



Licence No. 39143

ADELAIDEAQUA PTY LIMITED

Allotment 11 DP 80713), Christie Road, LONSDALE, 5160, SA

ISSUED:

04 Dec 2012

EXPIRY:

30 Nov 2032

ACN:

135 354 513

*Environmental Authorisation
under Part 6 of the
Environment Protection
Act 1993*

**South Australian
Environment
Protection Authority**
GPO Box 2607
Adelaide SA 5001
Tel: 08 8204 2004

EPA

Environment Protection Authority



LICENCE NUMBER 39143

LICENSEE DETAILS

Licence Holder: ADELAIDEAQUA PTY LIMITED

ACN: 135 354 513

Registered Address: Level 10, 115 Grenfell Street, ADELAIDE SA 5000

Premises Address(es): Allotment 11 (DP 80713), Christie Road, LONSDALE, 5160, SA

LICENSED ACTIVITIES

The Licensee is authorised to undertake, at the location(s) shown above, the following prescribed activities of environmental significance under Schedule 1 Part A of the Act, subject to the conditions in this Licence.

1(1)	Chemical storage and warehousing facilities
8(6a)(a)	Desalination plant that discharges wastewater to the marine environment

TERMS OF LICENCE

Commencement Date: 04 Dec 2012

Expiry Date: 30 Nov 2032

Amended Date: 31 Oct 2018

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Licence Explanatory Notes – Do Not Form Part of the Licence

Compliance with this licence

The EPA seeks to ensure that all reasonable and practicable measures are taken to protect, restore and enhance the quality of the environment according to the principles of ecologically sustainable development. To achieve this objective, the EPA uses a number of regulatory decision making principles and actions outlined in the 'Compliance and enforcement regulatory options and tools' document available on the EPA website.

Notification – serious or material environmental harm caused or threatened

If serious or material environmental harm from pollution is caused or threatened in the course of an activity, the licence holder must, as soon as reasonably practicable after becoming aware of the harm or threatened harm, notify the EPA (preferably on EPA emergency phone number 1800 100 833) of the harm or threatened harm, its nature, the circumstances in which it occurred and the action taken to deal with it in accordance with section 83 of the [Environment Protection Act 1993](#) (the Act). In the event that the primary emergency phone number is out of order, the licence holder should phone (08) 8204 2004.

Variations, transfers and surrender of a licence

The EPA may impose or vary the conditions of a licence by notice in writing to the licence holder in accordance with sections 45 and 46 of the Act. Public notice may be required where the variation of licence conditions results in a relaxation of the requirements imposed for the protection or restoration of the environment and results in an adverse effect on any adjoining land or its amenity.

If a licence holder wishes to vary the conditions of a licence, transfer a licence to another entity, or surrender a licence, the licence holder must submit an application to the EPA in accordance with the applicable provisions of the Act (sections 45, 49 and 56, respectively). A licence remains in effect and in its original form until such time as any proposed variation, application for surrender, or transfer has been made and approved in writing by the EPA.

Suspension or cancellation of a licence

The EPA may suspend or cancel a licence by notice in writing to the licence holder in accordance with section 55 of the Act if satisfied the licence holder has either obtained the licence improperly, contravened a requirement under the Act or if the holder is a body corporate, a director of the body corporate has been guilty of misconduct of a prescribed kind (whether in this State or elsewhere).

Responsibilities under Environment Protection legislation

In addition to the conditions of any licence, a licence holder must comply with their obligations under all State and Federal legislation (as amended from time to time) including: the [Environment Protection Act 1993](#); the [Environment Protection Regulations 2009](#); all Environment Protection Policies made under the [Environment Protection Act 1993](#); and any National Environment Protection Measures not operating as an Environment Protection Policy under the [Environment Protection Act 1993](#)

Public Register Information

The EPA maintains and makes available a Public Register of details related to its determinations and other information it considers appropriate (i.e. excluding trade processes or financial information) in accordance with section 109 of the Act. These details include, but are not limited to:

- licensing and beverage container applications and approvals
- enforcement actions
- site contamination
- serious or material environmental harm caused or threatened in the course of an activity
- environment improvement programmes and environment performance agreements
- environment assessment reports; results of testing, monitoring or evaluation required by a licence
- EPA advice or direction regarding development approvals referred to the EPA by a planning authority

Definitions

Unless the contrary intention appears, terms used in this licence that are defined in the Act (including any regulations or environment protection policies made pursuant to the Act) have the respective meanings assigned to those terms by the Act.

THE ACT: The *Environment Protection Act 1993*

PREMISES: The whole of the land comprised in Titles Register - Certificate of Title, Crown Lease and Crown Record.

CT6089/348
CT6152/198

AUTHORISATION FEE PAYMENT DATE: means the anniversary of the grant or renewal of this authorisation.

AVERAGE SALINITY: means the salinity measured at ten minute intervals at MP2 or MP4 average over a 24 hour running period.

ENVIRONMENTAL HARM: means the same as is defined in section 5 of the Environment Protection Act 1993.

MINIMUM ALLOWABLE HEAD LOSS: means the head difference between the sea water and outfall de-aeration chamber being greater than or equal to (in [m]) $-8.57E-1 + 8.12E-3 x + 2.69E-5 x$ squared where x = Production [ML/d] and is the volume of fresh water produced in the desalination plant.

OEMMP: means Operational Environmental Management and Monitoring Plan and includes any plans referred to within this plan.

SLUDGE: means solid waste matter with a high water content (with solids above 2% w/w) and includes thickened sludge and dewatered sludge.

THE AUTHORITY: means the Environment Protection Authority established under Division 1 of Part 3 of the Act.

WASTE: means -

1. As defined under the Environment Protection Act 1993,

1(a) any discarded, dumped, rejected, abandoned, unwanted or surplus matter, whether or not intended for sale or for purification or resource recovery by a separate operation from that which produced the matter; or

1(b) any matter declared by regulation to be waste for the purposes of this Act (following consultation by the Minister on the regulation with prescribed bodies in accordance with the regulations); or

1(c) any matter declared by an environment protection policy to be waste for the purposes of this Act,

whether or not of value.

2. However, waste does not include—

2(a) an approved recovered resource whilst it is being dealt with in accordance with the declaration of that resource—see section 4A; or

2(b) anything declared by regulation or an environment protection policy not to be waste for the purposes of this Act,

even though the resource or the thing so declared might otherwise, but for the declaration, fall within the definition of waste in subsection (1).

Acronyms

EPA: means Environment Protection Authority

CIP: means Clean In Place.

Conditions of Licence

The Licensee is authorised to conduct the prescribed activities as described in this Licence at the Premises nominated, subject to the following conditions:

1 CONTROL OF EMISSIONS

1.1 AVERAGE SALINITY DISCHARGE LIMIT (U - 149)

If the salinity, averaged over 24 hours, measured at 100 metres from the diffuser structure, exceeds 1.3 PPT above ambient salinity the Licensee must:

- 1.1.1 undertake an investigation to determine the cause of the exceedence.
- 1.1.2 provide to the satisfaction of the EPA and within 5 working days of the determination of the exceedence, a program to develop and submit a final investigation report.
- 1.1.3 in accordance with the program required by 2., provide a final investigation report to the satisfaction of the EPA which includes:
 - a the outcomes of the investigation;
 - b actions to be undertaken to ensure that a maximum 1.3ppt differential averaged over 24 hours is maintained at all times; and
 - c timeframes for the actions to be completed.
- 1.1.4 implement the actions as required by 1.1.3.b within the approved timeframes upon approval in writing by the EPA.

1.2 OUTFALL HEAD LOSS - 24 HOUR PERIOD (U - 148)

If the head loss across the outfall system drops below the minimum allowable head loss for a twenty four hour period, the Licensee must:

- 1.2.1 notify the EPA within six hours;
- 1.2.2 stop all discharge of desalination effluent from the desalination plant within six hours; and
- 1.2.3 not recommence discharge until approved by the EPA.

1.3 OUTFALL HEAD LOSS - 6 HOUR PERIOD (U - 147)

If the head loss across the outfall system drops below the minimum allowable head loss for a six hour period, the Licensee must:

- 1.3.1 notify the EPA within six hours; and
- 1.3.2 take appropriate corrective action to manage salinity in the receiving environment.

1.4 SALINITY DISCHARGE LIMIT - 24 HOUR PERIOD (U - 146)

If the average desalination outfall effluent discharge salinity exceeds the intake salinity by a factor of 2.1 for a 24 hour period, the Licensee must:

- 1.4.1 notify the EPA within six hours;
- 1.4.2 stop all discharge of desalination effluent from the desalination plant within six hours; and
- 1.4.3 not recommence discharge until approved in writing by the EPA.

1.5 SALINITY DISCHARGE LIMIT - 6 HOUR PERIOD (U - 145)

If the average desalination outfall effluent discharge salinity exceeds the intake salinity by a factor of 2.1 for a six hour period, the Licensee must:

- 1.5.1 notify the EPA within six hours; and
- 1.5.2 take appropriate corrective action to manage salinity in the receiving environment forthwith.

1.6 SLUDGE MANAGEMENT (330 - 235)

The Licensee must:

- 1.6.1 not allow sludge to be discharged to the marine environment;
- 1.6.2 ensure that sludge does not create odour detectable at the Premises boundary; and
- 1.6.3 ensure that sludge is not disposed of at the Premises.

2 OPERATIONAL MANAGEMENT

2.1 APPROVED CLEAN IN PLACE CHEMICALS ONLY (212 - 42)

The Licensee must not use any CIP chemicals, antiscalants or water treatment chemicals in the desalination process other than those on the schedule specified in Attachment B to this licence entitled 'Adelaide Desalination Plant Approved Clean In Place (CIP) Chemicals, Antiscalants and Water Treatment Chemicals Schedule'.

2.2 BUNDING (330 - 232)

The Licensee must ensure that:

- 2.2.1 all chemicals stored at the Premises are stored within bunds;
- 2.2.2 bunds for containers with a capacity larger than 250 litres, contain at least 120% of the volume of the largest container in the bund; and

- 2.2.3 bunds for containers with a capacity of 250 litres or less, contain at least 25% of the total volume of all containers in the bund.

2.3 CHEMICALS PROHIBITED FROM MARINE DISCHARGE (212 - 41)

The Licensee must not allow the following chemicals to be discharged to the marine environment:

- 2.3.1 sodium dodecyl sulphate;
- 2.3.2 tetrasodium EDTA; and
- 2.3.3 chlorine.

2.4 COMPLAINTS REGISTER (300 - 3)

The Licensee must:

- 2.4.1 maintain a Register of complaints received regarding the Licensee's operations that sets out:
 - a the date and time of the complaint;
 - b the name and address of the complainant (where provided);
 - c details of the complaint;
 - d the date and time of the events giving rise to the complaint including other relevant information and the likely cause at the time of the events;
 - e the job title of the person receiving the complaint;
 - f any action taken in response to the complaint; and
- 2.4.2 retain the Register for the duration of this licence.

2.5 COMPLY WITH APPROVED DOCUMENT (T - 1036)

The Licensee must implement and comply with the approved Marine Monitoring Plan document entitled EN-MP-08-A2 Marine Monitoring plan or any revised Marine Monitoring Plan approved in writing by the EPA.

2.6 CONTINGENCY PLAN (315 - 441)

The Licensee must prepare and maintain a plan of action to be taken in the event of emergencies that might foreseeably arise out of the activities undertaken pursuant to this licence which may involve the risk of serious or material environmental harm.

2.7 OPERATIONAL ENVIRONMENTAL MANAGEMENT AND MONITORING PLAN (U - 153)

The licensee must:

- 2.7.1 revise the OEMMP to the satisfaction of the EPA to address the following:
 - a methodologies for all monitoring required by conditions of this licence
 - b methodologies to manage the discharge of plant effluent to meet the salinity discharge limits for conditions U-145 and U-146;
 - c methodologies to manage the discharge of plant effluent to meet the outfall head loss requirements for conditions U-147 and U-148;
 - d methodologies to manage the intake of seawater into the plant to meet the intake velocity limits in accordance with condition U-152; and
- 2.7.2 submit the revised OEMMP to the EPA for approval by 30 April 2015; and
- 2.7.3 implement the revised OEMMP upon approval in writing by the EPA or any further revised OEMMP approved in writing by the EPA.

2.8 SEA WATER INTAKE VELOCITY (U - 152)

The Licensee must ensure that the seawater intake velocity at the entry to the intake structure does not exceed 0.15 m/s at any time.

3 MONITORING AND REPORTING

3.1 ANNUAL CERTIFICATE OF COMPLIANCE (320 - 50)

The Licensee must:

- 3.1.1 by 30 September in each year, provide a certificate of compliance to the Authority for the previous financial year;
- 3.1.2 ensure that the certificate of compliance contains the following information:
 - a a statement declaring full-compliance, partial-compliance, or non-compliance with each condition of the licence;
 - b details of each partial-compliance or non-compliance; and
 - c actions taken, or planned to be taken, to prevent any recurrence of the failure to achieve full-compliance; and
- 3.1.3 ensure that the certificate of compliance is certified as correct by a director of each company who holds the licence.

3.2 MARINE MONITORING (212 - 45)

The Licensee must undertake marine monitoring according to the schedule specified in Attachment A entitled 'Adelaide Desalination Plant Marine Monitoring Schedule'.

3.3 MARINE MONITORING REPORT (U - 151)

The Licensee must submit to the EPA by 31 March of each year all marine monitoring results, other than results of salinity monitoring for the preceding calendar year.

3.4 QUARTERLY SALINITY MONITORING REPORT (U - 150)

The Licensee must submit results of all salinity monitoring, to the EPA according to the following schedule:

- 3.4.1 all marine monitoring undertaken in January, February or March in any year by the end of May in that year;
- 3.4.2 all marine monitoring undertaken in April, May or June in any year by the end of August in that year;
- 3.4.3 all marine monitoring undertaken in July, August or September in any year by the end of November in that year; and
- 3.4.4 all marine monitoring undertaken in October, November or December in any year by the end of February in the following year.

4 ADMINISTRATION

4.1 ANNUAL RETURN AND PAYMENT OF ANNUAL FEES (A - 4)

For the purposes of section 48(2)(a) of the Act, the date in each year for the lodgement of the Annual Return is no later than 90 days before the anniversary of the grant or renewal of the Licence; and

- 4.1.1 For the purposes of section 48(2)(b) of the Act, the date in each year for the payment of Annual Authorisation Fee is the anniversary of the grant of the Licence.

4.2 APPROVAL OF OPERATING PROCESSES (A - 6)

The Licensee must not undertake changes to operating processes conducted pursuant to the Licence at the Premises without written approval from the EPA, where such changes:

- 4.2.1 have the potential to increase emissions or alter the nature of pollutants or waste currently generated by, or from the licensed activity; or

- 4.2.2 have the potential to increase the risk of environmental harm; or
- 4.2.3 would relocate the point of discharge of pollution or waste at the Premises.

4.3 APPROVAL OF WORKS (A - 5)

The Licensee must not construct or alter a building or structure, or install or alter any plant or equipment, for use of an activity undertaken pursuant to the Licence at the Premises without written approval from the EPA, where such changes:

- 4.3.1 have the potential to increase the emissions or alter the nature of pollutants or waste currently generated by, or from the licensed activity; or
- 4.3.2 have the potential to increase the risk of environmental harm; or
- 4.3.3 would relocate the point of discharge of pollution or waste at the Premises.

4.4 CHANGE OF LICENSEE DETAILS (A - 3)

If the Licensee's name or postal address (or both) changes, the Licensee must inform the EPA within 28 days of the change occurring.

4.5 LICENCE RENEWAL (A - 2)

For the purposes of section 43(3) of the Act, an application for Renewal of the Licence must be made no later than 90 days before the expiry date of the Licence.

4.6 OBLIGATIONS TO EMPLOYEES, AGENTS AND CONTRACTORS (A - 1)

The Licensee must ensure that every employee, agent or contractor responsible for undertaking any activity regulated by the Licence, is informed as to the conditions of the Licence.

Attachments

39143 APPROVED CHEMICALS ATTACHMENT.doc"

39143 MARINE MONITORING ATTACHMENT.doc"

Approved Chemicals Schedule

EPA LICENCE 39143 – ATTACHMENT B

Adelaide Desalination Plant Approved Clean In Place (CIP) Chemicals, Antiscalants and Water Treatment Chemicals Schedule

ADELAIDEAQUA PTY LIMITED – Allotment 11, Christie Road, LONSDALE SA 5160

Approved CIP Chemicals, Antiscalants and Water Treatment Chemicals per Licence Condition (212-42)	
Activated Carbon	C
AN905 PWG	Anionic polyelectrolyte from <i>SNF</i> (potable grade)
AN910 PWG	Anionic polyelectrolyte from <i>SNF</i> (potable grade)
AN913 PWG	Anionic polyelectrolyte from <i>SNF</i> (potable grade)
Calcium Hydroxide	Ca(OH) ₂
Carbon Dioxide	CO ₂
Chlorine	Cl ₂
Citric Acid	C ₆ H ₈ O ₇
DBNPA	C ₃ H ₂ N ₂ OBr ₂
Ferric Chloride	FeCl ₃
Ferric Sulphate	Fe ₂ (SO ₄) ₃
Flocon 285	Antiscalant from <i>Biolab Water Additives</i>
Flocon 295	Antiscalant from <i>Biolab Water Additives</i>
Fluorosilicic acid	H ₂ SiF ₆
Hydrochloric acid	HCl
Genesys-MP	Antiscalant from <i>Genesys International</i>
LT25	Anionic polyelectrolyte from <i>CIBA</i> (potable grade)
LT27	Anionic polyelectrolyte from <i>CIBA</i> (potable grade)
LT30	Anionic polyelectrolyte from <i>CIBA</i> (potable grade)
PC1020T	Antiscalant from <i>Nalco</i>
Phosphoric acid	H ₃ PO ₄
Sodium Carbonate	Na ₂ CO ₃
Sodium Hexametaphosphate	(NaPO ₃) ₆

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Sodium Hydroxide	NaOH
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Adelaide DeSalination Plant Approved Clean In Place (CIP) Chemicals, Antiscalants and Water Treatment Chemicals Schedule

ADELAIDEAQUA PTY LIMITED – Allotment 11, Christie Road, LONSDALE SA 5160

Approved CIP Chemicals, Antiscalants and Water Treatment Chemicals per Licence Condition (212-42) cont.	
Sodium Hypochlorite	NaClO
Sodium Metabisulphite	Na ₂ S ₂ O ₅
Sodium Silicate	Na ₂ SiO ₃
Sodium Dodecyl Sulphate	NaC ₁₂ H ₂₅ SO ₄
Spectraguard	Antiscalant from <i>Professional Water Technologies</i>
Sulphuric acid	H ₂ SO ₄
Tetrasodium EDTA	Na ₄ C ₁₀ H ₁₂ N ₂ O ₈

NOTE:

If the Licensee wishes to use any other Clean In Place (CIP) Chemicals, Antiscalants or Water Treatment Chemicals in any of their processes, the Licensee must seek approval prior to any use from the EPA. Approval from the EPA for any additions to this list will be provisional on the Licensee proving to the satisfaction of the EPA that the risk of harm to the environment is not increased from any changes.

Marine Monitoring Schedule

EPA LICENCE 39143 – ATTACHMENT A

Adelaide Desalination Plant Marine Monitoring Schedule

ADELAIDEAQUA PTY LIMITED – Allotment 11, Christie Road, LONSDALE SA 5160

Ambient Marine Ecological Monitoring	
Subtidal Reef	Two surveys per year of benthic flora and fauna on the sub-tidal reef undertaken once every 3 years.
Baited Remote Underwater Video	Two seasonal video fish traps to monitor local fish populations undertaken once every 3 years.
Infauna Survey	Two surveys per year of the meiofauna and macrofauna undertaken once every 3 years.

Intake Monitoring	
Seawater Characteristic	Measure conductivity, temperature, pH & DO of seawater intake every 10 minutes at Ambient MP1.
Seawater Characteristics	Analyse seawater quarterly for biological oxygen demand, suspended solids, total nitrogen (as N), total phosphorus (as P), zinc, lead and copper. Sample is to be a 24-hour flow weighted sample and to be collected on the same day.
Intake volume	Daily volume of seawater intake in ML.

Discharge Monitoring (Outfall)	
Discharge volume	Measure volume of outfall effluent discharge in ML daily.
Discharge Characteristics	Measure conductivity, temperature, DO, pH and Cl ₂ (or alternatively ORP) of whole of effluent discharge every 10 minutes. Must be measured for each stream separately and reported as separate streams.
Discharge Characteristics	Analyse quarterly for biological oxygen demand, suspended solids, total nitrogen (as N), total phosphorus (as P), zinc, lead and copper. Sample is to be a 24-hour flow weighted sample and to be collected on the same day.

Receiving Environment Monitoring (Diffuser Performance Validation)	
Salinity (100 metres)	Measure conductivity and temperature of seawater at MP2 & MP4 every 10 minutes.

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