA 6007

NAME AND LOCATION OF PREMISES

Perth Seawater Desalination Plant
Lot 3003 on Plan 46763, Crown Reserve 48164 Barter Road
and Part Lot 3000 on Plan 46736, Crown Reserve 30611
NAVAL BASE WA 6165
(as shown in Attachment 1)

PRESCRIBED PREMISES CATEGORY

Schedule 1 of the *Environmental Protection Regulations 1987*

CATEGORY	DESCRIPTION	CAPACITY
54A	Water desalination.	10 gegalitres or more per year.

CONDITIONS OF LICENCE

Subject to the conditions of licence set out in the attached 9 pages.

Officer delegated under Section 20
of the *Environmental Protection Act 1986*

AMENDMENT DATE Thursday, 18 December 2014
ISSUE DATE Thursday, 19 September 2013
COMMENCEMENT DATE Tuesday, 24 September 2013
EXPIRY DATE Sunday, 23 September 2018

CONDITIONS OF LICENCE

Environmental Protection Act 1986

LICENCE NUMBER L8108/2004/4

FILE NUMBER DEC3812-02

DEFINITIONS

In these conditions, unless inconsistent with the text or subject matter:

“brine” means the hypersaline by-product of seawater desalination;

“desalination effluent” means any liquid by-product discharged from the Premises into marine waters;

“diffuser” means a 160 metre long 40 port structure designed to facilitate uniform mixing of the Desalination Effluent in seawater, where the western end is located at 383,816.38 E and 6436,740.20 N and the eastern end is located at 383,971.20E and 6436,689.35N, (as depicted in Attachment 2);

“CEO” means CEO of the Department of Environment Regulation for and on behalf of the Chief Executive Officer as delegated under section 20 of the Act;

“CEO” for the purpose of correspondence means;

Manager Licensing (Greater Swan)
Department of Environment Regulation
Locked Bag 33
CLOISTERS SQUARE WA 6850
Telephone: (08) 9333 7510
Facsimile: (08) 9333 7550
Email: swanindustryreg@der.wa.gov.au;

“edge of the mixing zone” means the vertical boundary, from seabed to water surface, of a perimeter measuring 50 metres in any horizontal direction from the Diffuser;

“licensee” means Water Corporation of Western Australia;

“m³/s” means cubic metres per second; and

“premises” for the purpose of this licence means the Perth Seawater Desalination Plant located at Lot 3003 on Plan 46763, Crown Reserve 48164, Barter Road, Naval Base WA 6165 (as depicted in Attachment 1).

All other terms preferentially take their meaning from the *Environmental Protection Act 1986*.

ISSUE DATE Thursday, 19 September 2013

AMENDMENT DATE DRAFT

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CONDITIONS OF LICENCE

Environmental Protection Act 1986

LICENCE NUMBER L8108/2004/4

FILE NUMBER DEC3812-02

DISCHARGE TO WATER

1. The licensee shall discharge brine through the diffuser and shall achieve a minimum of 45 dilutions of the desalination effluent at the edge of the mixing zone.

MONITORING CONDITIONS

2. The licensee shall conduct monitoring to determine the daily total volume in kilolitres and daily average flow rate in m³/s of the desalination effluent discharged to marine waters.
3. The licensee shall conduct monitoring to determine the daily total volume in kilolitres and daily average flow rate m³/s of the brine component of the desalination effluent discharged to marine waters.

REPORTING CONDITIONS

Annual Reporting

4. (a) The licensee shall submit an environmental report to the CEO every 12 months.
- (b) In submitting the report required pursuant to condition 4(a), the licensee shall by 1 September in each year, provided to the CEO an Environmental Report containing the following monitoring data during the period beginning 1 July the previous year and ending on 30 June in that year, and shall include the following information:
 - (i) the daily total volume in kilolitres and daily average flow rate in m³/s of the desalination effluent discharged to marine waters determined pursuant to condition 2;
 - (ii) the daily total volume in kilolitres and daily average flow rate in m³/s of the brine component of the desalination effluent discharged to marine waters determined pursuant to condition 3; and,
 - (iii) demonstrate how compliance with condition 1 was achieved throughout the preceding 12 months.

ANNUAL AUDIT COMPLIANCE REPORT

5. The licensee shall by 1 September in each year, provide to the CEO an Annual Audit Compliance Report in the form in Attachment 3 to this licence, signed and certified in the manner required by Section C of the form, indicating the extent to which the licensee has complied with the conditions of this licence, and any previous licence issued under Part V of the Act for the premises, during the period beginning 1 July the previous year and ending on 30 June in that year.

CONDITIONS OF LICENCE

Environmental Protection Act 1986

ATTACHMENT 1- Plan of Premises

LICENCE NUMBER L8108/2004/4

FILE NUMBER DEC3812-02



Attachment 1: Perth Seawater Desalination Plant Plan of Premises

ISSUE DATE

Thursday, 19 September 2013

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CONDITIONS OF LICENCE
Environmental Protection Act 1986
ATTACHMENT 2

LICENCE NUMBER L8108/2004/4

FILE NUMBER DEC3812-02



Attachment 2: Diffuser Location

ISSUE DATE

Thursday, 19 September 2013

AMENDMENT DATE

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CONDITIONS OF LICENCE
Environmental Protection Act 1986

ATTACHMENT 3

LICENCE NUMBER L8108/2004/4

FILE NUMBER DEC3812-02

ATTACHMENT 3 – ANNUAL AUDIT COMPLIANCE REPORT

SECTION A

LICENCE DETAILS

Licence Number:	Licence File Number:
Company Name:	ABN:
Trading as:	
Reporting period: _____ to _____	

STATEMENT OF COMPLIANCE WITH LICENCE CONDITIONS

1. Were all conditions of licence complied with within the reporting period? (please tick the appropriate box)
2.
 Yes ☐ Please proceed to Section C
 No ☐ Please proceed to Section B

Each page must be initialed by the person(s) who signs Section C of this AACR

Initial:

ISSUE DATE

Thursday, 19 September 2013

AMENDMENT DATE

DRAFT

CONDITIONS OF LICENCE
Environmental Protection Act 1986
ATTACHMENT 3

LICENCE NUMBER L8108/2004/4

FILE NUMBER DEC3812-02

SECTION B

DETAILS OF NON-COMPLIANCE WITH LICENCE CONDITION.

Please use a separate page for each licence condition that was not complied with.

a) Licence condition not complied with?	
b) Date(s) when the non compliance occurred, if applicable?	
c) Was this non compliance reported to DER?	
<input type="checkbox"/> Yes <input type="checkbox"/> Reported to DER verbally Date _____ <input type="checkbox"/> Reported to DER in writing Date _____	<input type="checkbox"/> No
d) Has DER taken, or finalized any action in relation to the non compliance?	
e) Summary of particulars of non compliance, and what was the environmental impact?	
f) If relevant, the precise location where the non compliance occurred (attach map or diagram)	
g) Cause of non compliance	
h) Action taken or that will be taken to mitigate any adverse effects of the non compliance	
i) Action taken or that will be taken to prevent recurrence of the non compliance	

Each page must be initialed by the person(s) who signs Section C of this AACR

Initial: _____

ISSUE DATE

Thursday, 19 September 2013

AMENDMENT DATE

DRAFT

CONDITIONS OF LICENCE
Environmental Protection Act 1986
ATTACHMENT 3

LICENCE NUMBER L8108/2004/4

FILE NUMBER DEC3812-02

SECTION C

SIGNATURE AND CERTIFICATION

This Annual Audit Compliance Report may only be signed by a person(s) with legal authority to sign it. The ways in which the Annual Audit Compliance Report must be signed and certified, and the people who may sign the statement, are set out below.

Please tick the box next to the category that describes how this Annual Audit Compliance Report is being signed. If you are uncertain about who is entitled to sign or which category to tick, please contact the licensing officer for your premises.

If the licence holder is		The Annual Audit Compliance Report must be signed and certified:
an individual	<input type="checkbox"/>	by the individual licence holder, or
	<input type="checkbox"/>	by a person approved in writing by the Chief Executive Officer of the Department of Environment Regulation to sign on the licensee's behalf.
A firm or other unincorporated company	<input type="checkbox"/>	by the principal executive officer of the licensee; or
	<input type="checkbox"/>	by a person with authority to sign on the licensee's behalf who is approved in writing by the Chief Executive Officer of the Department of Environment Regulation.
A corporation	<input type="checkbox"/>	by affixing the common seal of the licensee in accordance with the Corporations Act 2001; or
	<input type="checkbox"/>	by two directors of the licensee; or
	<input type="checkbox"/>	by a director and a company secretary of the licensee, or
	<input type="checkbox"/>	if the licensee is a proprietary company that has a sole director who is also the sole company secretary – by that director, or
	<input type="checkbox"/>	by the principal executive officer of the licensee; or
	<input type="checkbox"/>	by a person with authority to sign on the licensee's behalf who is approved in writing by the Chief Executive Officer of the Department of Environment Regulation.
A public authority (other than a local government)	<input type="checkbox"/>	by the principal executive officer of the licensee; or
	<input type="checkbox"/>	by a person with authority to sign on the licensee's behalf who is approved in writing by the Chief Executive Officer of the Department of Environment Regulation.
a local government	<input type="checkbox"/>	by the chief executive officer of the licensee; or
	<input type="checkbox"/>	by affixing the seal of the local government.

It is an offence under section 112 of the Environmental Protection Act 1986 for a person to give information on this form that to their knowledge is false or misleading in a material particular. There is a maximum penalty of \$50,000 for an individual or body corporate.

I/We declare that the information in this annual audit compliance report is correct and not false or misleading in a material particular.

SIGNATURE: _____

NAME: _____

(printed) _____

POSITION: _____

DATE: ____/____/____

SIGNATURE: _____

NAME: _____

(printed) _____

POSITION: _____

DATE: ____/____/____

SEAL (if signing under seal)

ISSUE DATE

Thursday, 19 September 2013

AMENDMENT DATE

DRAFT



Decision Document

Environmental Protection Act 1986, Part V

Proponent: Water Corporation of Western Australia

Licence: L8108/2004/4

Registered office: 629 Newcastle Street
LEEDERVILLE WA 6007

ACN: -

Premises address: Lot 3003 on Plan 46763, Crown Reserve 48164 Barter Road
and Part Lot 3000 on Plan 46736, Crown Reserve 30611
NAVAL BASE WA 6165

Issue date: Thursday, 19 September 2013

Commencement date: Tuesday, 24 September 2013

Expiry date: Sunday, 23 September 2018

Decision

Based on the assessment detailed in this document the Department of Environment Regulation (DER), has decided to issue an amended works approval. DER considers that in reaching this decision, it has taken into account all relevant considerations.

Decision Document prepared by:

Joanna Waugh
Licensing Officer

Decision Document authorised by:

Ed Schuller
Manager Licensing



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1 Purpose of this Document

This decision document explains how DER has assessed and determined the application and provides a record of DER's decision-making process and how relevant factors have been taken into account. Stakeholders should note that this document is limited to DER's assessment and decision making under Part V of the *Environmental Protection Act 1986*. Other approvals may be required for the proposal, and it is the proponent's responsibility to ensure they have all relevant approvals for their Premises.

Works approval and licence conditions

DER has three types of conditions that may be imposed on works approvals and licences. They are as follows;

Standard conditions (SC)

DER has standard conditions that are imposed on all works approvals and licences regardless of the activities undertaken on the Premises and the information provided in the application. These are included as the following conditions on works approvals and licences:

Works approval conditions: 1.1.1-1.1.4, 1.2.1, 1.2.2, 5.1.1 and 5.1.2.

Licence conditions: 1.1.1-1.1.4, 1.2.1-1.2.4, 5.1.1-5.1.4 and 5.2.1.

For such conditions, justification within the Decision Document is not provided.

Optional standard conditions (OSC)

In the interests of regulatory consistency DER has a set of optional standard conditions that can be imposed on works approvals and licences. DER will include optional standard conditions as necessary, and are likely to constitute the majority of conditions in any licence. The inclusion of any optional standard conditions is justified in Section 4 of this document.

Non standard conditions (NSC)

Where the proposed activities require conditions outside the standard conditions suite DER will impose one or more non-standard conditions. These include both premises and sector specific conditions, and are likely to occur within few licences. Where used, justification for the application of these conditions will be included in Section 4.



2 Administrative summary

Administrative details		
Application type	Works Approval <input type="checkbox"/> New Licence <input type="checkbox"/> Licence amendment <input checked="" type="checkbox"/> Works Approval amendment <input type="checkbox"/>	
Activities that cause the premises to become prescribed premises	Category number(s)	Assessed design capacity
	54A	
Application verified	Date: N/A	
Application fee paid	Date: N/A	
Works Approval has been complied with	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>	
Compliance Certificate received	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>	
Commercial-in-confidence claim	Yes <input type="checkbox"/> No <input type="checkbox"/>	
Commercial-in-confidence claim outcome		
Is the proposal a Major Resource Project?	Yes <input type="checkbox"/> No <input type="checkbox"/>	
Was the proposal referred to the Environmental Protection Authority (EPA) under Part IV of the <i>Environmental Protection Act 1986</i> ?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Referral decision No: Managed under Part V <input type="checkbox"/> Assessed under Part IV <input type="checkbox"/>
Is the proposal subject to Ministerial Conditions?	Yes <input type="checkbox"/> No <input type="checkbox"/>	Ministerial statement No: EPA Report No:
Does the proposal involve a discharge of waste into a designated area (as defined in section 57 of the <i>Environmental Protection Act 1986</i>)?	Yes <input type="checkbox"/> No <input type="checkbox"/> Department of Water consulted Yes <input type="checkbox"/> No <input type="checkbox"/>	
Is the Premises within an Environmental Protection Policy (EPP) Area Yes <input type="checkbox"/> No <input type="checkbox"/> If Yes include details of which EPP(s) here.		
Is the Premises subject to any EPP requirements? Yes <input type="checkbox"/> No <input type="checkbox"/> If Yes, include details here, eg Site is subject to SO ₂ requirements of Kwinana EPP.		



3 Executive summary of proposal and assessment

Water Corporation's Perth Seawater Desalination Plant (PSDP), extracts seawater from Cockburn Sound and utilises reverse osmosis (RO) to produce potable water for the Perth metropolitan area. Concentrated brine (with a salinity of approximately 65,000 mg/L) is discharged back to Cockburn Sound. The process has the capacity to treat ~113 GL/year of seawater to produce ~45 GL/year of potable water. Approximately 68 GL/year of desalination effluent will be discharged to Cockburn Sound.

The PSDP is located on the corner of Barter and Leath Roads, Naval Base (within the Town of Kwinana) on the Swan Coastal Plain, adjacent to Cockburn Sound. The site is located within the Kwinana Industrial Area (KIA) and neighbouring sites include a number of power stations. The premises is located about 1 km from land zoned rural and approximately 3.5 km from the nearest residential-zoned area and 2.5 km from the Naval Base Holiday Village.

Cockburn Sound is a natural harbour system located about 35 km south of Perth in Western Australia. It is an oval shaped basin with a North-South length of 16 km and East-West breadth of 7 km. Maximum water depth is 22 m. Cockburn Sound is flanked by Garden Island to the West and mainland Western Australia to the East and South.

The surface geology at the site is Safety Bay Sand overlying the Tamala Limestone formation. Groundwater flow is in a northwesterly direction (originating from the Jandakot Mound) and is typically less than 1 m AHD, with the site elevation being approximately 4-6 m AHD.

The PSDP produces potable quality water from seawater utilising the process of reverse osmosis (RO) desalination. In the RO process, salty water is applied to a semi permeable membrane at pressure, whereby a percentage of the water but excluding the dissolved salts passes through the membrane. The remaining portion of the water, containing virtually all of the salt in the influent water, is returned to Cockburn Sound as brine (plus some trace contaminants).

This is an administrative licence amendment to update the prescribed premises boundary map to include the evaporation pond that Water Corporation are leasing from Synergy.

N/A	The premises boundary has been amended to include the evaporation pond that is leased by Water Corporation. Synergy's Cockburn Power Station is being appended concurrently to remove the evaporation pond from licence premises boundary map.	Licence (DMS#:3259896v 6), with Licensor as Electricity Generation Corporation and Licensee as Water Corporation, commencing 1 November 2011
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6 Risk Assessment

Note: This matrix is taken from the DER Corporate Policy Statement No. 07 - Operational Risk Management

Table 1: Emissions Risk Matrix

Likelihood	Consequence				
	Insignificant	Minor	Moderate	Major	Severe
Almost Certain	Moderate	High	High	Extreme	Extreme
Likely	Moderate	Moderate	High	High	Extreme
Possible	Low	Moderate	Moderate	High	Extreme
Unlikely	Low	Moderate	Moderate	Moderate	High
Rare	Low	Low	Moderate	Moderate	High