



Government of **Western Australia**  
Department of **Health**



# **Memorandum of Understanding**

**between the**

**Department of Health**

**and**

**Busselton Water**

**for**

**Drinking Water**

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**Modification / Approval History**

<b>Date</b>	<b>Description of Change</b>	<b>Page</b>	<b>Changed by</b>	<b>Approved by</b>
	Issued for Approval		---	---
27/01/2015	Updated Schedules 4B to 9 (as provided by Department of Health)		Keith Mungham	Robin Belford
21/12/2015	Updated schedules from Materials and Substances in Contact with Drinking Water fact sheet		Keith Mungham	Robin Belford
24/12/2015	Extend term of MoU to 31/12/2016		Keith Mungham (DoH correspondence of 24/12/2015)	Robin Belford
28/11/2016	Updated schedules 5 to 9 of Materials and Substances in Contact with Drinking Water as directed by DoH		Keith Mungham	Robin Belford
3/12/2016	Extend term of MoU to 30/6/2017		Keith Mungham (DoH correspondence of 29/12/2016)	Robin Belford

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## MEMORANDUM OF UNDERSTANDING

THIS MEMORANDUM is entered into on the 3<sup>rd</sup> day of October 2011.

**BETWEEN** BUSSELTON WATER ("*the Licensee*")

**OF THE ONE PART**

**AND** THE DEPARTMENT OF HEALTH ("*the Department*")

**OF THE OTHER PART**

### CONTEXT

- A. The Licensee is a corporatised body under the *Water Boards Act 1904*.
- B. The Licensee has been granted an Operating Licence by the Economic Regulation Authority under the *Water Services Licensing Act 1995*.
- C. The Licensee has the responsibility for providing a supply of Drinking Water in line with sound commercial practices and in accordance with its Operating Licence.
- D. The Licensee may also provide specialist advice to the Department on Drinking Water matters.
- E. The Department is the regulatory agency for Drinking Water quality in Western Australia.
- F. The Department has a role in providing advice to the Government on standards in relation to Drinking Water quality and associated risks to public health.
- G. The Department has certain responsibilities in relation to the protection of public health under the *Health Act 1911* and other relevant legislation.
- H. The Advisory Committee for the Purity of Water is a non-statutory inter-departmental committee that operates under the chairmanship of the Department in accordance with its terms of reference and provides advice to the Ministers for Health and Water on Drinking Water quality.

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## 1.0 Foreword

### 1.1 Preface

This Memorandum of Understanding (MoU) is designed to establish and maintain a strong co-operative relationship between the Licensee and the Department for managing Drinking Water quality and protecting public health.

The MoU operates within a licensing framework established by the Economic Regulation Authority in accordance with the *Water Services Licensing Act 1995*. Obligations pertaining to the MoU are set out in clause 9 of the Operating Licence.

This MoU incorporates the 'Framework' for Management of Drinking Water Quality approach set out in the "Australian Drinking Water Guidelines", and is designed to integrate all facets of the Drinking Water quality management and assurance system.

Foremost in this MoU is the reinforcement of the Department as the regulator of Drinking Water quality in the State. Consequently this MoU enables the Department to Audit the Licensee's water quality, management and reporting systems to provide assurance of ongoing satisfactory performance.

Both the Department and the Licensee recognise that the practices and processes used to establish and maintain high levels of Drinking Water quality need to be open and transparent to the community. Both organisations commit to ensure that performance will be reported in a timely manner and is open to public scrutiny.

The "Guidelines for Drinking-Water Quality" published by the World Health Organization and the "Australian Drinking Water Guidelines" identify catchment management and source protection as key elements of a multi barrier approach to ensure safe Drinking Water. Both agencies are committed to maintain and improve these primary barriers.

Both parties are committed to implementing the "Australian Drinking Water Guidelines".

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## 1.2 Design of the MoU

This Memorandum of Understanding is modelled, as far as possible, to reflect the twelve elements of the Framework for Management of Drinking Water Quality contained within the Guidelines.

In addition this MoU incorporates and makes reference to:

- Schedules – documents prepared by the Department for general publication and application within the water industry.
- Binding Protocols – documents developed by both the Department and Licensee for detailing processes and procedures to be followed for prescribed events. These documents may not necessarily be publicly available as they may contain operationally sensitive details; and
- Water Quality Management Processes and Procedures - documents prepared by the Licensee to assure Drinking Water quality which are not publicly available as they may contain operational specific details.

## 1.3 Parts of the MoU

The Text, Schedules and Binding Protocols are identified in the Table of Contents of this MoU and are also identifiable by the information in the header of each page. The Water Quality Management Processes and Procedures that have been agreed by the parties are listed in Binding Protocol 2.

## 2.0 Interpretation

In this Memorandum of Understanding:

Assessable Water Sample means	A Water Sample taken for performance monitoring that is used to measure water quality performance in accordance with agreed and routine monitoring regimes.
Audit means	An audit by the Department as described in section 14 of this Memorandum.
Authority means	Economic Regulation Authority
Chief Executive Officer means	For each party, the person whose signature, name and title is recorded in section 19 of this Memorandum.
Department means	Department of Health
Drinking Water means	Water intended primarily for human consumption but which has other domestic uses.
Drinking Water Quality Policy means	A document that expressed the Licensee's commitment to the management of Drinking Water quality and that has been prepared in accordance with the principles and objectives of section 3.1.1 of the Guidelines.
Events (or Notifiable events)	Has the same meaning as in <u>Binding Protocol 4 - Exception Protocol</u> .
Executive Director Public Health	Has the same meaning as in the <i>Health Act</i> 1911.
Guidelines means	"Australian Drinking Water Guidelines" published by the National Health and Medical Research Council and Natural Resources Management Ministerial Council, Canberra 2004.
Hazard	Has the same meaning as in section 3.2.3 and the glossary of the Guidelines, viz: a biological, chemical, physical or radiological agent that has the potential to cause harm.

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Hazardous event	Has the same meaning as in section 3.2.3 and the glossary of the Guidelines, viz an incident or situation that can lead to the presence of a Hazard.
Licensee means	Busselton Water Board, trading as Busselton Water
MoU means	Memorandum of Understanding
NATA means	National Association of Testing Authorities Australia, ACN 004 379 748
Operating Licence means	A licence granted for the purpose of Section 18 of the <i>Water Services Licensing Act 1995</i> .
PSC 88 means	Public Sector Circular 88 "Use of Herbicides in Water Catchment Areas", endorsed by the Department on 29 August 2006
Responsible Officer means	For each party, the person whose name and title is recorded in <u>Binding Protocol 1 – Responsible Officers</u> of this MoU.
Schedule means	The schedule of schedules which are appended to and form part of this MoU
Water Catchment Area	Has the same meaning as in PSC 88.
Water Quality Management Processes and Procedures	Are documents prepared by the Licensee to assure drinking water quality, that identify risks to the quality of the water and risks that may be posed by the quality of the water, assess those risks and set out steps to manage those risks (including the development and implementation of preventative strategies).

Other terms have the same meaning as in the Operating Licence for this licensee, unless the context indicates otherwise

### **3.0 Commitment to Drinking Water Quality**

The Licensee and Department are committed to ensuring the Drinking Water supplied by the Licensee is safe now and into the future. To facilitate this both parties will:

#### **3.1 Resource the MoU**

The Licensee and Department agree to provide adequate resources to meet their respective obligations under this MoU.

#### **3.2 Identify Responsible Officers**

The Licensee and Department shall each identify a Responsible Officer within their organisation who will be responsible for monitoring, facilitating and reporting to their relevant Chief Executive Officer in relation to this MoU. Binding Protocol 1 – Responsible Officers identifies the Responsible Officers for the Licensee and Department.

#### **3.3 Recognise and Support the Advisory Committee for the Purity of Water**

The Licensee and the Department recognise and are committed to the ongoing work of The Advisory Committee for the Purity of Water.

#### **3.4 Develop and Improve Drinking Water Quality Regulation**

The Department and Licensee will work cooperatively to develop and improve health based Drinking Water regulation that is relevant to the business of the Licensee.

#### **3.5 Work to Protect Drinking Water Catchment Areas**

The Department and Licensee will cooperate with each other and other key stakeholders in areas of mutual interest to ensure adequate consideration is given to protect sources of Drinking Water.

#### **3.6 Minimising Risks from Pesticides**

The Department and Licensee are committed to the protection of Drinking Water from pesticides and will continue to co-operate and encourage involvement of key stakeholders to minimise the risk of contamination of Drinking Water by pesticides.

#### **3.7 Employee Awareness and Training**

The Licensee shall ensure that employees and contractors involved in the treatment of Drinking Water for or on behalf of the Licensee are appropriately trained, experienced and competent.

### **4.0 Administration of Drinking Water Quality**

The processes for adopting, amending, implementing Drinking Water quality processes, procedures and requirements are as follows:

**4.1 Drinking Water Quality Policy**

If the Licensee has not developed a Drinking Water Quality Policy prior to signing this MoU, the Licensee shall develop a Drinking Water Quality Policy that is satisfactory to the Department within three months of signing this MoU.

**4.2 Current Drinking Water Quality Requirements**

The Department's Drinking Water quality requirements are set out in Schedule 1 – Drinking Water Quality Requirements.

**4.3 Variations to Drinking Water Quality Requirements**

The Department may vary the requirements set out in Schedule 1 – Drinking Water Quality Requirements in specific circumstances or for identified supplies, provided the proposed variation does not compromise public health and the Department has given the Licensee adequate notice and reason. The Department may specify the period of time during which the variation is to apply. Variations are set out in Schedule 2 – Variations.

**4.4 Additional Drinking Water Quality Requirements**

The Department may set additional drinking water quality requirements for the Licensee to comply with, or make interpretations where the Guidelines are considered to lack relevant specificity. The Department shall consult the Licensee and the Advisory Committee for the Purity of Water before taking such action.

**4.5 Exemptions**

The Department may grant exemptions from requirements set out in Schedule 1 – Drinking Water Quality Requirements, provided the proposed exemption does not compromise public health. In granting an exemption, the Department may specify the period of time during which the exemption is to apply. Exemptions are set out in Schedule 3 – Exemptions.

**4.6 Schedules to the MoU**

The Department in consultation with the Licensee and other members of the water industry may develop schedules to this MoU. The Schedules are intended to provide supporting guidance information to this MoU and for other Drinking Water quality requirements.

**4.7 Ministerial Approval to vary Standard Quality Specifications**

Drinking Water Variations, additional requirements or exemptions that are specified under clauses 4.3, 4.4 or 4.5 have no effect until approved by the Minister for Health or delegate.

**4.8 Licensee Water Quality Obligation**

The Licensee shall ensure that the Drinking Water that it supplies to another person complies with the Department's requirements as set out in Schedule 1, or any variation granted in accordance with clause 4.3 or additional requirement that may be set under clause 4.4, as the case may be, except in accordance with an exemption granted under clause 4.5.

## **5.0 Other Forms of Water Supply**

### **5.1 Licensee to Notify the Department**

The Licensee shall notify the Department if the Licensee provides a water service that is not intended for drinking.

### **5.2 Licensee's obligations if it provides a water service that is not intended for drinking**

If the Licensee provides a water service that is not intended for drinking, the Licensee shall, in relation to the water that is supplied by the Licensee:

- Advise customers receiving that service that the water is not to be used for drinking or food preparation;
- Advise customers to notify tenants or guests at that property that the water is not to be used for drinking or food preparation;
- Provide customers with an annual written reminder that the water is not to be used for drinking or food preparation;
- Ensure that, if the Licensee provides the water service via a standpipe or to any public open space or area accessible to the general public that the Licensee manages, the water service is to be clearly labelled as not suitable for drinking.

### **5.3 Services by Agreement**

The Licensee shall, in any service by agreement arrangement that it enters pertaining to the supply of water by the Licensee, ensure that the service by agreement arrangement clearly identifies whether the water to be supplied under that agreement is intended for drinking or is not intended for drinking.

## **6.0 Systems Analysis and Management**

The Licensee and Department shall maintain and apply an effective system to assure Drinking Water quality in accordance with the Guidelines. To facilitate this, the Licensee and the Department, as the case may be, shall:

### **6.1 Water Quality Management Processes and Procedures**

In consultation with the Department, the Licensee shall develop, implement, maintain and review Water Quality Management Processes and Procedures. Water Quality Management Processes and Procedures that have been endorsed by the Department are listed in Binding Protocol 2 – Water Quality Management Processes and Procedures.

### **6.2 Risk Management to Cover Entire Catchment to Tap Delivery Chain**

The Licensee shall ensure that the Water Quality Management Processes and Procedures adequately consider risks, Hazards and Hazardous Events that may affect water that the Licensee receives from another person as part of the water's catchment to tap delivery chain, as well as any risks, Hazards and Hazardous Events that may affect water in its own supply systems.



### **6.3 Adequacy of Risk Management**

The Licensee shall implement its duty of care to ensure that effective barriers are maintained to prevent the potential for entry or transmission of micro-organisms throughout the drinking water supply. The parties agree chlorine provides the most lasting and effective protection from treatment plant to the customer's tap.

In consequence of the Licensee's decision in February 2010 to introduce full-time chlorination and because of its vital role as an effective barrier to prevent the potential for entry or transmission of harmful microorganisms in the drinking water supply, the parties agree to the expeditious implementation of the Licensee's adopted chlorination program.

### **6.4 Source Protection**

The Licensee and the Department recognise their roles in source protection and will identify Hazards and assess risks where required to ensure the safety of public water supplies. Where risks are identified within catchments, the Licensee and Department shall respond to avoid, minimise or manage the risks.

### **6.5 Acknowledge Drinking Water Source Protection Plan**

The Licensee shall work co-operatively with the Department in accordance with any Drinking Water Source Protection Plan endorsed by the Department of Water that is relevant to the Licensee's water supply system.

### **6.6 Water Quality Monitoring Plan**

In consultation with the Department the Licensee shall develop, maintain and implement a drinking quality water monitoring plan that includes a program for taking and analysing water samples.

### **6.7 Water Analysis**

The Licensee shall ensure that each Assessable Water Sample is submitted to an analytical laboratory that is accredited by NATA, and is analysed by that laboratory to determine whether the water sample complies with the requirements set out in this MoU, unless the Licensee has established an alternative arrangement for analysis of Assessable Water Samples that is set out in a written agreement with the Department, in which case the Licensee shall comply with the alternative arrangement so agreed.

## **7.0 Materials and Chemicals**

### **7.1 Materials in Contact with Water**

The Licensee shall only use materials in contact with Drinking Water that have been approved either under Australian Standard AS/NZS 4020:2005 – Testing of produces for use in contact with Drinking Water or by the Department or have been identified by the Department as not requiring approval. Please note that:

- Materials approved for Drinking Water applications are listed in Schedule 5 - Approved Materials
- Materials that do not require approval are listed in Schedule 6 - Materials Assessed - Not Requiring Approval (Subject to Condition).

## **7.2 Chemicals Approved for Addition to Drinking Water.**

The Licensee shall only add chemicals to Drinking Water that have been approved for use by the Department. Chemicals that have been approved for addition to Drinking Water are listed in Schedule 7 - Chemicals Approved for Addition to Drinking Water.

## **7.3 Chemicals Used to Maintain Water Treatment and Distribution Systems.**

The Licensee shall only use chemicals to maintain Drinking Water treatment and distribution systems that have been approved by the Department. The Department may specify operational procedures to be followed to ensure that Drinking Water contamination does not occur. Approved chemicals and operational procedures are listed in Schedule 8 - Chemicals and Procedures used to maintain water treatment and distribution systems.

## **7.4 Chemicals and Materials Used in Drinking Water Catchment Areas.**

The Licensee shall ensure that chemicals applied to and used within catchment areas by the Licensee for purposes other than direct improvement of water quality have been approved by the Department. The Department may specify operational procedures to be followed to ensure that Drinking Water contamination does not occur. Approved chemicals and procedures are listed in Schedule 9 Chemicals and Materials Used in Catchment Areas.

## **7.5 Use of Herbicides in Water Catchment Areas**

The Licensee shall not use herbicides in Water Catchment Areas except in accordance with the provisions of Schedule 4 - PSC 88 "Use of Herbicides in Water Catchment Areas".

## **7.6 References to Licensee includes to its Contractors**

The Licensee shall ensure that contractors working for or under contract to the Licensee also comply with the obligations on the Licensee set out in section 7 of this MoU.

## **8.0 Data Exchange**

### **8.1 Licensee Data**

The Licensee shall make available statistically valid results to the Department of its water-sampling program in a format and with a frequency agreed jointly between the Department and the Licensee. The Licensee will also provide the Department with access to the full results of its water sampling program if and when required by the Department.

## **8.2 Department Data**

The Department shall provide the Licensee with reports and studies it undertakes which are relevant to those activities of the Licensee which impact on public health.

## **8.3 Special Investigations**

The Licensee shall provide the Department with access to reports and studies undertaken by the Licensee as part of its business which are relevant to public health.

## **8.4 Information Exchange**

Each party will provide to the other party a program of their respective public health related research and development activities associated with the provision of water services. Either party may place confidentiality constraints on the information and data that it provides, where doing so does not compromise public health.

## **8.5 Water Quality Committee Meetings**

The Licensee and Department agree to meet quarterly in Busselton to review and analyse water quality data and issues relevant to the quality of Drinking Water supplied by the Licensee. The Licensee shall maintain a Water Quality Committee as the forum within which such meetings shall occur.

## **8.6 Reporting Formats**

The Department and Licensee shall, within six months of signing this MoU, establish a standard reporting format for data required to be reported to the Department.

## **9.0 Events of Public Health Significance**

### **9.1 Framework**

From time to time it may be necessary for the Licensee to notify the Department of events that may have a potential to affect public health. The joint response to the event will depend upon its nature and the potential risk to public health.

There are three levels of response to events that affect the safety of Drinking Water:

- Activation of the Emergency Co-ordination Plan (ECP)
  - high level public health impact, immediate public notification required.
- Events Level 1
  - medium level public health impact with potential to require public notification and activation of the ECP
- Events Level 2
  - low level public health impact requiring exception notification.

## **9.2 Notifiable Events**

Notifiable events and the corresponding response protocols are described in Binding Protocol 3 – Emergency Co-ordination Plan and Binding Protocol 4 - Provider Exception Protocol.

## **9.3 Licensee to Report**

The Licensee shall report to the Department any event within or likely to affect its own water supply systems, schemes or assets operated under contract which may have implications for public health in accordance with Binding Protocol 4 - Water Provider Exception Protocol.

## **9.4 Department to Respond**

The Department will provide a 24 hour point of contact for the reporting of any such events, in order that the Executive Director Public Health of the Department, or his or her nominee, can determine whether any action should be taken in accordance with Binding Protocol 4 - Water Provider Exception Protocol.

## **9.5 Maintenance of Incident Response Plans**

The Licensee and Department agree to jointly maintain and review incident response plans for the Licensee's Drinking Water supply systems.

## **9.6 Incident Response Plan Training and Exercises**

The Licensee and Department agree to jointly undertake reasonable levels of staff training for incident response plans and to conduct joint exercises.

## **10.0 Public Health Necessity**

### **10.1 Determination of an Event as a Risk to Public Health**

The Licensee may request the Executive Director Public Health of the Department to determine whether an event constitutes a risk to public health.

### **10.2 Declaration of an Emergency or Necessity**

The Executive Director Public Health of the Department may, pursuant to Section 15 of the *Health Act* 1911, declare an event that constitutes a risk to public health as an emergency or necessity, and require immediate preventative or remedial action to be taken.

### **10.3 Declaration of Water to be Not Fit for Human Consumption**

The Executive Director Public Health may declare water to be not fit for human consumption and specify methods of treatment or alternative sources of supply. On occasions where such power is exercised, the Executive Director Public Health will advise the Licensee of the reasons for this declaration as soon as is reasonably possible. The Executive Director Public Health shall rescind such declarations promptly when no longer necessary.

#### **10.4 Communication**

The communication protocols outlined in Binding Protocol 4 - Water Provider Exception Protocol for Events Level 1 shall be used.

### **11.0 Public Education and Information**

#### **11.1 Public Education**

The Department and Licensee may develop public education programs relating to Drinking Water quality, recognising that the Licensee has other obligations of this nature under its Operating Licence.

#### **11.2 Licensee Annual Drinking Water Quality Report**

The Licensee shall prepare a report for the Department, in respect of each financial year, that lists Drinking Water quality testing conducted and their results in a format agreed to between the Department and the Licensee, as well as information demonstrating performance under this MoU.

#### **11.3 Timing of Annual Drinking Water Quality Report**

The Department shall advise the Licensee of the date by which the Licensee must submit the annual Drinking Water quality report prepared under clause 11.2 to the Department for endorsement. The Department must ensure that the date so specified provides the Licensee with a reasonable amount of time in which to compile the report and is, in any event, not earlier than 31 October.

#### **11.4 Licensee Annual Drinking Water Quality Report to be made Public**

The Licensee shall publish its annual water quality report for the Department within ten days of the report being endorsed by the Department.

#### **11.5 Department Annual Drinking Water Quality Report**

The Department may collate and publish an annual Drinking Water quality report incorporating data from the Licensee and other providers of Drinking Water.

### **12.0 Implementing the Guidelines**

#### **12.1 Background**

The Guidelines incorporate an integrated quality assurance framework that is designed to manage Drinking Water quality from catchment to tap. This approach is significantly different to previous management structures and will require the adoption of a multi agency continual improvement system.

#### **12.2 Implementation of Framework**

The Department and Licensee shall work cooperatively with other stakeholders to implement the Framework for Management of Drinking Water Quality, set out in the Guidelines, during the period of this MoU.

## **13.0 Emerging Issues**

### **13.1 Monitoring and Response**

The Department and Licensee shall monitor and discuss emerging issues relevant to the quality of Drinking Water supplied by the Licensee that are currently not addressed by the Guidelines or this MoU, and that may be of public health significance.

## **14.0 Audit**

### **14.1 As Auditor**

The purposes of an Audit under this MoU is to determine whether the Licensee has, during the Audit period, complied with the obligations imposed by the following sections of this MoU

- 4.0 Administration of Drinking Water Quality.
- 6.0 Systems Analysis and Management
- 7.0 Materials and Chemicals
- 8.0 Data exchange
- 9.0 Events of public health significance

For the avoidance of doubt, the Audit under this MoU is not the operational Audit referred to in clause 16 of the Operating Licence.

### **14.2 Department May Require Audit**

The Executive Director Public Health may, by written notice given to the Licensee, require the Licensee to be Audited in accordance with the purpose set out in clause 14.1 of this memorandum in respect of a specified Audit period by the completion date specified in the notice.

### **14.3 Audit Timetable**

The Audit period and completion date will be determined by the Department in consultation with the Licensee, noting that the Operating Licence requires an Audit at least once every three years, and noting also that Audits will normally not be conducted more frequently than annually.

### **14.4 Audit may only be Conducted by an Approved Person**

The Audit may only be conducted by suitably qualified and experienced persons approved by the Department as an Auditor for this purpose.

### **14.5 Department to Maintain a List of Suitable Auditors**

The Department shall provide a list of no fewer than three Auditors suitable for use by the Licensee in procurement of Auditing services. The Department may, or on request of the Licensee shall, nominate an Auditor for this purpose.

#### **14.6 Audit Report Preparation**

The Department shall ensure that, after conducting the Audit, the Auditor prepares an Audit report that states the Auditor's opinion on whether the Licensee complied with the obligations set out in clause 14.1. The report must satisfy the definition of "Audit report" set out in the Operating Licence and must, if applicable, include recommendations for improvements and any other information that substantiates the Auditor's opinion.

#### **14.7 Licensee May Review Draft of the Audit Report**

The Department shall ensure that the Auditor provides the Licensee a reasonable opportunity to review a draft of the audit report.

#### **14.8 Audit Report to the Licensee**

The Department shall provide a copy of the Audit report to the Licensee within one week of the completion of the Audit.

#### **14.9 Audit Outcome**

The Department and Licensee will discuss the findings of the Audit within one month of the Department providing the Audit report to the Licensee and will establish a timetable for improvements.

#### **14.10 Audit Report to the Authority**

The Licensee must provide a copy of the Audit report to the Authority within one month of receiving the Audit report from the Department.

#### **14.11 Audit Cost**

The cost of the Audit shall be borne by the Licensee.

### **15.0 Role of the Department of Health**

#### **15.1 Role**

The Department's roles are to:

- minimise human exposure to environmental health Hazards that pose or have the potential to pose a health risk;
- reduce the incidence and impact of communicable disease.

#### **15.2 As Regulator**

The Department is the Regulator of Drinking Water quality and sets out its requirements to the Authority for incorporation into the Operating Licence.

#### **15.3 As Adviser to the Licensee**

The Department may provide advice to the Licensee on issues related to the supply and quality of water from source to tap.

#### **15.4 As Adviser to the Public**

In consultation with the Licensee, the Department will provide prompt advice to the public, including media, with respect to health-related or scientific issues related to the supply and quality of Drinking Water, albeit this does not



preclude the Licensee from providing its own advice to the public, including media, with respect to water quality issues.

**15.5 As Auditor**

The Department may Audit the Licensee to determine whether the Licensee has complied with the obligations imposed by this MoU.

**15.6 As Notifier to Health Care Providers**

In consultation with the Licensee the Department will notify health care providers of issues pertaining to the quality of Drinking Water that may affect the public.

**16.0 Review and Amendment**

**16.1 Expiry**

The term of this Memorandum shall be as mutually agreed, the 30<sup>th</sup> June 2017.

**16.2 Review and Renewal of MoU**

The Chief Executive Officers shall ensure that this Memorandum is reviewed and renewed not less than once every three years and that any such review commences at least six months prior to the expiry of the term set under clause 16.1.

**16.3 Amendment of MoU**

The Chief Executive Officers may amend this Memorandum at any time upon agreement provided that any amendment is consistent with clause 9 of the Operating Licence.

**16.4 Amendment of Binding Protocols and Schedules upon Agreement**

The Responsible Officers may amend the Binding Protocols and Schedules at any time upon agreement, provided the objective of the amendment is consistent with the protection of public health and provided that any amendment is consistent with clause 9 of the Operating Licence.

**16.5 Department may Add Chemicals or Products to Schedules 5 to 9**

The Department may add products to Schedules 5, 6, 8 or 9 or chemicals to Schedule 7 from time to time and, if it does so, the Department shall promptly advise the Licensee of the nature of any such addition to the Schedule.

**17.0 Licensing Framework**

**17.1 MoU is Legally Binding**

This MoU is executed pursuant to the Licensee's Operating Licence and is legally binding between the Department and Licensee.



**17.2 Provision of Complete Copy of MoU to the Authority**

The Licensee shall provide a complete copy of this MoU to the Authority within one month of entering into the MoU.

**17.3 Provision of Amendments to the MoU to the Authority**

The Licensee shall provide any amendments to this MoU to the Authority within one month of entering into any amendments to the MoU.

**18.0 Dispute Resolution**

**18.1 Parties may Provide Written Notice**

Either party may elect to have any dispute raised in respect to this agreement resolved by providing written notice. Disputes arising during the performance of this agreement will be resolved, wherever possible, at the level where the dispute initially arises and without the need for such notice.

**18.2 Parties may refer Dispute to their Chief Executive Officer**

Where a dispute between the parties cannot be resolved by the Responsible Officers, then either party may refer the dispute to their respective Chief Executive Officer for resolution.

## 19.0 Endorsements

Signed



**Dr D Russell-Weisz  
A/DIRECTOR GENERAL  
DEPARTMENT OF HEALTH**

Signed



**Keith White  
CHIEF EXECUTIVE OFFICER  
BUSSELTON WATER**

Date: 3/10/2011

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# SCHEDULES

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## Schedule 1 - Drinking Water Quality Requirements

### Health-related characteristics of drinking water

Drinking water supplied by the Licensee to another person must comply with the following criteria:

With respect to *Escherichia coli*.

- no sample of drinking water should contain *Escherichia coli*; and
- at least 98% of all assessable water samples collected in any 12 month period in each locality supplied by the Licensee shall contain no *Escherichia coli* per 100 millilitres of drinking water.

With respect to *Naegleria* species:

- no sample of drinking water should contain any *Naegleria* species tolerant to 42° Celsius and above; and
- at least 95% of all assessable water samples collected in any 12 month period in each locality supplied by the Licensee shall contain no *Naegleria* species tolerant to 42° Celsius and above.

With respect to chemicals other than pesticides:

- the Health guideline values for chemicals set out in Table 10.10 of the Guidelines.

With respect to pesticides:

- the Health value for pesticides set out in Table 10.11 of the Guidelines.

With respect to radiological quality of drinking water:

- the guideline value for radiological quality set out in Table 10.12 of the Guidelines.

### Aesthetic characteristics of drinking water

The Licensee should aim to supply drinking water in each locality that complies, as far as practicable, with the Aesthetic guideline values for physical and chemical characteristics set out in Table 10.10 of the Guidelines. However, bearing in mind the high levels of public expenditure which would be required to achieve compliance in respect of some small water supplies, it is accepted that achievement of this aim may take many years.

### Framework for Management of Drinking Water Quality

The Department expects the Licensee to implement the Framework for Management of Drinking Water Quality as set out in the Guidelines. The Department has not set a time period for full implementation as it is considered that this work is ongoing.

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**Schedule 2 –Variations**

The following schedule lists variations that have been granted in accordance with clause 4.3 and clause 4.7 of this MoU.

LOCALITY	NATURE OF VARIATION	TIME PERIOD

(The above Schedule is blank)

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**Schedule 3 – Exemptions**

The following schedule lists exemptions that have been granted in accordance with clause 4.5 and clause 4.7 of this MoU.

LOCALITY	NATURE OF EXEMPTION	TIME PERIOD

(The above Schedule is blank)



## Materials and Substances in Contact with Drinking Water

### Introduction

Materials, products and substances used to collect, contain, control or treat water may also contaminate drinking water. The “*Australian Drinking Water Guidelines*”<sup>1</sup> encourages the protection of drinking water from catchment to consumer. One of the important factors influencing the quality of drinking water provided to consumers is the effect of various materials and substances that may come into contact with the drinking water as it is collected and supplied throughout the distribution system.

The Department of Health (Western Australia) only supports the use of any material, product or substance in contact with drinking water if it has been approved for its intended purpose.

Schedules have been created for the following specific purposes:

### Schedule 4 – Chemicals and Materials Assessed – Not Approved

Schedule 4 lists chemicals, products and materials that have been presented to the Department of Health and have not been approved for use in association with any drinking water application in Western Australia.

### Schedule 5 – Approved Materials

Schedule 5 lists products (linings, paints, resins etc) compliant to Australian Standard ‘AS/NZS 4020:2005 *Testing of products for use in contact with drinking water*’ that have been examined and approved by the Department of Health for drinking water applications.

### Schedule 6 – Materials Assessed – Not Requiring Approval (Subject to Condition)

Schedule 6 lists products that have been presented to and noted by the Department of Health but do not require approval as they are either to be removed before drinking water is produced, or used in accordance with the restrictions or comments stated therein.

### Schedule 7 – Chemicals Approved for Addition to Drinking Water

Schedule 7 lists chemicals either accepted or approved by the Department of Health for addition to drinking water in Western Australia.

This Schedule makes direct reference to Chapter 8 of the “*Australian Drinking Water Guidelines*”, which provides further information about quality assurance, monitoring and analytical advice and assessing levels of contaminants in chemicals used for drinking water treatment.

**Water treatment chemicals not listed in Schedule 7 must be approved by the Department of Health WA before use with drinking water in Western Australia.**

## **Schedule 8 – Chemicals and Procedures used to Maintain Water Treatment and Distribution Systems**

Schedule 8 lists chemicals and products used to maintain water treatment and distribution systems that have been approved by the Department of Health for addition to drinking water.

## **Schedule 9 – Chemicals and Materials used in Drinking Water Catchment Areas**

Schedule 9 lists products that have been assessed and approved by the Department of Health for use in water catchment areas in Western Australia.

## **Schedule 10 - Fire Suppressants and Fire Retardants used in Drinking Water Catchment Areas**

Schedule 10 lists products that are currently used in firefighting operations by the Fire Services Management Branch of the Western Australian Department of Parks and Wildlife (DPAW). These products have not been formally assessed for approval by the Department of Health as they are used in emergency situations in localised applications, pursuant to DPAW guidelines.

## **Applying for Approval to Use a Substance or Material in Contact with Drinking Water**

Materials, substances and chemicals that are compliant with Australian Standard AS/NZS 4020:2005 or Chapter 8 of the “*Australian Drinking Water Guidelines*” may be used in contact with or to treat drinking water in Western Australia without applying to the Department of Health WA. The Department of Health should be notified prior to use.

Where approval is necessary, applicants are encouraged to seek Australian Standard endorsement of their product before applying to the Department of Health, via the Australian Water Quality Centre, Victoria Square, Adelaide, phone 1300 653366. The Department of Health WA will assess individual products for use in Western Australia only where a separate accreditation process has not been or can not be applied.

For more information about other products that may come into contact with drinking water, such as fertilisers, herbicides, pesticides and specialised chemicals for non-potable uses such as industrial boilers and air-conditioning units, please contact the Water Unit of the Department of Health WA<sup>3</sup> or refer to:

[http://ww2.health.wa.gov.au/Articles/A\\_E/Drinking-water-catchment-management](http://ww2.health.wa.gov.au/Articles/A_E/Drinking-water-catchment-management)

<sup>1</sup> NHMRC, NRMCC (2011) “*Australian Drinking Water Guidelines Paper 6 National Water Quality Management Strategy*”. National Health and Medical Research Council, National Resource Management Ministerial Council, Commonwealth of Australia, Canberra, available from: [www.nhmrc.gov.au/guidelines/publications/eh52](http://www.nhmrc.gov.au/guidelines/publications/eh52)

<sup>2</sup> Contact details at: [www.awqc.com.au/awqc/](http://www.awqc.com.au/awqc/)

<sup>3</sup> Contact details at the end of this Fact Sheet.

## Use of Herbicides in Water Catchment Areas

Delivering a **Healthy WA**



# CIRCULAR NO: PSC 88

SUBJECT : USE OF HERBICIDES IN WATER CATCHMENT AREAS

### Purpose

PSC 88 is for the purpose of protecting surface and ground water sources that are used as sources of water for human consumption from contamination by herbicides. The document is a best practice policy statement that applies to all government departments and their contractors.

### Definitions

The term "Water Catchment Area" refers to:

- (a) proclaimed public drinking water source areas (i.e. water reserves, catchment areas and underground water pollution control areas proclaimed under the *Country Areas Water Supply Act 1947* or *Metropolitan Water Supply, Sewerage and Drainage Act 1909*), and
- (b) reserves vested for the purpose of water supply; and
- (c) any other area that is designated by licensed water service providers and the Department of Water and confirmed by the Executive Director, Public Health

"Blanket Area Spraying" means the application of herbicide by boom sprayer, aircraft, misting machines, and like apparatus capable of treating a wide swath at one pass and these swaths being matched by continuous passes.

1. Other than with the expressed written approval of the Executive Director, Public Health, the only herbicides that may be used in water catchment areas are:

2,4-D	amitrole
fluazifop-p-butyl	glyphosate
hexazinone*	triclopyr
metsulfuron methyl - <b>only</b> when used for hand/spot spraying of weeds (eg blackberry and cape tulip)	

\*(hexazinone can affect native vegetation and therefore should be used with care or advice sought from the Department of Environment where sensitive native plants are present.)



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2. These herbicides may only be used when no other means are suitable for the control of weeds.
3. 2,4-D may only be used when the weeds are resistant to the other specified herbicides or when other chemicals are not sufficiently selective.
4. The specified herbicides may be used against declared plants and other undesired weeds on water catchments and water channels or in the vicinity of reservoirs provided timings, techniques and precautions ensure there is no spray drift or early run off from treated areas likely to contaminate reservoirs, rivers or streams. All applications must be under the supervision of a person experienced in the use of herbicides.
5. Application is to be limited to injection techniques or direct spraying of individual weeds or clumps of weeds by apparatus producing a coarse or large droplet spray. Other than with the expressed written approval of the Executive Director, Public Health, blanket area spraying is not acceptable.
6. No mixing of the herbicide is to occur within 50 metres of reservoirs, rivers or streams. Except with the written permission of the Executive Director, Public Health, no application is to be made within 20 metres of reservoirs or rivers and streams when flowing. Application may be made within 20 metres of dry river and stream beds during the summer months.
7. Empty containers and all equipment to be removed from the catchment area before washing and disposal.
8. Other than with the expressed written approval of the Executive Director, Public Health, any unused herbicide is to be removed from the catchment area and no other herbicide except for immediate requirements is to be stored there.
9. Rates of application, safety directions and precautions on labels of the original container of the herbicide shall be strictly adhered to.
10. Records of the amounts and dates of use of herbicides on catchments are to be retained. They may be required for investigation of incidents or complaints.

Dr M Stevens  
**Delegate of the**  
**EXECUTIVE DIRECTOR, PUBLIC HEALTH**

29 August 2006

## Schedule 4 – Chemicals and Materials Assessed - Not Approved

Schedule 4 lists chemicals, products and materials that have been presented to the Department of Health and have not been approved for use in association with any drinking water application in Western Australia.

<b>DoH REF</b>	<b>Year Assessed</b>	<b>PRODUCT</b>	<b>COMPANY</b>	<b>REASON</b>
88/809 0/14	1989	A Catt Suppressor Valve	J A Industries	Previously approved. Unable to confirm current status.
92/803 6	1992	Acothane Solvent Free Coating (brush grade)	Great Western Chemicals	Previously approved. Unable to confirm current status.
88/809 0/4	1989	Acryl 60	ICI Building Products	Previously approved. Unable to confirm current status.
88/809 0/36	1990	Anzopol 3329003	Anzol Pty Ltd	Previously approved. Unable to confirm current status.
F-AA- 39668	2016	Aqua Salveo	Drops of the Future	Could not demonstrate safety or efficacy of product. Contact DoH for details.
92/803 6/4	1993	Bostik N49 Primer (used with Seal N Flex 1)	Bostik	Previously approved. Unable to confirm current status.
88/809 0	1984	Butynol	Shelter Engineering Pty Ltd	Previously approved. Unable to confirm current status.
88/809 0/24	1990	Calcure Type D	Cementaid Pty Ltd	Did not complete assessment
88/809 0/24	1990	Calform NX	Cementaid Pty Ltd	Did not complete assessment
88/809 0/24	1990	Calstrip	Cementaid Pty Ltd	Did not complete assessment
88/809 0/24	1990	Caltite	Cementaid Pty Ltd	Did not complete assessment
88/809 0	1986	Carboline 191 4B Topcoat	Vessey Chemicals (WA) Pty Ltd	Previously approved. Unable to confirm current status.
88/809 0	1986	Carboline 191 Primer	Vessey Chemicals (WA) Pty Ltd	Previously approved. Unable to confirm current status.
92/803 6/14	1990	Chesterton 855 Abrasion Control Liquid	John Venables	Previously approved. Unable to confirm current status.
92/803 6/14	1994	Chesterton ARC SC2 Abrasion Control Fluid	John Venables	Previously approved. Unable to confirm current status.



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<b>DoH REF</b>	<b>Year Assessed</b>	<b>PRODUCT</b>	<b>COMPANY</b>	<b>REASON</b>
86/940	1985	Chevron Industrial Membrane	CIM Distributors	Previously approved. Unable to confirm current status.
88/8090	1985	Copon EA9	Dimet Western Australia	Previously approved. Unable to confirm current status.
-	1986	Corrocoat EP1	Corrocoat Aust Pty Ltd	Minor changes to formulation with no retesting to AS4020
88/8090/31	1992	Corroguard EP	Corroless Australia/Pics- Axlo Gp. PO Box 265 Altona VIC 3018	Previously approved. Unable to confirm current status.
88/8090/31	1992	Corroless RF35	Corroless Australia / Pics- Axlo Gp. PO Box 265 Altona VIC	Previously approved. Unable to confirm current status.
92/8036/8	1993	Cotene 9121/70A Black	Birwick march Pty Ltd	Previously approved. Unable to confirm current status.
92/8036/8		Coterie 9121/70A Black	Solco International	Previously approved. Unable to confirm current status.
86/940	1986	Crystic 491	Monsanto Australia	Previously approved. Unable to confirm current status.
88/8090/30	1990	Derbigum SP Bitumen Membrane	Derbit Australia	Previously approved. Unable to confirm current status.
90/8163	1991	Dow Corning Silicone 780	Dow Corning Australia	Did not complete assessment
92/8036/13	1994	Drizoro Maxplug	Auswest Coatings	Previously approved. Unable to confirm current status.
90/8163	1991	Durapond	Duram Coating Products	Failed testing
88/8163	1991	Dyna Valve-Jumper Valve	Aplitek (Qld) Matro Labs	Previously approved. Unable to confirm current status.
90/8163	1991	Elastoseal	Crommelin Chemicals	Did not complete assessment
88/8090/13	1989	Elasto-thane 227R	ICI Building Products	Did not complete assessment
88/8090/19	1989	Emastak	Gating Pty Ltd, Barry Arnold	Previously approved. Unable to confirm current status.
86/940	1989	Ferroguard	Newcastle Chemicals	Previously approved. Unable to confirm current status.
88/8090	1986	Fluigide E	Corrocoat Australia Pty Ltd	Minor changes to formulation with no retesting to AS4020.
88/8090		Gipchem Permaflex	Gippsland Chemicals	Previously approved. Unable to confirm current status.

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<b>DoH REF</b>	<b>Year Assessed</b>	<b>PRODUCT</b>	<b>COMPANY</b>	<b>REASON</b>
88/809 0/09	1988	Glass Fibre Reinforced Polyester	FG Industries	Previously approved. Unable to confirm current status.
88/809 0/39	1991	Halar Fluoropolymer Resin	ACPS Lined Systems	Did not complete assessment
88/809 0/01	1990	HIP2835 Stabiliser	Hardie Iplex	Did not complete assessment
88/809 0	1985	Hycote 151	Underwater Technology Corp	Previously approved. Unable to confirm current status.
D-AA-15-288262	2015	Hydro 90	Sarco Stopper Ltd	No current approval equivalent to AS 4020 (BS 6920 approval expired).
92/803 6/3	1993	Hydrotite CJ 0725-3K Rubber Sealant	Parchem	Previously approved. Unable to confirm current status.
92/803 6/3	1993	Hydrotite SS 0220 Rubber sealant	Parchem	Previously approved. Unable to confirm current status.
92/803 6/9	1993	Innotech Rain Water Tanks	Innotech Site Services	Previously approved. Unable to confirm current status.
88/809 0/18	1991	Interpon HD 3005 epoxy powder coating	Taubmans Pty Ltd	Did not complete assessment
88/809 0/43	1991	Isophthalic Resin (KEM 142)	ICI Dulux Resins	Did not complete assessment
88/809 0/46	1991	Leakmaster LVI	Parchem	Previously approved. Unable to confirm current status.
90/816 3	1992	Magnaspheres (granules)	Steetley	Previously approved. Unable to confirm current status.
88/809 0	1986	Merco 219	Bestobell Engineering Products	Previously approved. Unable to confirm current status.
88/809 0/16	1989	Metallic Zinc Spray	John McCoy & Assoc	Did not complete assessment
88/809 0/45	1991	Neste 0909 polyethylene manufacture	Morris White Pty Ltd	Previously approved. Unable to confirm current status.
88/809 0/40	1991	Noverox AX/Sx	General & Technical Distributors, Balcatta WA	Previously approved. Unable to confirm current status.
88/809 0/28	1990	Nutra Rust 661	Burwood Agencies	Did not complete assessment

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<b>DoH REF</b>	<b>Year Assessed</b>	<b>PRODUCT</b>	<b>COMPANY</b>	<b>REASON</b>
88/809 0/43	1991	Orthophthalic Resin (73-2020)	ICI Dulux Resins	Did not complete assessment
88/809 0	1986	Pabkote	Pabco Products	Previously approved. Unable to confirm current status.
88/809 0/12	1989	Peratol	BTR Industrial Products Pty Ltd	Previously approved. Unable to confirm current status.
88/809 0	1987	Polyethylene Pipes	Industrial Pipe Systems	Previously approved. Unable to confirm current status.
88/809 0/22	1990	Polyethylene Resin Hostalen GM 5010	David Moss Trading Pty Ltd	Did not complete assessment
90/816 3	1991	Procure (Sprayable rubber)	Dunlop Industrial products	Did not complete assessment
86/940	1986	PU 119	Ludavici JC & Son Ltd	Previously approved. Unable to confirm current status.
86/940	1986	PU40	Ludavici JC & Son Ltd	Previously approved. Unable to confirm current status.
95- 06134	2002	PVA (bags)	Orica Chemicals	Previously approved for use in 2002 but no longer approved.
2109 th1a	2012	PVA (bags) - Plantic TFR V2019	Plantic Technologies Ltd	Previously approved for trial use in 2012 but no longer approved.
03/ 6935	2003	PV Liquid Vinyl (PV311-Top)	Industrial Coating Solutions PTY Ltd	Previously approved. Unable to confirm current status.
97/ 7042	1997	Qualipoly Isophthalic Polyester Resin K530	Qualipoly Chemical Corp. Taiwan ROC	Previously approved. Unable to confirm current status.
88/809 0/51	1992	Rafpoxy A52 High Build	Raffles Paints	Did not complete assessment
88/809 0/23	1989	RCL Polyester Resin	RCL resinous Chemicals	Failed chemical leachate testing
88/809 0/42	1991	Red Mud Plastic	J P Distributors	Did not complete assessment
88/809 0/21	1990	Secoseal 200	Expandite (Australia) Pty Ltd	Did not complete assessment
88/809 0/35	1990	Shamir Epoxy Polyester	Amiad Australia Pty Ltd	Did not complete assessment
88/809 0/37	1991	Sikaflex 1 a	Sika Australia	Previously approved. Unable to confirm current status.



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<b>DoH REF</b>	<b>Year Assessed</b>	<b>PRODUCT</b>	<b>COMPANY</b>	<b>REASON</b>
88/809 0/29	1990	Steel it coatings	Specialty Metals	Did not complete assessment
88/809 0/24	1990	Superplastet SR	Cementaid Pty Ltd	Did not complete assessment
88/809 0/06	1994	Tank lining High Build Epoxy	Courtaulds (Australia) Pty	Did not complete assessment
88/809 0/04	1989	Thoroseal	ICI Building Products	Previously approved. Unable to confirm current status.
92/803 6/10	1993	Thortex Cerami-Tech CR	Simtech Sales & Services, Carine WA	Previously approved. Unable to confirm current status.
88/809 0	1990	Turbomag Electromagnetic water treatment system	Turbomag Australia Pty Ltd	Previously approved. Unable to confirm current status.
88/809 0/02	1990	UPVC Pressure Pipe	Humes Plastics Pty Ltd	Previously approved. Unable to confirm current status.
88/809 0/15	1989	Ureseal 270	ICI Building Products	Previously approved. Unable to confirm current status.
88/809 0	1988	Waterplug	ICI Building Products	Previously approved. Unable to confirm current status.
04/721 5	2005	WR-525 Carbon Fibre Reinforced PEEK (polyaryletherketone polymer) Composite	Victrex PLC	Previously approved. Unable to confirm current status.
88/809 0/20	1992	Z bond roof and gutter silicone	Brenntag	Previously approved. Unable to confirm current status.
88/809 0/20	1992	Z bond V60 glazing silicone	Brenntag	Previously approved. Unable to confirm current status.

**Notes**

DoH                      Department of Health (Western Australia)

## Schedule 5 – Approved Materials

Schedule 5 lists products (linings, paints, resins etc) compliant to Australian Standard ‘AS/NZS 4020:2005 Testing of products for use in contact with drinking water’ that have been examined and approved by the Department of Health (Western Australia) for drinking water applications.

Any material or substance compliant to AS/NZS 4020:2005 may be used in contact with drinking water without application to the Department of Health. However, care should be taken to ensure compliance with all appendices of the Standard. (Department of Health notification is recommended).

Please note that water treatment chemicals approved for use in Western Australia are listed in [Schedule 7](#). Chemicals and products approved for use to maintain water treatment and distribution systems are listed in [Schedule 8](#).

DoH REF / WC DOC NO	Year Approved	PRODUCT	OTHER NAMES	COMPANY	REASON FOR APPROVAL	RESTRICTION OR COMMENT
7351482	2012	622 White Grease	-	Chesterton	NSF Approval - with incidental food contact	Lubricant
E-AA-13-25495	2013	Aeon PVC/ Elvaloy Tank Membrane	Replaces Nylex Potable Membrane	Innova International Pty Ltd	AS4020 Approval in 2010	In-line/tank membrane liner
99-06176 F-AA-25238	1999	Akzo Nobel Interline 876	-	Pentair Water and Environmental Systems	On file. Latest AS4020 Approval in 2010	Sealant to cement mortar lined water supply mains.
E-AA-13-25496	2013	Ameron PSX 34 adhesive	Replaces Ameron RP-34C adhesive	Wenco Pty Ltd, O'Connor, WA	NSF International listing Jan 2013	Epoxy adhesive
F-AA-13706/2	2016	<b>Anhydride Cured Epoxy Resin</b>		<b>Fiber Glass Systems NOV</b>	NFS/ANSI Standard 61 – Approval 2013	Bore Casing
EHB-02152	2009	Aquatain	-	Aquatain Products Pty Ltd	On file	Refer to DoH for conditions of approval.
D-AA-16/27542	2016	Aquatex Aqualiner	AQEF Trafab	Bartlett Tank Liners	<b>AS4020 Approval in 2001, NSF/ANSI Standard 61</b>	In-line/tank membrane liner
F-AA-25319	2013	Bactericidal Polydex Lubricant	Replaces Vinidex Jointing Lubricant	Vinidex	AS4020 Approval in 2004	Lubricant for rubber ring joints

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7746652	2012	Belzona 1111 Supermetal	Belzona Supermetal	Rezitech Services	AS4020 Approval in 2011	Coating
7746657	2012	Belzona 1341	Super Metalglide	Rezitech Services	AS4020 Approval in 2011	Coating
92-08036/5 E-AA-13-25496	1994	Bondstrand Series 2000 pipe	-	Wenco Pty Ltd, O'Connor, WA	NSF International 2013	Glass-reinforced epoxy water pipe
F-AA-25224	2013	Carboguard 690 N53 Blue/Grey and White	-	Altex Coatings Ltd	AS4020 Approval in 2009	Contact DoH for conditions of approval.
8234324	2012	Ceram-Chem RP500	-	Chemco International	AS4020 Approval in 2010	Coating
9772116	2013	Chemclad XC	-	Enecon Corporation	NSF Approval 2011	Coating
2503 th1a	2012	Chemspray 690	-	Chemind Hi-Tec Polymers	On file	Lining Material
7908322	2012	Chesterton ARC 855	ARC 885	Imatech Abrasion and	WRAS Approval 11 May 2009	Coating
7908331	2012	Chesterton ARC S2	ARC S2	Imatech Abrasion and	WRAS Approval 11 May 2009	Coating
8909748	2013	Combiflex SG	-	Sika Australia	AS4020 Approval in 2012	Sealant
92-08036 F-AA-25277	1997	Conbextra GP	-	Fosroc Expandite NSW	On file	General purpose non-shrink cementitious grout.
92-08036 F-AA-25276	1997	Concure WB30	-	Fosroc Expandite NSW	On file. Latest AS4020 Approval in 2010	Retains moisture in concrete for effective curing.

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9187636	2013	Copper Tube (20 mm diameter) QLKE-160-070-4-1-4-23-3-2-00	-	ABB Industrial Systems Pty Ltd, Luvata, Sweden	AS4020 Approval in 2013	Material of small bore cooling pipe that runs through pump motor cooler at SSDP
EHB-01509	2009	Deacon 360-FG	-	Deacon Industries Inc.	On file	Reseal packing glands of sluice valves.
EHB-01480	2009	Denso Butyl Primer & Tape	-	Denso (Australia) Pty Ltd	On file	Corrosion prevention of tank steel columns
EHB-01339	2009	Devcon Brushable Ceramic	-	ITW Polymers & Fluids	On file	Corrosion control
0a07 th1a	2010	Dupont Tank Tan EFT-602-P7	-	Dupont	On file	Adherence to NSF 61 approval conditions
7746637	2012	Duremax GPE Part A & B	General Purpose Epoxy Part A & B	Dulux Australia	AS4020 Approval in 2012	Coating
7746630	2012	Duremax GPE Water Tank Grey Part A	General Purpose Epoxy	Dulux Australia	AS4020 Approval in 2004	Coating
7746647	2012	Duribild HSE Part A & Part B	High Solids Epoxy Part A & B	Dulux Australia	AS4020 Approval in 2011	Coating
F-AA-13607	2014	Duribild HSE White Light 74463001		Dulux Australia	AS4020 Approval in 2011	Coating
D-AA-16/13301	2016	Enviroliner 6000	Enviroliner 6040	Layfield Geosynthetics & Fabrics	AS4020 Approval in 2007	Tank liner
99-06075 F-AA-25273	1999	EPDM compound 5567	-	Pentair Water and Environmental Systems	On file. Latest AS4020 Approval in 2011	Pressure seal in steel pipelines
F-AA-5273	2013	EPDM Ref FR5615	-	Stockbrands Co Pty Ltd	AS4020 Approval in 2006	Material for rubber flange gasket

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88-08090/33 F-AA-25281	1991	Epigen 1311	-	Peerless Industrial Systems	On file. Latest AS4020 Approval in 1999	Waterproof coating
9488334	2013	EpiMax 330	Solventless Epoxy Coating	Epimax Technologies	AS4020 Approval in 2011	Coating
9954677	2013	EpiMax 333AR	High Build Acid Resistant Coating	Epimax Technologies	AS4020 Approval in 2013	Coating
F-AA-13607/2	2016	EpinameI DTM985	-	Valspar Paint Pty Ltd	AS4020 Approval in 2015	Tank coating
1b21 th1a	2011	Epirez 633	-	ITW Polymers and	On file	Mortar binder
88-08090 F-AA-25355	1989	Exit Rust	-	Liquied Engineering	On file	Pre-treatment of metallic surfaces
92-08036 F-AA-25279	1997	Expandaf foam Strip	-	Parchem	On file	Joint filler in concrete
E-AA-13-25494	2013	Fibreglass Composite Laminate from Crystic VE 671 Resin	-	Summit Composites Pty Ltd	AS4020 Approval in 2009	Composite for pipes and tanks
88-08090 F-AA-25347	1986	Fibretak	-	Calmarc Chemicals	On file	Coating
7960112	2012	Flexitiff Part A & B	Polyurea Elastomer Coating Part A & B	Dulux	AS4020 Approval in 2009	Coating
EHB-03010	2011	Flexus Shotbond	-	ITW New Zealand Ltd	On file	Lining drinking water pipes. Contact DoH for conditions of approval.
88-08090 F-AA-25283	1986	Fluiglide	-	Corrocoat Australia Pty Ltd	On file. Latest AS4020 Approval in 2004	Coating
9488531	2013	Hard Rubber - General	-	ABB Australia	WRAS Approval in 2010	Internal Lining of ABB Magnetic Flowmeter

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9047955	2013	Hepadur Multi-Strength 35530	-	Sika Australia	NSF International 09/11/2011	Coating
88-08090/26 F-AA-25280	1990	Hobas, Centrifugally Cast GRP Pipes	-	Global Pipe Australia Pty	On file. Latest AS4020 Approval in 2013	Water Pipes
92-08036	1997	Hydrocell	-	Parchem	On file	Joint filler in concrete
D-AA-16/5289	2016	Hydro 90	-	Sarco Stopper Ltd	UK WRAS Approval No. 1507560	PE liner.
D-AA-27359	2016	Industratex 420	-	Bartlett Tank Liners	AS4020 Approval in 1998	PE liner.
D-AA-16/27536	2016	Industratex 650	-	Bartlett Tank Liners	AS4020 Approval in 1998	PE liner.
10776872 F-AA-13607	2014	Intercrete 4841	Cementitious Coating 851 (UK)	AkzoNobel	AS4020 Approval by NSF-WRc 05/12/2013	Coating
10703719 F-AA-13607	2014	Intercrete 4842	Cemprotec Elastic (UK)	AkzoNobel	AS4020 Approval by NSF-WRc 05/03/2014	Coating
10776890 F-AA-13607	2014	Intercrete 4872	Cemprotec 2000-S (UK)	AkzoNobel	AS4020 Approval by NSF-WRc 05/12/2013	Tape
7746652	2012	Interline 850 White	TLA850/ TLA856	AkzoNobel	AS4020 Approval in 2010	Coating
7746647	2012	Interline 921	THA921/ THA922	AkzoNobel	AS4020 Approval in 2012	Coating
88-08090/27 F-AA-25238	1990	Interline 925	THA125	International Paint	On file. Latest AS4020 Approval in 2011	Coating. Adherence to manufacturer's conditions
7746657	2012	Interline 975	THA975/ THA973	AkzoNobel	AS4020 Approval in 2012	Coating

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1c20 th1a	2011	Interline 975 Part A & B	-	International Paint	On file	In-line and tank liner
7746630	2012	International Paint Intercrete 4802	Intercrete 4802	AkzoNobel	Has UK approvals	Cement
7604378	2012	Jotacote 605	-	Jotun Australia	AS4020 Approval in 2010	Coating
7604432	2012	Jotacote UHB	-	Jotun Australia	AS4020 Approval in 2006	Coating
7351470	2012	Lanotec Type A Grease	-	Lanotec	AS4020 Approval in 2011 (excepting taste)	Lubricant
00-06180 F-AA-25362	2001	MIEX DOC Resin	-	Orica	On file. Latest NSF International 2011	Water treatment system
7784068	2012	MP & M Mortar	-	Concrete Waterproofing Manufacturing	AS4020 Approval in 2012	Mortar
10449169 F-AA-13607	2014	MX3 FG		Inox	NSF Approval - 22/09/2011. Incidental Food Contact	Lubricant
92-08036 F-AA-25275	1997	Nitocote EP405	-	Parchem	On file. Latest AS4020 Approval in 2008	Lining and water-proofing of tanks
F-AA-13607	2016	Novatex SQ-S Gasket	Inertex SQ-S Expanded PTFE Gasket Sheet	Novus Sealing	NSF/ANSI Standard 61 approval.	Gaslet/sealing material
EHB-03010	2011	Nukote ST Polyurea	-	Nukote Distribution s Pty Ltd	On file	Liner in potable water tanks. Contact DoH for conditions of approval.
7746637	2012	Polibrid 700 A-E	Polibrid	AkzoNobel	AS4020 Approval in 2012	Coating



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9524089	2013	Polyeuro 5502F	-	Australian Urethane Systems	AS4020 Approval in 2008 - being retested	Coating
88-08090	1985	Polyglass "VE"	-	Corrocoat (Aust)	On file	Vinyl ester resin glass reinforced
2712 th2a	2012	Polyglass "VEF"	-	Corrocoat (Aust)	AS4020 Approval in 2004	Lining/coating material for tanks, pipes and pumps.
7596749	2012	Pozzolith 122Ri	-	BASF Construction Chemicals Australia	Group 1B Material - with non hazardous ingredients	Concrete Additive
7427162	2012	PVC Heavy Duty Pipe Wrap Tape	Pipe Tape	Heatley Industrial and Safety	Group 1B material. PVC in stabilised form - long history of past use.	Securing submersible power cables to bore column
7515512	2012	Qenos PE HD2090	HD2090	AquaArmour	Group 1B material. High density polyethylene	Covering dams to reduce evaporation
10922313 F-AA-13607	2014	Quickspray Supreme W	QSP53120 / QSP 53110	EIC (Aust) Pty Ltd	AS4020 Approval by AWQC 07/05/2013	Coating
88-08090/38	1991	Radcon #7	-	Crommelin Chemicals (WA)	On file. Latest BS6920 Approval in 1998	Coating
10395852 F-AA-13607	2014	Radmix RAD19FF	SikaFiber Force PP48	Sika Australia	AS4020 Approval by AMS Laboratories 20/01/2014	Concrete Additive
88-08090 F-AA-25346	1989	Ranex rust buster	Name change only from Ranex rust converter	Bondall Pty Ltd	On file	Pre-treatment of metallic surfaces
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92-08036 F-AA- 25274	1997	Renderoc HB40 with Nitobond SBR primer	-	Parchem	On file. Latest AS4020 Approval in 2011	High performance medium-weight concrete reinstatement mortar.
92-08036 F-AA- 25274	1997	Renderoc LA55	-	Parchem	On file. Latest AS4020 Approval in 2011	Single component free-flowing low alkali micro-concrete.
1c15 th1a	2011	Resicoat® R4-ES	-	Akzo Nobel	On file	Internal coating in valves
9772660	2013	Rheobuild 561	-	BASF	On file	Concrete additive
7596593	2012	Rheobuild 1000 NT	-	BASF Constructio n Chemicals Australia	Group 1B Material - with non hazardous ingredients	Concrete Additive
F-AA- 13607/2		RPC Permaglass	-	RPC Technologies	AS 4020 Approval 2016	Bore casing
7604554 / 7604583	2012	Scotchkote Urethane Coating 165 PW	-	Corrosion Protection Products 3M	BS6920 Approval	Coating
EHB- 03010	2011	Scubapox 1725	-	National Maintenanc e Products Pty Ltd	On file	Sealant for cracks in service tanks and reservoirs.
88- 0890/48 7604466	2012	Sigmaguard CSF 575	Name change only from Sigmaguard CSF 75	Sigma Coatings	AS4020 Approval in 2009	Coating. Water containers to be flushed before use.
9524098	2013	Sikaflex Tank	-	Sika Australia	AS4020 Approval in 2001	Sealant
8909740	2013	Sikafloor 161	-	Sika Australia	AS 4020 Approval in 2011	Coating
89009744	2013	Sikalastic 150	-	Sika Australia	AS 4020 Approval in 2009	Coating
8946508	2013	Sikalastic 152	-	Sika Australia	AS 4020 Approval in 2013	Coating

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8909755	2013	Sikalastic 841 ST	-	Sika Australia	AS4020 Approval in 2011	Coating
8946527	2013	Sikaplan WT4200 15C Felt 500 Light Blue	-	Sika Australia	AS 4020 Approval in 2010	Liner
8946513	2013	Sikaplan WT4200 15C Light Blue	-	Sika Australia	AS 4020 Approval in 2010	Liner
8946541	2013	Sikaplan WT4200 18H Light Blue	-	Sika Australia	AS 4020 Approval in 2010	Liner
9321536	2013	Silastic 732 Multipurpose (White, Clear and Black)	-	Dow Corning	NSF International listing July 2013	Sealant
9976316	2013	STOPAQ 2100 Aquastop	-	Anti Corrosion Technology	NSF Approval 2011	Pipe Wrapping
9976316	2013	STOPAQ Wrapping Band CZH	-	Anti Corrosion Technology	NSF Approval 2011	Pipe Wrapping
F-AA-25238	1987	Strataflo	-	Pentair Water and Environmental Systems	On file. Latest AS4020 Approval in 2012 for Duraflo same ABS pipe as Strataflo.	Bore casing, only.  Formulation to remain same.
92-08036 F-AA-25278	1997	Supercast PVC	-	Parchem	AS4020 Approval in 1995	Waterstop
92-08036 F-AA-25278	1997	Supercast SW	-	Parchem	AS4020 Approval in 1995	Waterstop
F-AA-13607	2010	Tampur 150	Tam 150	Tam International Australia Pty Ltd	On file	Waterstop / Crack injection
7604351	2012	Tankguard 412	-	Jotun Australia	AS4020 Approval in 2006	Coating
F-AA-25320	2013	Tapping Bands 4N	Replaces Nylon Tapping Bands	Stockbrands Co Pty Ltd	AS4020 Approval in 2009	In-line/pipe fitting for potable water

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6778829	2012	Titanex H07RN-F	Titanex submersible cable	Olex	AS4020 Approval in 2012	Connecting power from surface to bore pump motor
9187604	2013	Tube Plate (Naval Brass) QLKE-160-070-4-1-4-23-3-2-00	-	ABB Industrial Systems Pty Ltd, Luvata, Sweden	AS4020 Approval in 2013	Material of motor cooler manifold at SSDP
88-08090 F-AA-25347	1986	Tufseal 35E	-	Calmarc Chemicals	On file	Coating
2306 th1a	2012	Vandex BB75-Z	-	Parchem Construction Supplies Pty	On file	Water Proofing reservoir walls
2306 th1a	2012	Vandex Plug	-	Parchem Construction Supplies Pty	On file	Plugging areas of leakage on reservoir walls
EHB-01339	2010	VESPEL CR-6100	-	DuPont De Nemours Int.	On file	Wear resistance bearing material
7596930	2012	Wattyl Epinamel TL710	-	Wattyl Australia	AS4020 Approval in 2009	Coating
7598416 / 7598486	2012	Wattyl Epinamel TL770SF	-	Wattyl Australia	AS4020 Approval in 2009	Coating
7784039	2012	Xypex Admix C-1000NF	-	Concrete Waterproofing Manufacturing	AS4020 Approval in 2012	Concrete additive
7784011	2012	Xypex Admix C-5000	-	Concrete Waterproofing Manufacturing	AS4020 Approval in 2012	Concrete additive
7783992	2012	Xypex Concentrate	-	Concrete Waterproofing Manufacturing	AS4020 Approval in 2012	Coating
7784118	2012	Xypex Megamix I	-	Concrete Waterproofing Manufacturing	AS4020 Approval in 2012	Coating
7784027	2012	Xypex Megamix II	-	Concrete Waterproofing Manufacturing	AS4020 Approval in 2012	Mortar
7784102	2012	Xypex Modified	-	Concrete Waterproofing Manufacturing	AS4020 Approval in 2012	Coating

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7784050	2012	Xypex Patch N Plug	-	Concrete Waterproofing Manufacturing	AS4020 Approval in 2012	Coating
EHB-03010	2011	Yokoham floating fender pneumatic	-	Yokohama	On file	Plug on scour pipes.
EHB-01290	2009	ZAVLAR Liquid Rubber	-	Liquid Rubber Australia	On file	Internal coating for clear water tanks
9265761	2013	Zinga	-	Zinga Pty Ltd	AS4020 Approval in 2013	Coating

**Notes**

DoH            Department of Health (Western Australia)  
WC            Water Corporation of Western Australia

## Schedule 5(a) – Approved Materials

The following table lists products that have been previously approved by the Department of Health but which are understood to be no longer manufactured.

DoH REF	Year Approved	PRODUCT	COMPANY	RESTRICTION OR COMMENT
00-06044	2000	AV 600M	Grace Construction Products	No longer manufactured
92-08036/4	1993	Bostik 2638 Gun-grade polyurethane sealant	Bostik (Australia) Pty Ltd	No longer manufactured
86-00940	1986	Colturiet EHB	Wattyl-Sigma Coatings Wattyl-Sigma Coatings	No longer manufactured
86-00940	1986	Colturiet GPL	Wattyl-Sigma Coatings Wattyl-Sigma Coatings	No longer manufactured
88-08090/2	1985	Dulux Epoxy Bildcote	Dulux Australia	No longer manufactured
88-08090/17	1989	Dulux Ferrodor EPX Epoxy Paint	Dulux Australia	No longer manufactured
00-06044	2000	GPR	Grace Construction Products	No longer manufactured
88-08090/50	1992	Gruvlock Compound EP10059	Grinnell Supply Sales	No longer manufactured
88-08090	1985	Hot Water Resistant Epoxy	Taubmans Pty Ltd	No longer manufactured
88-08090/5	1988	Krystol	Crommelin Chemicals (WA)	No longer manufactured
88-08090	1986	Pliseal AC	Calmarc Chemicals	No longer manufactured
88-08090	1986	Pliseal S B	Calmarc Chemicals	No longer manufactured
88-08090	1989	Ranex rust converter	Landra Nominees Pty Ltd	Name change to Ranex rust buster
92-08036	1997	Renderroc S	Fosroc Expandite NSW	No longer manufactured
88-08090	1989	Revenge rust converter	Landra Nominees Pty Ltd	No longer manufactured
88-08090/48	1991	SigmaGuard CSF 75	Wattyl (Qld)	Name change to SigmaGuard CSF 575
88-08090	1985	Taubmans Clear Silicone Epoxy	Taubmans	No longer manufactured

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88-08090	1985	Taubmans HiBuild Epoxy (Series 70)	Taubmans P/L	No longer manufactured
90-08163	1992	Tubemakers rubber ring joint lubricant No 2	Tubemakers Pty Ltd	No longer manufactured
88-08090	1986	Tufcote: Flexiglas (with Tufcote)	Calmarc Chemicals	No longer manufactured
88-08090	1986	Tufseal 24S Flexiglas (with Attaflex)	Calmarc Chemicals	No longer manufactured
88-08090/49	1992	Vinidex jointing lubricant	Vinidex	Replaced by Bactericidal Polydex Lubricant
88-08090/10	1988	Nylon tapping bands	Stockbrands Company Pty Ltd	Replaced by Tapping bands 4N

**Notes**

DoH            Department of Health (Western Australia)

## Schedule 6 - Materials Assessed - Not Requiring Approval (Subject To Condition)

Schedule 6 lists products that have been presented to and noted by the Department of Health (Western Australia) but **do not require** approval as they are either to be removed before drinking water is produced or used in accordance with the restrictions or comments stated below.

DoH REF	Year Assessed	PRODUCT	COMPANY	RESTRICTION OR COMMENT
04-06089	2004	AMC Pac L	Australian Mud Company Pty Ltd	To be removed from final production water.
04-06089	2004	AMC Pac R	Australian Mud Company Pty Ltd	To be removed from final production water.
04-06089	2004	Aus-Det	Australian Mud Company Pty Ltd	To be removed from final production water.
04-06089	2004	Aus-Dex	Australian Mud Company Pty Ltd	To be removed from final production water.
04-06089	2004	Aus-Gel Xtra	Australian Mud Company Pty Ltd	To be removed from final production water.
04-06089	2004	Bio-Vis	Australian Mud Company Pty Ltd	To be removed from final production water.
04-06133	2004	Ciba Alcomer 72L	ADG Technology Pty Ltd	To be removed from final production water.
EHB-01281	2009	DRILPLEX HDD	M-I Swaco Pty Australia	To be removed from final production water.
EHB-01281	2009	FLO-PLEX	M-I Swaco Pty Australia	To be removed from final production water.
D-AA-16/27174	2016	Gel Extra	Mud Logic Pty Ltd	To be removed from final production water.
04-06133	2004	Hibitrol HV	ADG Technology Pty Ltd	To be removed from final production water.
04-06089	2004	Liqui-Pol	Australian Mud Company Pty Ltd	To be removed from final production water.
2111 th1a	2012	Matex BIT-COOL	Airdrill Pty Ltd	To be removed from final production water.
2111 th1a	2012	Matex DD605L	Airdrill Pty Ltd	To be removed from final production water.
2111 th1a	2012	Matex DD955	Airdrill Pty Ltd	To be removed from final production water.
2111 th1a	2012	Matex DD2000	Airdrill Pty Ltd	To be removed from final production water.
2111 th1a	2012	Matex 1560 XS FOAM	Airdrill Pty Ltd	To be removed from final production water.

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2111 th1a	2012	Matex DD XPAND	Airdrill Pty Ltd	To be removed from final production water.
2111 th1a	2012	Matex E.S. Thread Compound	Airdrill Pty Ltd	To be removed from final production water.
2111 th1a	2012	Matex FORM A CORE	Airdrill Pty Ltd	To be removed from final production water.
2111 th1a	2012	Matex HOLE CONTROL	Airdrill Pty Ltd	To be removed from final production water.
2111 th1a	2012	Matex RDO302ES	Airdrill Pty Ltd	To be removed from final production water.
2111 th1a	2012	Matex SALT VIS P	Airdrill Pty Ltd	To be removed from final production water.
2111 th1a	2012	Matex SALT-VIS	Airdrill Pty Ltd	To be removed from final production water.
2111 th1a	2012	Matex SAND DRILL	Airdrill Pty Ltd	To be removed from final production water.
2111 th1a	2012	Matex TORQUELESS	Airdrill Pty Ltd	To be removed from final production water.
2111 th1a	2012	Matex ULTRAVIS	Airdrill Pty Ltd	To be removed from final production water.
2111 th1a	2012	Matex VIBRA STOP	Airdrill Pty Ltd	To be removed from final production water.
04-06133	2004	Max Gel Polypac – All grades	ADG Technology Pty Ltd	To be removed from final production water.
EHB-01281	2009	MAX GEL	M-I Swaco Pty Australia	To be removed from final production water.
D-AA-27176	2016	PAC L	Mud Logic Pty Ltd	To be removed from final production water.
D-AA-16/27175	2016	PAC R	Mud Logic Pty Ltd	To be removed from final production water.
04-06133	2004	Poly-Plus (Liquid)	ADG Technology Pty Ltd	To be removed from final production water.
04-06133	2004	Poly-Plus Dry	ADG Technology Pty Ltd	To be removed from final production water.
EHB-01281	2009	POLYSWELL	M-I Swaco Pty Australia	To be removed from final production water.
04-06133	2004	Potassium chloride	ADG Technology Pty Ltd	To be removed from final production water.
04-06133	2004	Potassium hydroxide	ADG Technology Pty Ltd	To be removed from final production water.



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EHB-01281	2009	RINGFREE	M-I Swaco Pty Australia	To be removed from final production water.
EHB-01281	2009	ROD EASE	M-I Swaco Pty Australia	To be removed from final production water.
04-06133	2004	SAPP (Sodium acid pyrophosphate)	ADG Technology Pty Ltd	To be removed from final production water.
D-AA-15/250809	2015	Super Gel-X	CETCO	To be removed from final production water.
D-AA-16/27172	2016	Terge	Mud Logic Pty Ltd	To be removed from final production water.
D-AA-16/27173	2016	VIS LV	Mud Logic Pty Ltd	To be removed from final production water.
04-06089	2004	Well-Clean	Australian Mud Company Pty Ltd	To be removed from final production water.
04-06089	2004	Xan-Bore	Australian Mud Company Pty Ltd	To be removed from final production water.

**Notes**

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## Schedule 7 - Chemicals Approved for Addition to Drinking Water

Schedule 7 lists chemicals either accepted or approved by the Department of Health for addition to drinking water in Western Australia.

Chapter 8 of the “*Australian Drinking Water Guidelines*” provides further information about quality assurance, monitoring and analytical advice and assessing levels of contaminants in chemicals used for drinking water treatment.

Chemicals and products approved for use to maintain water treatment and distribution systems are listed in [Schedule 8](#). Materials approved for use in contact with drinking water are listed in [Schedule 5](#).

CHEMICAL	FORMULA	REFERENCE	RESTRICTION OR COMMENT
Adsorbia GTO Titanium Based Adsorbent	-	DoH 06-06194	Arsenic monitoring shall be conducted in the reticulated supply as a key characteristic, until the lifespan of the product is determined.
Aluminum chlorohydrates	AlCl(OH) <sub>5</sub>	NHMRC 2005	
Aluminum sulphate (alum)	Al <sub>2</sub> (SO <sub>4</sub> ) <sub>3</sub>	AWWA B403-82	
Ammonia (ammonium hydroxide)	NH <sub>3</sub> (aq)	FCC p. 20-21	
Ammonium sulphate	(NH <sub>4</sub> ) <sub>2</sub> SO <sub>4</sub>	AWWA B302-81	
Calcium carbonate (Redgate Lime)	CaCO <sub>3</sub>	DoH 06-06032	In accordance with RMIC requirements of Chapter 8 of ADWG.
Calcium carbonate (Imerys, Rotech Services)	CaCO <sub>3</sub>	DoH F-AA-13607, NSF Approved	In accordance with RMIC requirements of Chapter 8 of ADWG.
Calcium chloride	CaCl <sub>2</sub>	DoH 04-06352	Max rate 100 mg/L Food grade (99%) (Contaminants <5 ppm Pb and <3 ppm As)
Calcium hydroxide	Ca(OH) <sub>2</sub>	AWWA B202-83	
Calcium hypochlorite	Ca(OCl) <sub>2</sub>	AWWA B300-80	
Calcium oxide	CaO	AWWA B202-83	
Calgon T	Sodium hexa-metaphosphate	AWWA B502-83	
Carbon dioxide (99.9% purity v/v)	CO <sub>2</sub>	DoH F-AA-13607	Use in accordance with the manufacturer's instructions.

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CHEMICAL	FORMULA	REFERENCE	RESTRICTION OR COMMENT
Carbon, granulated activated (GAC)	C	AWWA B604-96	Adsorption
Carbon, powdered activated (PAC)	C	AWWA B600-78	Adsorption
CAT-FLOC 8103 PLUS (pDADMACs)	-	NSF/ANSI Standard 60	Coagulation and flocculant aid. Dosing rate not to exceed 57 mg/L.
Chlorine	Cl <sub>2</sub>	AWWA B301-81	
Chlorine dioxide	ClO <sub>2</sub>	NHMRC 2005	
CleanOxide 75 Part A (P) and B (Chlorine dioxide)	-	DoH 2712th1a	
Copper sulphate	CuSO <sub>4</sub> .5H <sub>2</sub> O	AWWA B602-80	Algicide
Ferric chloride	FeCl <sub>3</sub> .6H <sub>2</sub> O	AWWA B407-83	
Ferric sulphate	Fe <sub>2</sub> (SO <sub>4</sub> ) <sub>3</sub>	NHMRC 1983 (95th Session, p.27)	
GO2 Component A and B (Chlorine dioxide)	-	DoH 1707th1a	
Granular Activated Alumina (DD – 6)	Al <sub>2</sub> O <sub>3</sub>	NSF/ANSI Standard 61	
GMA Garnet	Fe <sub>3</sub> Al <sub>2</sub> (SiO <sub>4</sub> ) <sub>3</sub>	DoH EHB-1085	In accordance with RMIC requirements of Chapter 8 of ADWG. Not approved for use by individual (home) consumers.
Hydrex 4715 (Sodium metabisulfite)	Na <sub>2</sub> S <sub>2</sub> O <sub>5</sub>	0a05th1a	In accordance with RMIC requirements of Chapter 8 of ADWG.
Hydrochloric acid	HCl	NHMRC 2005	
Hydrofluorosilicic acid (Fluorosilicic acid)	H <sub>2</sub> SiF <sub>6</sub>	AWWA B703-84	In accordance with RMIC requirements of Chapter 8 of ADWG.
Hydrogen peroxide	H <sub>2</sub> O <sub>2</sub>	FCC p.146-147	
Hydroxylated ferric sulphate	-	NHMRC 2005	
Magnetite	Fe <sub>3</sub> O <sub>4</sub>		
Nalclear 8170 PULV (Polyacrylamide)	-	NSF/ANSI Standard 60	Coagulation and flocculant aid. Dosing rate not to exceed 1 mg/L.

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CHEMICAL	FORMULA	REFERENCE	RESTRICTION OR COMMENT
Nalclear 8173 PULV (Polyacrylamide)	-	NSF/ANSI Standard 60	Coagulation and flocculant aid. Dosing rate not to exceed 1 mg/L.
Nalclear 8181 (Polyacrylamide)	-	NSF/ANSI Standard 60	Coagulation and flocculant aid. Dosing rate not to exceed 1 mg/L.
Nalclear 8182 (Polyacrylamide)	-	NSF/ANSI Standard 60	Coagulation and flocculant aid. Dosing rate not to exceed 1 mg/L.
Nalco 7396 (Tetrapotassium pyrophosphate)	-	NSF/ANSI Standard 60	Dosing rate not to exceed 29 mg/L.
Nalco 3265 (pDADMACs)	-	NSF/ANSI Standard 60	Coagulation and flocculant aid. Dosing rate not to exceed 40 mg/L.
Nalco 9597 (pDADMACs)	-	NSF/ANSI Standard 60	Coagulation and flocculant aid. Dosing rate not to exceed 24 mg/L.
Nalcolyte 8105 (Polyamines)	-	NSF/ANSI Standard 60	Dosing rate not to exceed 20 mg/L.
Optimer 8110 PULV (Polyacrylamide)	-	NSF/ANSI Standard 60	Coagulation and flocculant aid. Dosing rate not to exceed 1 mg/L.
Ozone	O <sub>3</sub>	NHMRC 2005	
Polyacrylamides and acrylic acid polymers and copolymers	(CH <sub>2</sub> CHCONH <sub>2</sub> ) <sub>8</sub> and (CH <sub>2</sub> CHCOOH) <sub>8</sub>	NHMRC 1977, 1979 (84 <sup>th</sup> Session p.22 and 88 <sup>th</sup> Session, p.21)	
Polyaluminium chloride	Al <sub>8</sub> (OH) <sub>10</sub> SO <sub>4</sub> Cl <sub>1</sub> <sub>2</sub>	NHMRC 1979 (88 <sup>th</sup> Session, pp.17-18)	
Poly aluminium silica sulphates	Na <sub>12</sub> (AlO <sub>2</sub> ) (SiO <sub>2</sub> ) <sub>12</sub> .xH <sub>2</sub> O	NHMRC 2005	
Polydiallyldimethyl ammoniumchlorides (polyDADMACs)	-	NHMRC 1982 (93rd Session, pp.19-20)	
Potassium permanganate	KMnO <sub>4</sub>	AWWA B603-83	
Quantum Filtration DMI 65	-	DoH 06-06480	Iron and manganese removal. Chapter 8, ADWG conditions apply.
Sodium alginate	-	FCC p.274	
Sodium aluminate	NaAlO <sub>2</sub>	AWWA B405-83	
Sodium bicarbonate	NaHCO <sub>3</sub>	FCC p.278	
Sodium carbonate	Na <sub>2</sub> CO <sub>3</sub>	AWWA B201-80	

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CHEMICAL	FORMULA	REFERENCE	RESTRICTION OR COMMENT
Sodium chloride	NaCl	AWWA B200-78	
Sodium fluoride	NaF	AWWA B701-84	In accordance with RMIC requirements of Chapter 8 of ADWG.
Sodium fluorosilicate (sodium silicofluoride)	Na <sub>2</sub> SiF <sub>6</sub>	AWWA B702-84	In accordance with RMIC requirements of Chapter 8 of ADWG.
Sodium hexametaphosphate	(NaPO <sub>3</sub> ) <sub>6</sub>	AWWA B502-83	
Sodium hydroxide	NaOH	AWWA B501-80	
Sodium hypochlorite	NaOCl	AWWA B300-80	
Sodium metabisulphite	Na <sub>2</sub> S <sub>2</sub> O <sub>5</sub>	DoH 06-06237	In accordance with RMIC requirements of Chapter 8 of ADWG.
Sodium silicate	Na <sub>2</sub> O.xSiO <sub>2</sub> (x = 3-5)	AWWA B404-80	
Sodium tripolyphosphate	Na <sub>5</sub> P <sub>3</sub> O <sub>10</sub>	ADWG	
Sulphuric acid	H <sub>2</sub> SO <sub>4</sub>	FCC p.317-18	
Tanamet crystals	-	DoH 07-06010	In accordance with RMIC requirements of Chapter 8 of ADWG. Not approved for use by individual (home) consumers.
Ultrion 8188 (Polyaluminium chloride)	-	NSF/ANSI 60	Coagulation and flocculant aid. Dosing rate not to exceed 180 mg/L.
Ultrion 8588 (Aluminium chlorohydrates, polyDADMACs)	-	NHMRC 1979 (88 <sup>th</sup> Session p17-18)	Coagulation and flocculant aid. In accordance with manufacturer's recommendations.
Ultrion 44560 (Polyamine)	-	NSF/ANSI Standard 60	Coagulation and flocculant aid. Dosing rate not to exceed 84 mg/L.
Ultrion 44697 (Polyamine)	-	NSF/ANSI Standard 60	Coagulation and flocculant aid. Dosing rate not to exceed 84 mg/L.
Zeolite ANZ38		DoH 15/249004	Contact DoH for information
Zinc orthophosphate	Zn <sub>3</sub> (PO <sub>4</sub> ) <sub>2</sub>	NHMRC 1987 (104 <sup>th</sup> Session p32)	

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**Notes**

ADWG	“Australian Drinking Water Guidelines”
AWWA	American Water Works Association Standards
DoH	Department of Health (Western Australia)
FCC	Food Chemicals Codex, 3rd Edition, 1981
NHMRC	National Health and Medical Research Council (Australia)
NSF / ANSI	NSF International / American National Standards Institute
RMIC	Recommended Maximum Impurity Concentration
mg/L	milligrams per litre

## Schedule 8 - Chemicals and Procedures used to Maintain Water Treatment and Distribution Systems

Schedule 8 lists chemicals and products used to maintain water treatment and distribution systems that have been approved by the Department of Health.

Water treatment chemicals approved for use are listed in [Schedule 7](#). Materials approved for use in contact with drinking water are listed in [Schedule 5](#).

DoH REF	Year Approved	PRODUCT	COMPANY	RESTRICTION OR COMMENT
88-08090/07	1990	ALBA Bore Treatment Antibacterial	Chem Chemicals and Malcolm Thompson Pumps	Flush bore for 30 minutes after application
9772655	2013	AMC Clay Doctor	AMC	Drilling Fluid. Used Offline - must be used in accordance with manufacturer's instructions.
9378501	2013	AMC Star Seal	AMC	Hole stabilising additive used for air drilling. Used offline - must be used in accordance with manufacturer's instructions. Must be followed by a Pump Test or flushed for a minimum of two hours.
DoH 0a045a	2010	Aquamax RO608	GE Betz Pty Ltd	Antiscalant in RO systems. Dosing rate not to exceed 10 mg/L.
15/249004	2015	Ascorbic acid	Chem-Supply Pty Ltd.	Used offline - membranes to be isolated prior to treatment and flushed prior to returning to service.
2215 th1a	2012	AWC A-102 Plus	AS Harrison & Co Pty Ltd	Antiscalant in RO systems. Dosing rate not to exceed 10 mg/L.
2215 th2a	2012	AWC A-103	AS Harrison & Co Pty Ltd	Antiscalant in RO systems. Dosing rate not to exceed 10 mg/L.
F-AA-13607	2016	AWC A-108Fe	AS Harrison & Co Pty Ltd	Antiscalant in RO systems. Dosing rate not to exceed 10 mg/L.
2215 th3a	2012	AWC A-109	AS Harrison & Co Pty Ltd	Antiscalant in RO systems. Dosing rate not to exceed 10 mg/L.
2215 th4a	2012	AWC C-205	AS Harrison & Co Pty Ltd	Membrane cleaner. Contact DoH for conditions of approval.
2215 th5a	2012	AWC C-236	AS Harrison & Co Pty Ltd	Membrane cleaner. Contact DoH for conditions of approval.

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<b>DoH REF</b>	<b>Year Approved</b>	<b>PRODUCT</b>	<b>COMPANY</b>	<b>RESTRICTION OR COMMENT</b>
1610 th1a	2011	Belgard EV2050	BWA Water Additives	Antiscalant in desalination plants. Dosing rate to not exceed 8 mg/L.
1613 th1a	2011	Belite M8	BWA Water Additives	Defoamer in seawater distillation plant. Dosing rate not to exceed 0.1 mg/L in feed stream.
EHB-00870	2008	Bio D-Scaler	Bio Green Chemicals Pty Ltd	Treated equipment to be flushed until water is clear.
EHB-000092517 th1a	2008 2012	BluBac BluBac Xtra	Clearbore Pty Ltd	Flush equipment with at least 5 times the total treated volume with untreated water, or until pH is within 0.5 pH units of the original untreated water.
92-08036/06	1993	Boreclean	Boretech, Qld	Rehabilitation of water bores. Product to be diluted to 10% and flush bore for 30 minutes before use.
92-08036/07	1993	Boreclean forte	Carela Australia Pty Ltd	Rehabilitation of water bores. Product to be diluted to 10% and flush bore for 30 minutes before use.
7660813	2012	BoreSaver MULTIKLEEN	Aquabiotics Industrial Pty Ltd	Bore pipe and pump cleaner. Used offline - must be flushed for 30 minutes or until background pH is re-established, whichever is the longest.
01-06614 F-AA-13607	2001	Boresaver Ultra Pro C	Aquabiotics Pty Ltd	Residual levels of copper and oxalate must comply with drinking water guidelines.
2117 th1a	2012	Calstat RO-30	WAT Australia Pty Ltd	Antiscalant in RO systems. Dosing rate not to exceed 10 mg/L.
88-08090/32	1990	Carrela-Bio-Plus Carrel a-Bio-Plus-Forte	George Roberts and Associates	Application for bore treatment and water tanks (cleaning, disinfection) Flush bore for 30 minutes after treatment.
EHB-00102	2007	Citric Acid	Redox Chemicals	To clean ultra filtration membranes. Isolate membranes from drinking water stream. Soak in water for 30 minutes prior to return to service.



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<b>DoH REF</b>	<b>Year Approved</b>	<b>PRODUCT</b>	<b>COMPANY</b>	<b>RESTRICTION OR COMMENT</b>
06-06331	2006	Clearbore	Clearbore Pty Ltd	Post treatment flushing and testing required.
2104 th1a	2012	Copper Citrate	Consolidated Chemical Company	Contact DoH for conditions of approval.
07-06281	2007	DBNPA 2,2-dibromo-3-nitrilopropionamide	DOW Chemicals	To remove membrane biofouling. Operational conditions apply.
F-AA-25429	2013	Dequest SPE 0108	IMCD Australia Ltd	Antiscalant in RO systems. Dosing rate not to exceed 10 mg/L.
F-AA-25429	2013	Dequest SPE 0111	IMCD Australia Ltd	Antiscalant in RO systems. Dosing rate not to exceed 17 mg/L.
85-01121/6	1986	Fertan Rust Converter	Fertan Australia NZ	Rust treatment only.
1610 th1a	2011	Floclean MC11	BWA Water Additives	RO membrane cleaner. Contact DoH for conditions of approval.
1610 th1a	2011	Floclean MC3	BWA Water Additives	RO membrane cleaner. Contact DoH for conditions of approval.
1610 th2a	2011	Flocon 135	BWA Water Additives	Antiscalant in RO systems. Dosing rate not to exceed 10 mg/L.
1610 th3a	2011	Flocon 190	BWA Water Additives	Antiscalant in RO systems. Dosing rate not to exceed 10 mg/L.
1610 th4a	2011	Flocon 260	BWA Water Additives	Antiscalant in RO systems. Dosing rate not to exceed 5 mg/L.
1610 th5a	2011	Flocon 285	BWA Water Additives	Antiscalant in RO systems. Dosing rate not to exceed 9 mg/L.
1610 th6a	2011	Flocon Plus N	BWA Water Additives	Antiscalant in RO systems. Dosing rate not to exceed 10 mg/L.
F-AA-13607/2	2016	GuardION 801	Baker Hughes	Antiscalant in RO systems. Dosing rate not to exceed 10 mg/L.
EHB-00869	2008	Glycerol	Klen International	Membranes to be purged to waste before being used to supply drinking water.
0a18th 2a	2010	Hydrex 4101	Ecolab	Antiscalant in RO systems.
1811th 1a	2010	Hydrex 4102	Ecolab	Antiscalant in RO systems. Dosing rate not to exceed 17 mg/L.

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<b>DoH REF</b>	<b>Year Approved</b>	<b>PRODUCT</b>	<b>COMPANY</b>	<b>RESTRICTION OR COMMENT</b>
1811th 2a	2010	Hydrex 4129	Ecolab	Antiscalant in RO systems. Dosing rate not to exceed 17 mg/L.
0a04th 3a	2010	Hydrex 4701	Ecolab	To clean filtration membranes. Contact DoH for information
0a04th 4a	2010	Hydrex 4703	Ecolab	To clean filtration membranes. Contact DoH for information
0a18th 1a	2010	Hydrex 4705	Ecolab	To clean filtration membranes. Contact DoH for information
0a18th 1a	2010	Hydrex 4710	Ecolab	To clean filtration membranes. Contact DoH for information
F-AA- 27304	2014	Hydrex 4720	Ecolab	Membrane cleaner. Contact DoH for information
0a04th 7a	2010	Hypersperse MDC220	Ecolab	Anti-scalant. Dosing rate not to exceed 10 mg/L.
0a04th 6a	2010	Hypersperse MSI300	Ecolab	Anti-scalant. Dosing rate not to exceed 10 mg/L.
D-AA- 15/250 808	2015	Hypersperse MDC120	GE Betz Pty Ltd	Antiscalant for RO membranes. Dosing rate not to exceed 10 mg/L.
D-AA- 15/25 810	2015	Hypersperse MDC700	GE Betz Pty Ltd	Antiscalant for RO membranes. Dosing rate not to exceed 10 mg/L.
2222 th1a	2012	Hypersperse MDC704	GE Betz Pty Ltd	Antiscalant for RO membranes. Dosing rate not to exceed 10 mg/L.
EHB- 01731	2009	Hypersperse MDC707	GE Betz Pty Ltd	Antiscalant for RO membranes. Dosing rate not to exceed 10 mg/L.
D-AA- 15/250 812	2015	Hypersperse MDC714	GE Betz Pty Ltd	Antiscalant for RO membranes. Dosing rate not to exceed 10 mg/L.
2222 th1a	2012	Hypersperse MSI410	GE Betz Pty Ltd	Antiscalant for RO membranes. Dosing rate not to exceed 10 mg/L.
2109 th1a	2012	Kleen MCT 103	GE Betz Pty Ltd	RO membrane cleaner. Contact DoH for conditions of approval.
2109 th1a	2012	Kleen MCT 511	GE Betz Pty Ltd	RO membrane cleaner. Contact DoH for conditions of approval.
D-AA-15/ 250811	2015	Kleen MCT 515	GE Betz Pty Ltd	RO membrane cleaner. Contact DoH for conditions of approval.

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<b>DoH REF</b>	<b>Year Approved</b>	<b>PRODUCT</b>	<b>COMPANY</b>	<b>RESTRICTION OR COMMENT</b>
1c08th1a	2011	Manganese (II) Sulphate Monohydrate	Chem Supply Pty Ltd	Filter media conditioning. Contact DoH for conditions of approval
00-06180	2001	MIEX DOC Resin	Orica Advanced Technologies	Water treatment system
8343520	2013	Nalco PermaClean PC-11	Nalco	Disinfect and sanitise membrane plants. Used offline - must be used in accordance with manufacturer's instructions.
12506418	2015	Nu Well 100	Bilfinger Water Technologies	Bore cleaner. Used offline - must be flushed for 30 minutes or until background pH is re-established, whichever is the longest.
12506422	2015	Nu Well 110	Bilfinger Water Technologies	Bore cleaner. Used offline - must be flushed for 30 minutes or until background pH is re-established, whichever is the longest.
9772585	2013	Orange Aid	Natural Drilling Equipment	Lubricant and Sealant. Used Offline - must be used in accordance with manufacturer's instructions.
1928th1a	2011	Osmoclean CD	Osmoflo Pty Ltd	Contact DoH for conditions of approval.
1817th2a	2011	Osmoclean DW	Osmoflo Pty Ltd	Contact DoH for conditions of approval.
1817th1a	2011	OsmoDechlor	Osmoflo Pty Ltd	Contact DoH for conditions of approval.
151125gs1a	2015	Osmosan	Osmoflo Pty Ltd	Contact DoH for conditions of approval.
1a03th2a	2011	Osmotreat	Osmoflo Pty Ltd	Contact DoH for conditions of approval.
1a03th1a	2011	Osmotreat Si	Osmoflo Pty Ltd	Contact DoH for conditions of approval.
88-08090/44	1991	PALTEM	Balfour Beatty	Pipeline Auto Lining System
F-AA-34166	2015	PermaCare PC-504T	Nalco	Filtration membrane antifoulant. Dosing rate not to exceed 15 mg/L.
F-AA-34166	2015	PermaCare PC-510T	Nalco	Filtration membrane antiscalant. Dosing rate not to exceed 10 mg/L.

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<b>DoH REF</b>	<b>Year Approved</b>	<b>PRODUCT</b>	<b>COMPANY</b>	<b>RESTRICTION OR COMMENT</b>
F-AA-34166	2015	PermaCare PC-1020T	Nalco	Filtration membrane antifoulant. Dosing rate not to exceed 26 mg/L.
F-AA-34166	2015	PermaCare POSM35T	Nalco	Antiscalant in RO systems. Dosing rate not to exceed 15 mg/L.
F-AA-34166	2015	PermaCare POSM352T	Nalco	Antiscalant in RO systems. Dosing rate not to exceed 15 mg/L.
F-AA-34166	2015	PermaClean PC-33	Nalco	Contact DoH for conditions of approval.
F-AA-34166	2015	PermaClean PC-40	Nalco	Contact DoH for conditions of approval.
F-AA-34166	2015	PermaClean PC-67	Nalco	Contact DoH for conditions of approval.
EHB-03010	2011	PermaClean PC 77	Nalco	Filtration membrane cleaner. Contact DoH for conditions of approval.
EHB-03010	2011	PermaClean PC 98	Nalco	Filtration membrane cleaner. Contact DoH for conditions of approval.
F-AA-34166	2015	PermaTreat PC-191T	Nalco	Antiscalant in RO systems. Dosing rate not to exceed 15 mg/L.
F-AA-34166	2015	PermaTreat PC-391T	Nalco	Antiscalant in RO systems. Dosing rate not to exceed 15 mg/L.
D-AA-15/288265	2015	Phoslock	Phoslock Water Solutions	Limited source water reservoir application only, subject to specific conditions including monitoring for free lanthanum. Contact DoH for conditions of approval.
99-06524	2003	Quinplex White Oil (4010 H1)		Artesian bore lubricant
9772660	2013	Rheobuild 561	BASF	Concrete Additive. Used Offline - must be used in accordance with manufacturer's instructions.
1b15th1a	2011	Rhodamine WT	Abbey Color	Tracer dye. Contact DoH for conditions of approval.
2103th1a	2012	Sodium Lauryl Sulphate	KLEN International (74) Pty Ltd	Membrane cleaner. Contact DoH for conditions of approval.

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DoH REF	Year Approved	PRODUCT	COMPANY	RESTRICTION OR COMMENT
985616 6	2013	Superfoam	AMC	Hole cleaning additive used for air drilling. Used Offline - must be used in accordance with manufacturer's instructions.
125064 20	2015	Sulphamic acid	Challenge Chemicals Australia	Bore cleaner. Used offline - must be flushed for 30 minutes or until background pH is re-established, whichever is the longest.
86-00940	1985	Turbomag Electromagnetic Water Treatment System	Turbomag Australia Pty Ltd	Scale and corrosion removal and prevention
125064 22	2015	Well Clean	Pentair Southern Cross	Bore cleaner. Used offline - must be flushed for 30 minutes or until background pH is re-established, whichever is the longest.
977263 8	2013	Well Guard	XTEX	Lubricant and Sealant. Used Offline - must be used in accordance with manufacturer's instructions.
88-08090/41	1992	Wellchem Claysperse – Downhole Dispersant	Challenge Chemicals Australia	Flush bore for 30 minutes
88-08090/41	1991	Wellchem Nu Antibac – Downhole Bacterial Acid	Challenge Chemicals Australia	Flush bore for 30 minutes
88-08090/41	1992	Wellchem Well Clean – Downhole Antibacterial Acid	Challenge Chemicals Australia	Flush bore for 30 minutes

**Notes**

ADWG            “Australian Drinking Water Guidelines”  
DoH             Department of Health (Western Australia)  
RO               Reverse Osmosis  
mg/L            milligrams per litre

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### Schedule 8(a) - Chemicals and Procedures used to Maintain Water Treatment and Distribution Systems

The following table lists products that have been previously approved by the Department of Health but which are understood to be no longer manufactured.

DoH REF	Year Approved	PRODUCT	COMPANY	RESTRICTION OR COMMENT
88-08090/47	1991	Occtech D24	Occtech Corp. Pty Ltd O'Connor WA	No longer manufactured.
EHB-03010	2011	PermaClean PC 99	Nalco	No longer manufactured.
06-06355	2006	PermaTreat PC 191	Ondeo Nalco	No longer manufactured. Replaced by PermaTreat PC191T (refer Schedule 8).
06-06357	2006	PermaTreat PC 510	Ondeo Nalco	No longer manufactured. Replaced by PermaTreat PC510T (refer Schedule 8).
06-06356	2006	PermaTreat PC 1020	Ondeo Nalco	No longer manufactured. Replaced by PermaTreat PC1020T (refer Schedule 8).

#### Notes

DoH                      Department of Health (Western Australia)

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## Schedule 9 - Chemicals and Materials used in Water Catchment Areas

The following table lists products that have been assessed and approved by the Department of Health for use in water catchment areas in Western Australia.

<b>DoH REF</b>	<b>Year Approved</b>	<b>PRODUCT</b>	<b>COMPANY</b>	<b>RESTRICTION OR COMMENT</b>
EHB-02152	2009	Aquatain	Ultimate Products (Aust) Pty Ltd	Contact DoH for information
03-07168	2009	Road Master	Road Master Pty Ltd	Road base stabilization
04-06898	2006	PK-4 (surface stabilizer)	Eco Enzymes Australia	Only surfaces that are not subjected to continual immersion may be treated.
06-06330	2007	Polycom	Biocentral Laboratories	Follow manufacturer's instructions.

### Notes

DoH            Department of Health (Western Australia)

## Schedule 10 - Fire Suppressants and Retardants used in Water Catchment Areas

The following table lists fire suppressants and fire retardants that are currently used in firefighting operations by the Fire Services Management Branch of the Western Australian Department of Parks and Wildlife (DPAW)<sup>1</sup>.

These products have not been formally assessed for approval by the Department of Health as they are used in emergency situations in localised applications. The Department of Health acknowledges that in emergency situations fire suppressants and fire retardants that are efficient treatments for bushfires are used as necessary.

<b>PRODUCT</b>	<b>COMPANY</b>
Phos-Chek WD881 Class A Foam	Solutia Australia Pty Ltd
Phos-Chek MVP-F Powdered Fire Retardant	Solutia Australia Pty Ltd

1 Further information about DPAW at: <https://www.dpaw.wa.gov.au/management/fire>