

Water Reference Group

Assisting industry in adopting Direct Planned Potable
Recycled Water for use in abattoirs

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Project Description

To determine why the meat industry has not taken up the large-scale water savings seen in other industries, AMPC commissioned the South Australian Research and Development Institute (SARDI) to identify barriers to the uptake of Direct Planned Potable Recycled Water (DPPRW). As part of this project, a Water Reference Group (WRG) was formed, comprising of industry and government representatives to inform and advise the project. Industry was surveyed on water reuse and recycling and identified the barriers to adoption. A number of WRG meetings were held to discuss four impediments to adoption and to identify trial projects for possible implementation.

Project Content

The content of the project can be summarised by the following steps:

1. Gathering information contained in around thirty industry reuse/recycling projects funded by AMPC/MLA.
2. Consulting industry via a survey of practices regarding reuse/recycling.
3. Establishing a Water Reference Group from the Australian Meat Industry Council, meat processors, Australian Meat Regulators Group, Department of Agriculture, Water and the Environment (DAWE), the University of New South Wales and AMPC to oversee the project and disseminate information to their stakeholders during the project.
4. Online meetings with the WRG to identify, discuss and plan how to resolve barriers to adoption of DPPRW in abattoirs and to design potential future trials on water reuse/recycling.
5. Developing position papers on ways to overcome identified barriers, such as the design of future pilot trials.

Discussions with industry personnel and the WRG identified four major impediments to implementing reuse/recycling initiatives:

1. Regulatory requirements were both stringent and involved several authorities.
2. The risk assessment required by regulatory authorities was onerous and complicated.
3. The business case needed for initiatives, particularly DPPRW, was difficult to justify.
4. The negative public perception of using recycled water as DPPRW.

Project Outcome

Impediment 1: Regulatory requirements

The study established that a four-stage process (local authority; state health/environment department; state meat authority; DAWE) is required for an export establishment to install infrastructure to reuse/recycle water on-site. DAWE acknowledged that the above process does not align with AQIS Meat Notice 2008/6 *Efficient use of water in export meat establishments* and minor rewriting is required.

Recommendation: That AMPC and the industry initiate the process of revising the Meat Notice and AMPC and the industry request DAWE to formally review market access requirements in relation to use of recycled water.

Impediment 2: Risk assessment

The quantitative risk assessment approach applied to recycled water installations follows the Australian Water Recycling Guidelines which is complicated to undertake and measures risk in terms of Disability Adjusted Life Years, an estimate of limited usefulness to establishment personnel. An alternative approach is illustrated by the use of Risk Ranger which is designed for a food safety context, but a similar tool could be developed specifically to estimate risk incurred by water recycling technologies in the meat industry.

Recommendation: That AMPC consider funding development of a suitable risk assessment tool for water recycling in the meat industry.

Impediment 3: Potential pilot projects and their business case

Recommendation: Potential projects fall into three categories:

1. High technology production of DPPRW – a demonstration plant that begins with recycling to a non-potable stage and then progresses to providing DPPRW.
2. Water reuse/recycling projects – reuse of hot water wash on beef floor; reuse of steriliser water; reuse of final smallstock wash water and alternative knife sanitising.
3. Reconsideration of projects completed by AMPC/MLA over the past two decades – nine projects were identified.

Impediment 4: Changing perception of using recycled water as DPPRW – need for progress

A template for recycling of waste treatment streams to DPPRW was provided by a major poultry processor (Ingham's). The proposed demonstration plant may also provide a useful framework for engaging with customers of processing establishments and the broader community and for promoting the benefits of water recycling in the meat processing sector and the food safety controls that are put in place to do so safely.

Benefit for Industry

Industry has now articulated the barriers to adoption of DPPRW and options have been identified to overcome these. During the WRG process, other water recycling/reuse initiatives and pilot projects have been identified, which could be implemented without the need to achieve DPPRW.