

I'M A CERTIFIED OPERATOR, NOW WHAT? – A CASE STUDY IN DRINKING WATER OPERATOR RECERTIFICATION



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ABSTRACT

In September 2010 the Victorian Department of Health issued the “Victorian Framework for Water Treatment Operator Competencies – Best Practice Guidelines” (Victorian Guidelines). This has been followed by the National Certification Framework (NCF) for drinking water operators, with a number of operators achieving the requirements for certification in Queensland in 2015 and New South Wales in 2016.

An important aspect of both the Guidelines and the NCF is the development of an associated Operator Certification Scheme, which formally recognises the professionalism of drinking water operators. The objective of certification is to address the inconsistencies in training and competency of drinking water operators across the country, which has been highlighted by regulators and the water industry as a potential public health risk.

Within Veolia, drinking water operator certification has driven innovation in training management and delivery, resulting in major cost savings and improved staff up-skilling and knowledge sharing. Through our certified operator continuing professional development (CPD) program, we have been able to provide interesting and rewarding CPD opportunities for operators. This paper provides a case study of the operator professional development activities used to good effect within our organisation. This has resulted in successful recertification of our first group of operators certified under the Victorian Guidelines.

1.0 INTRODUCTION

In September 2010 the Victorian Department of Health issued a set of Best Practice Guidelines for operator competency (See Figure 1). The aim of the guidelines is to define the minimum training, qualification and competency standards that operators must attain and maintain in order to operate drinking water treatment facilities in Victoria.

The Victorian Guidelines have been an important first step to the establishment of the National Certification Framework (NCF). Certification under the NCF has since rolled out in New South Wales and Queensland, with drinking water operators now having access to certification across Australia.

Currently, the Water Industry Operators Association of Australia (WIOA) is the only body endorsed by the Victorian Department of Health to certify operators to the requirements of the Victorian Guidelines. WIOA has also developed a Certification Scheme which complies with the requirements of the NCF, opening the door for operator certification in all Australian States and Territories. The aim of the WIOA Certification Scheme is to verify that an operator meets the minimum competency requirements of the Victorian Guidelines and NCF, and is, therefore, by extension, qualified and competent to perform their role within the water industry.



Figure 1: *The Victorian Guidelines. Issued by the Victorian Department of Health in September 2010*

1.1 Veolia's Attitude to Certification

Since the publication of the Victorian Guidelines in September 2010, Veolia has considered operator competency and certification to be an important measure of the value we can provide to our clients, as well as improving the capability and professionalism of our operational teams.

WIOA's Certification Scheme was officially launched at a reception held at the Victorian Department of Health on Friday 14 December 2012 (See Figure 2). At this reception two of the first four operators to be certified under the new scheme were Broc Mulcair and Luke McCormick, from Veolia Bendigo Operations in Central Victoria.

Since the launch of the certification scheme in December 2012, Veolia have a total of 12 drinking water operators certified in Victoria. There are five Veolia operators in New South Wales, who's certification will be formally recognised at the 2016 WIOA conference in Newcastle. Our aim is to set certification as the professional benchmark for recognising the skills and capabilities of our experienced operators.



Figure 2: *Operator Certification Ceremony on December 14th 2012*

2.0 CERTIFIED OPERATOR PROFESSIONAL DEVELOPMENT

To ensure that certified drinking water operators keep their skills up-to-date the WIOA Certification Scheme has a process requiring certification to be renewed every five years (three years in Victoria). Certified operators need to show that they have remained active in the industry and that they have taken steps to keep up-to-date with new technology. They do this by accruing 15 CPD points in each certification cycle under the NCF and Victorian Guidelines.

Appropriate activities that can accrue certification points include:

- Accredited Training – formal Units of Competence from the National Water Training Package delivered by a Registered Training Organisation (RTO) and where a formal Statement of Attainment is issued.
- Non-Accredited Training – completion of training courses, seminars or workshops designed to directly update or refresh the technical skills of certified operators.
- Other Activities – attendance or participation in conferences or industry events, along with activities such as presentations and demonstrations to keep the skills of certified operators current.
- Significant Workplace Project – where certified operators are able to perform investigations into a facet of their certified field.
- Exceptional Activities – activities that do not easily fall into any of the previous categories, may include coaching or mentoring other operators.

The concept of continuing professional development (CPD) is a very common one across a range of professions such as accountancy, health care and engineering. The idea of certification and CPD in the water operations context is to recognise that operators play a critical role in protecting public health and safety, through the competent operation of drinking water plants.

However this requirement for operator CPD has thrown up challenges to water businesses, particularly in times where cash flow is tight and operational budgets are under scrutiny. Some of the challenges that have been identified include:

- The perceived cost and staff commitment borne by the businesses who participate. It is important that the overall value of these schemes outweighs the cost imposed.
- Delivering appropriate training for a variety of treatment plants and processes. We had difficulty finding quality external training in technologies such as reverse osmosis, membranes, ozone, and activated carbon, hence we have developed in-house resources and expertise.
- Getting the most effective outcome from available training budgets for certified operator CPD. It is important that we don't simply rely on classroom-based training, which is costly and has been shown to provide limited benefit in professional development outcomes.
- Managing rosters to allow for operator involvement in CPD activities. This requires a shift towards more practical on-the-job activities.

It should be noted that the perceived cost of operator CPD has been a major driver for innovation within Veolia. The following sections describe the overall benefits of innovation in training delivery arising from the adoption of operator certification. This has resulted in ongoing and significant savings to the business in training and professional development.

2.1 Developing a CPD Program for Certified Operators

Our approach to certification and CPD for operators has been to completely re-think the way that we approach training within our organisation. We have made a cultural shift from simply sending operators away to attend courses, to incorporating training and professional development as an integral part of our day-to-day operations. We have taken greater control over CPD management and delivery, and included a new and innovative range of methods of delivering training and professional development activities.

Veolia encourages all employees to pursue professional development activities relevant to their role and career aspirations. The “Learn-Lead-Succeed” (10-20-70) initiative represents Veolia's approach to learning and reflects leading practice on how adults learn and develop new skills and knowledge:

- 70% of learning - the vast majority - comes from work related development such as on-the-job tasks, special projects/assignments and job rotation
- 20% of learning comes through guidance and demonstration from other people such as managers, supervisors and peers
- 10% of learning comes from formal learning programs such as training, reading books and listening to seminars/presentations.



Figure 2: *Veolia’s Approach to Learning – Learn-Lead-Succeed*

We have recognised there are a number of activities that can be considered to be CPD that don’t involve classroom based training. The critical aspects are to;

- identify the key learning outcomes and benefits of these activities, and
- formalise the scheduling, management, record-keeping and reporting on CPD

Further work for Veolia is the development of our own technical staff to provide leadership, training delivery and mentoring skills to share knowledge and expertise in specialised areas. We use the technical expertise and knowledge of our own people, in combination with our network of industry experts and Registered Training Organisations (RTOs).

2.0 RECERTIFICATION CASE STUDY

Broc Mulcair is an experienced Operator/Maintainer based at Veolia’s Bendigo WTP in Central Victoria. Broc was the first drinking water operator to be certified in Victoria under the Victorian Guidelines and with the WIOA Operator Certification Scheme. He received formal recognition of his certification at the ceremony held at the Victorian Department of Health in December 2014. He successfully achieved recertification with WIOA in December of 2015, after accruing his 15 points of CPD.



Figure 3: *Broc Mulcair. First Operator to be Certified in Victoria with WIOA*

Table 1 shows a number of CPD activities Broc participated in to enable him to maintain his certification. Broc's experience is a typical example of the kind of activities that Veolia's operators are involved in that have been developed, recorded and recognised under our Learn-Lead-Succeed approach to CPD. This approach has resulted in high quality professional development that has been customised to meet the individual's and business needs, and all at relatively low cost.

Table 1: *Individual Professional Development Register for Broc Mulcair*



Water Industry Operator Certification Scheme Individual Professional Development Register

Name of Applicant	Broc Mulcair	Employer	VEOLIA	
WIOCS Number	Water Industry Operator Certification Scheme Number (0001)	Date of Certification	14/12/2012	
Date Completed	Title and Description	Delivered by	Course fees	Points
COMPULSORY - Water Industry Issues Update Course				
	Water industry issues update course	Vic Dept Health	N/A	
4 - 5 Sept 2013	Option 1 - Attended Victorian Dept Health session as delegate WIOA Vic conference			3
				3
Nationally Recognised Accredited Training - Qualifications or Units of Competency				
Non Accredited Education and Training, Seminars, Workshops, In-House Programs				
12/07/2013	Attend In-house workshop on membrane management	Veolia	N/A	1
13/05/2014	Attend in-house workshop on Activated Carbon Operation	Veolia	N/A	1
				2
Other Activities - Conferences (attendance or presentation), Articles, Awards or other activities to be recognised				
13-14 Feb 2013	Present at Western Corridor Recycling Scheme tour to Robust Recycling Project	Veolia	N/A	2
4 - 5 Sept 2013	Attend WIOA 2013 conference as Delegate	WIOA	\$528	2
27/11/13	Conduct Site Tour & Membrane Maintenance - WIOA membrane workshop	WIOA / Veolia	N/A	2
13/11/14	Conduct site tour for operators and supervisors from Wannon Water	Veolia	N/A	2
19/08/14	Attend Site Tour at Wannon Water	Wannon Water	N/A	1
22 July 2015	Attend Site Tour at Western Water	Western Water	N/A	1
			\$ 528	10
Significant Workplace Project				
Exceptional Activities				
Total			\$ 528	15

3.1 Professional Development Activities and Initiatives

Activities that Veolia's certified operators have participated in included:

- Attending site tours (Succeed). We have an annual program of site tours to other water utilities around Victoria. This gives our operators exposure to the operational practices of the wider water industry, allows them to build networks and contacts with other water businesses, as well as expand their knowledge of water and wastewater treatment processes.
- Operational secondments (Succeed). We have always had a practice within Veolia of providing opportunities for staff mobility. With the advent of certification, this practice has been extended to operators, providing them with the opportunity to participate in short-to medium-term operational secondments. Notable examples have been; working on a demonstration plant for robust recycling applications in Hobart, and a month at Casey Station in Antarctica commissioning and operating a water treatment plant to treat diesel-contaminated meltwater.
- Conducting process investigations (Succeed): There have been a number of process investigations that have been led and reported on by our certified operators. Notable examples have been; a drinking water network nitrification study, a troubleshooting study on granular media filters, and a washwater system water quality enhancement investigation.

- Hosting industry workshops and tours (Lead): Our experienced operators have led a number of site tours and maintenance demonstrations at our facilities for operators and engineers visiting from other water businesses. This has allowed them to show technical leadership and enhanced the reputation of our business.
- In-house technical and “lessons-learned” workshops and seminars (Learn): We have found enormous benefit through using our own technical staff to host and deliver in-house knowledge-sharing awareness sessions on a range of water-treatment topics.
- Attending industry conferences and workshops (Learn & Lead): We encourage our operators to attend water industry conferences, when and where appropriate. In a number of cases our operators have given papers or poster presentations.

3.0 CONCLUSION

From a team culture perspective, Veolia has found participation in the implementation of operator certification to be a beneficial exercise. Feedback from certified operators has been that they appreciate the recognition of their skills and knowledge, and are receptive to the increased focus on their role as custodians of public health. They have risen to the challenge of CPD requirements, and are more likely to actively participate in their own training and professional development planning.

Further benefits have been the establishment of Veolia’s reputation as an industry leader in operator certification. Through the process of certification we have built up an extensive knowledge and expertise for delivery of high quality industrially-relevant training. As a result we have been able to assist other water businesses with their professional development requirements through the delivery of tours, workshops and practical demonstrations. These have contributed to the on-the-job learning requirements of operators across the industry and enhanced our standing as a highly reputable water business.

4.0 ACKNOWLEDGEMENTS

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5.0 REFERENCES

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