

Victorian Desalination Project | Independent Reviewer & Environmental Auditor

## IR&EA REPORT

COMPLIANCE WITH ENVIRONMENTAL PERFORMANCE

REQUIREMENTS QUARTER 2 2012

QUARTERLY REPORT TO THE MINISTER FOR ENVIRONMENT AND  
CLIMATE CHANGE

**July 2012**



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## SUMMARY

The Victorian Desalination Project (VDP – the Project) is being constructed on the coast in South Gippsland near Wonthaggi by the AquaSure consortium in a public-private partnership with the Victorian Government. The Project includes a desalination plant, a pipeline to transfer water to the Melbourne water distribution network near Cardinia, and an underground power supply, which will be largely in the same alignment as the pipeline. AquaSure has contracted Thiess Degrémont Joint Venture (TDJV) to design and construct, and Degrémont Thiess Services (DTSJV) to operate and maintain the VDP.

The overall environmental management framework for the VDP was initially defined in the Environmental Effects Statement (EES) for the reference project. This framework was further refined and included in the Project Deed as a contractual requirement for both the Design and Construction (D&C) and Operations and Maintenance (O&M) Stages of the Project. The main components of the Environmental Management Framework are:

- The VDP must be designed and constructed in accordance with a set of documented Environmental Performance Requirements, included in Appendix S3 of the Project Deed. In addition, Commonwealth and Victorian environmental legal requirements must be met.
- An Environmental Management System and Environmental Management Plans to support delivery of compliance with the Environmental Performance Requirements; and
- Additional requirements in the Project Deed to support environmental management.

The Independent Reviewer and Environmental Auditor (IR&EA) provides independent oversight of design engineering, construction, and environmental performance of the VDP. The IR&EA is jointly appointed by the State Government and AquaSure; the consortium building the VDP, and which will subsequently operate it. In particular, the IR&EA audits the Project Activities to assess whether the environmental requirements of the Project are being met. The Department of Sustainability and Environment (DSE) Capital Projects Division administers the Contract with AquaSure on behalf of the State.

This report provides a summary of the IR&EA's monthly environmental audit outcomes from April - June 2012.

Works commenced at the desalination plant site on the coast near Wonthaggi on 30 September 2009. The Project Activities occurring during the reporting period were:

- **Plant site:** minor bulk earthworks, civil works, building works, electrical works and mechanical installation. Site revegetation continued outside the construction footprint. Construction verification and cleaning activities continued, and early commissioning works were conducted.
- **Utilities alignment:** Reinstatement of the alignment continued during the reporting period. The power cable was successfully energised from the Cranbourne Terminal Station to the Plant site.
- **Marine works:** completion of marine construction activities.

During the reporting period a total of three formal audit findings were raised, all of these Areas for Improvement. A list of all the audit findings, as well as corrective and preventive actions to the end of June 2012 taken by AquaSure and TDJV to close the findings is given in Appendix 1.

The number of audit findings raised this reporting period continued the fall as noted in previous reporting periods. This is consistent with the nature of the Project activities. Work along the Utilities alignment is almost complete, and at the Plant site construction activities are increasingly under cover and on paved surfaces, while the commissioning activities are yet to be fully underway. This reduces the overall environmental risk of construction activities.

The audit findings raised during the reporting period were related to documentation, and do not reflect on ground environmental risks. Several Areas for Improvement were closed during the reporting period, and the overall number of audit findings open at the start of the period was the same as that open at the end of the period.

No Non-compliances were raised during the reporting period.

Activities at the plant site continued to be focused on mechanical and electrical works, which are of lower environmental risk than the earlier works dominated by civil activities. Commissioning activities commenced late in the reporting period with the commissioning of the seawater lift pumps, flushing of water from the intake and outlet tunnels, and circulation of seawater around the intake and outlet tunnels and the pump chambers.

The primary activities along the Utilities alignment related to reinstatement. This work has been suspended over winter, as conditions are too wet to allow work to continue. The main environmental risk relates to the potential for areas of which had not been

reseeded before winter to generate sediment. The audits found that appropriate sediment and erosion control has been installed in relevant areas.

The conclusions in relation to the objectives for the Environmental Audits in the Project Deed are given below.

### **Operation of the Environmental Management System**

The AquaSure Environmental Management System (EMS) provides the overall framework for environmental management for the project. The EMS continues to operate effectively. IR&EA and external audit findings relate to minor issues, largely concerned with documentation.

### **Implementation of each component of the EMP**

The D&C EMP and the Area EMPs, including the Commissioning Environmental Sub Plan remained effective in guiding on-ground environmental management. The environmental risk profile of construction activities continues to decrease as work along the utilities alignment is almost complete, and activities at the plant site are increasingly under cover.

### **Other Environmental requirements**

Construction related Environmental Performance Requirements are integrated into the relevant sub plans of the Area EMPs. Accordingly, the audits of the EMPs provide assurance that the Performance Requirements are being met. In addition, construction requirements and methodologies are defined in Site Establishment Packages and Temporary Works Packages, which refer to the D&C EMP and the Performance Requirements. These packages are certified by the IR&EA.

The design related Performance Requirements are integrated into the relevant Design Package. The IR&EA certification of the Design Packages includes assurance that the related performance requirements have been adequately addressed.

During the reporting period there were no material audit findings which would suggest that the Performance Requirements had not been met. It is noted that a Non-compliance relating to construction waste management has remained open for some time.





# 1 INTRODUCTION

The Victorian Desalination Project (VDP) is being constructed on the coast in South Gippsland near Wonthaggi by the AquaSure consortium in a public-private partnership with the Victorian Government. The project includes the desalination plant, a pipeline to transfer water to the Melbourne water distribution network near Cardinia, and an underground power supply, which will be largely in the same alignment as the pipeline.

Environmental management for both the design and construction, and operational stages of the VDP was a major part of planning for the Project. The Project was the subject of a comprehensive Environment Effects Statement (EES), including a Panel hearing. The Project must comply with a range of environmental requirements and approvals as outlined in the Project Deed between the State and AquaSure. Design and construction of the VDP is being carried out under a formal environmental management framework which includes an overarching Project Environmental Management System (EMS), and specific Environmental Management Plans (EMPs) for the overall Design and Construction (D&C) phase and each area of construction (the plant site, the pipeline and power supply corridor, and the marine works). The Operations and Maintenance (O&M) phase will similarly operate under specific EMPs. In addition a range of environmental requirements have been defined relating to the design and operation of the desalination plant, and to the construction activities.

The Independent Reviewer and Environmental Auditor (IR&EA) provides independent oversight of design engineering, construction, and environmental performance of the VDP. The IR&EA is jointly appointed by the State Government and AquaSure; the consortium building the VDP, and which will subsequently operate it. In particular, the IR&EA audits the Project Activities to assess whether the environmental requirements of the Project are being met. The Department of Sustainability and Environment (DSE) Capital Projects Division administers the contract with AquaSure on behalf of the State.

This report provides a summary of the IR&EA's monthly environmental audit outcomes from April - June 2012.

## 2 THE VDP ENVIRONMENTAL MANAGEMENT FRAMEWORK

The overall environmental management framework for the VDP was initially defined in the Environmental Effects Statement (EES) for the reference project. This framework was further refined and included in the Project Deed as contractual requirements for both the Design and Construction (D&C) and Operations and Maintenance (O&M) phases of the Project. The main components of the Environmental Management Framework are:

- The VDP must be designed and constructed in accordance with a set of documented Environmental Performance Requirements, included in Appendix S3 of the Project Deed. In addition, Commonwealth and Victorian environmental legal requirements must be met.
- An Environmental Management System and Environmental Management Plans to support delivery of compliance with the Environmental Performance Requirements; and
- Additional requirements in the Project Deed to support environmental management.

The main elements of the Environmental Management Framework for the D&C stage are summarised below.

### 2.1 Environmental performance requirements

The Project Deed, in Appendix S3, sets out over 200 individual Environmental Performance Requirements in 39 environmental areas. They apply variously to the D&C and/or the O&M stages of the Project, and are required to be met as a condition of the Project Deed. Many of the Environmental Performance Requirements must be considered in the design of the desalination plant, to ensure that operational environmental performance requirements can be met.

Some of the Environmental Performance Requirements are relevant to construction activities. The D&C EMPs should effectively incorporate these requirements, and include mechanisms to ensure that they are met.

Specific project approvals, and general environmental requirements are necessary under both Commonwealth and Victorian legislation. Some of the key environmental legal requirements derive from the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* and Victorian legislation including the *Environment Effects Act 1978*, the *Environment Protection Act 1970*, the *Planning and Environment Act 1987*, the *Flora and Fauna Guarantee Act 1988* and the *Wildlife Act 1975*. A full list of applicable legislation is given in the Technical Appendix 2 of the EES.

AquaSure must have a process to manage the identification of the compliance requirements associated with all the Environmental Performance Requirements, including approvals. In addition, AquaSure must identify how they will comply with these requirements and track progress of compliance actions.

## 2.2 EMS and EMPs

The Project is being designed and constructed, and will be operated, under the guidance of a set of formal environmental management documents:

- AquaSure maintains an overarching project Environmental Management System (EMS), which is required to be independently certified to the Australian and International standard AS/NZS ISO 14001:2004<sup>1</sup>. The EMS guides all aspects of environmental management for the project, including on-the-ground management of environmental issues and risks, as well as supporting mechanisms such as compliance management, delivery of relevant training, communication, auditing, inspections and monitoring.
- Specific documented Environmental Management Plans (EMPs) for the Plant Site, the Utilities corridor (covering the construction of the transfer pipeline and the underground power supply), and the marine intake and outlet structures. These Area EMPs are consistent with AquaSure's EMS, and include explicit requirements defined in Appendix S3 of the Project Deed. They are managed by AquaSure as part of their obligations under the Project Deed, and maintained by the D&C contractor, Thiess Degrémont Joint Venture (TDJV).

## 2.3 Other project environmental requirements

The Project Deed defines a number of other environmental conditions. The key ones are included in Appendix S3 and include:

- The appointment by AquaSure of a suitably qualified Environmental Management Representative (EMR), with appropriate resources to manage the implementation of the EMPs and to monitor compliance with the Environmental Requirements.
- Requirements for management of environmental incidents, provision of environmental training, control by AquaSure of subcontractors, and reporting and auditing.

The Project Deed also includes requirements for revision and approval of the EMS and EMPs, and for communication on environmental matters between AquaSure, the State and the IR&EA.

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<sup>1</sup> AS/NZS ISO 14001:2004. Environmental management systems. Requirements with guidance for use.

<sup>2</sup> AS/NZS ISO 19011:2002. Guidelines for quality and/or environmental management systems auditing

## 2.4 IR&EA environmental audits

The IR&EA is currently required under the Project Deed to conduct monthly audits of the Project Activities to determine whether they have been undertaken in accordance with the EMS, the EMP and Environmental Requirements.

The independent environmental audits are carried out on a rolling monthly basis. Audit and surveillance activities include field surveillance of construction activities, formal audits of the EMS and subordinate D&C and Area EMPs, and review of design documentation for compliance with design-based environmental performance requirements.

A risk-based approach is used to select the monthly activities and areas for surveillance and audit. AquaSure is required by the Project Deed to provide a Certificate of Environmental Compliance to the IR&EA and the State confirming that the Project Activities have been carried out in accordance with the EMP and the Environmental Requirements. These certificates are to be provided monthly on the first business day of each month.

The IR&EA has developed a Verification and Monitoring Plan under which all audit and surveillance activities are carried out.

Monthly Environmental Audit Reports are provided to AquaSure and the State, providing a summary of the audit activities, findings and conclusions.

As a condition of the D&C EMP approval, quarterly reports are prepared for the State to provide to the Minister for Environment and Climate Change on performance against the environmental requirements of the Project Deed, based on the findings of the monthly environmental audits. This report provides a summary of the environmental audit activities and outcomes conducted from April - June 2012. In addition the Design Review and Certification process provides evidence that the Project design is in accordance with the Environmental Performance Requirements defined in the Project Deed.

## 3 CONDUCT OF ENVIRONMENTAL AUDITS

The overall conduct of the environmental audits is consistent with the conduct of audit activities given in ISO 19011:2002<sup>2</sup>. The required timing of audit activities, including conducting audits and reporting, is defined in the Project Deed. An overview of the audit process is provided below and is shown in Figure 1 at the end of this section.

The environmental audits assess whether environmental management arrangements, as defined by AquaSure and approved by the State, in the EMS and D&C and Area EMPs, are being implemented. The environmental audits also address whether environmental risks are being adequately managed, and whether the Project Environmental Requirements are being met.

### 3.1 Audit objective

The objective for the environmental audit is given in clause 13.9 of the Project Deed, which requires that *“the Independent Reviewer & Environmental Auditor ... form an opinion as to whether or not the Environmental Management Plan and Environmental Requirements are being complied with, ... [and] to assess performance in relation to:*

- *the operation of the Environmental Management System;*
- *the implementation of each component of the Environmental Management Plan; and*
- *each other Environmental Requirement.”*

Environmental requirements are set out in Appendix S3 (Environmental Requirements) of the Project Deed, Environmental Approvals, and Ministers' requirements.

The environmental audits focus on:

- Construction-related Environmental Performance Requirements (including conditions of environmental approvals), which are the subject of a monthly rolling audit program designed to determine conformance with the EMS and D&C EMPs;
- Specific requirements of the EMS, D&C EMP, D&C Area EMPs, and subordinate documents which relate to the implementation of the overall EMS and EMPs; and
- Design-related Environmental Performance Requirements, conformance with which is assessed through audits of AquaSure/TDJV's internal processes for integrating Performance Requirements into design requirements, and during the Design Review and Certification process.

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<sup>2</sup> AS/NZS ISO 19011:2002. Guidelines for quality and/or environmental management systems auditing

### 3.2 Pre-audit activities

The audit activities for each month period are determined through the following activities:

1. **Review of the Construction Program** to identify the Project Activities occurring during the audit period.
2. **Review of the AquaSure/TDJV Environmental Risk Registers** to identify environmental risks relevant to the identified Project Activities, and the related identified controls (EMP Sub Plans or other requirements). The relevant elements of the controls form part of the audit criteria.
3. **Review of the IR&EA field surveillance checklist and results of previous audits** to identify any areas in which the planned environmental arrangements may not be met.
4. **Review of EMS and EMP requirements.** EMS and EMP requirements not directly related to control of identified environmental risks (e.g. training, communication, document and record management requirements) are reviewed to identify any key requirements which should form part of the audit.
5. **Review of the relevant environmental approvals.** The environmental approvals relevant to the identified Project Activities are reviewed to identify compliance requirements. The key compliance requirements are generally integrated into the Area EMPs, and are included as part of the audit criteria.
6. **Review of AquaSure and TDJV records** relating to: internal audits; environmental monitoring; non-conformance, corrective and preventive actions; and incidents.
7. **Confirmation of audit criteria and development of checklists.** Audit criteria are developed from the audit areas identified in the tasks above and included in checklists which are used to guide audit interviews, records reviews and inspections.

### 3.3 Audit scope

A scope for each audit is defined, and generally includes:

- AquaSure EMS implementation, including the responsibilities of the Environmental Management Representative (EMR) as required in Appendix S3 of the Project Deed;
- Implementation of the requirements of the D&C EMP;
- Implementation of the D&C Area EMPs as related to high risk areas identified by the AquaSure/TDJV environmental risk identification and management processes.

### 3.4 Audit reference documents

Audit reference documents are defined, relevant to the project activities and audit scope. These are generally the relevant EMP, and particularly the relevant sub plan. Specific audit

issues are identified from the reference documents, and included in a checklist, which are completed with audit observations and evidence each month and maintained as audit records.

### 3.5 Audit activities

Audit and surveillance activities include:

- Field surveillance of construction activities;
- Formal audits of the EMS and subordinate D&C and Area EMPs, both in the field to check on-ground compliance with environmental management arrangements, and office-based audits to assess the implementation of necessary environmental management procedures and processes; and
- Review of design documentation for compliance with design-based environmental performance requirements.

Activities and areas for surveillance and audit activities are chosen monthly on a risk basis.

### 3.6 Audit findings classification

Audit findings are classified according to the following definitions:

**Non-compliance:** The absence of, or the failure to implement and maintain, one or more requirements of the relevant EMP or subordinate documentation, or a situation, which would, on the basis of available objective evidence raise significant doubt as to the effectiveness of environmental management.

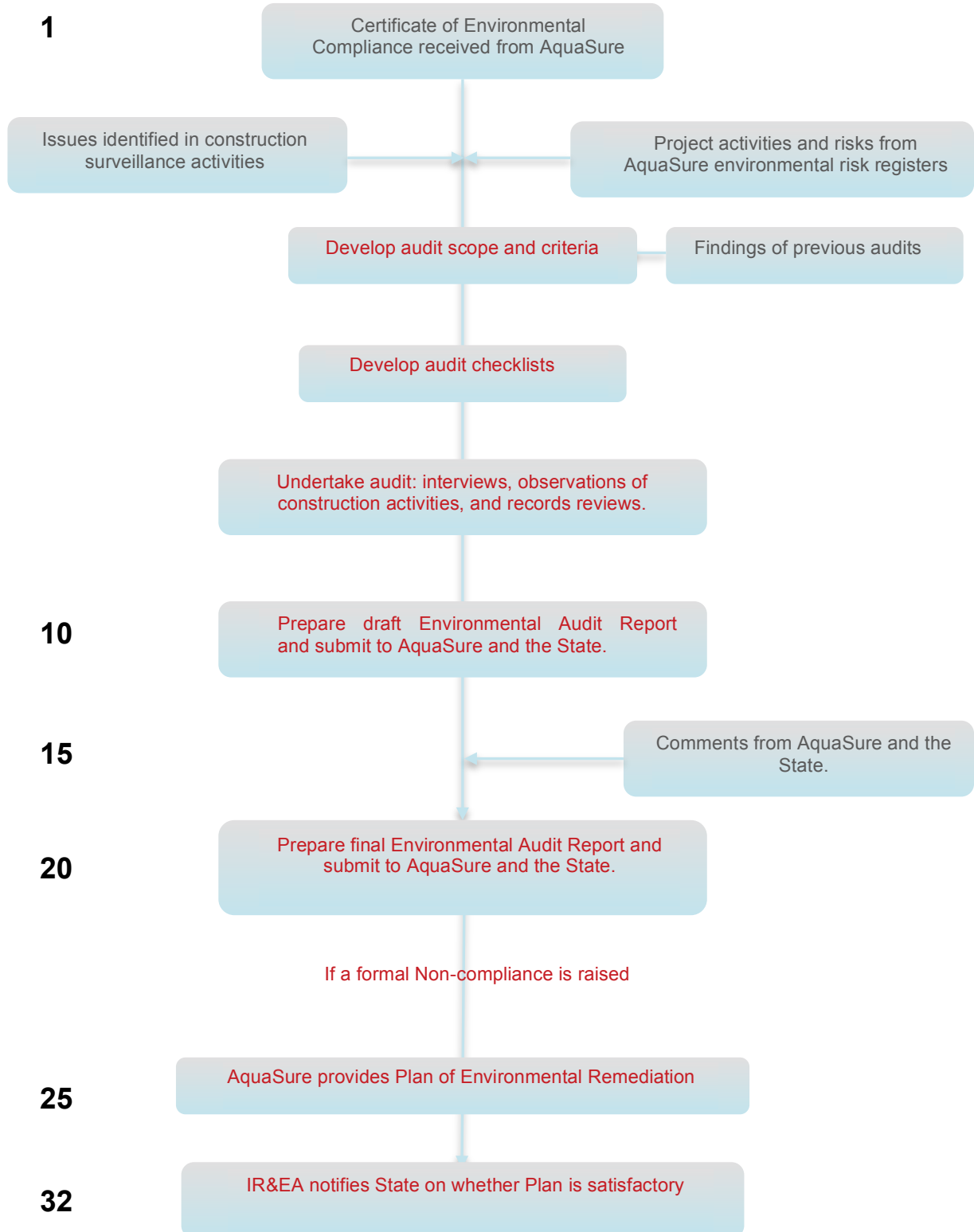
**Note:** A non-compliance may be an individual non-compliance or a number of minor but related audit non-conformances, which when considered in total are judged to constitute a non-compliance.

**Area for improvement:** A deficiency in the implementation of the relevant EMP or subordinate documentation judged to be a risk to the environment, or to environmental management, without constituting an overall failure in the area concerned.

**Observation:** An audit finding which may relate to an incidental or isolated system discrepancy, which does not compromise the effectiveness of environmental management, or constitute an actual or potential environmental risk.

**Figure 1. Overview of the environmental audit process**

**Business days  
from start of month**





## 4 PROJECT ACTIVITIES AND ENVIRONMENTAL AUDITS

### 4.1 Project activities

The Project Activities occurring during the reporting period were:

- **Plant site:** minor bulk earthworks, civil works, building works, electrical works and mechanical installation. Site revegetation continued outside the construction footprint. Construction verification and cleaning activities continued, and early commissioning works were conducted.
- **Utilities alignment:** Reinstatement of the alignment continued during the reporting period. The power cable was successfully energised from the Cranbourne Terminal Station to the Plant site.
- **Marine works:** completion of marine construction activities.

Views of these construction activities are shown in Figures 2 and 3 below.

**Figure 2. Final marine works, April 2012**



Photo courtesy of TDJV

**Figure 3. Construction of surge tank, April 2012**



Photo courtesy of TDJV

## 4.2 Environmental audits

The IR&EA conducted the following audits during the reporting period:

Audit No	Date	Scope
140	13/4/12	Office audit of implementation of the Environmental Management Representative's (EMR's) responsibilities and relevant requirements of the Project Deed
141	13/4/12	Office audit of documentation and records related to requirements of the D&C EMP
142	3/4/12	Field audit of implementation of key requirements and sub-plans of the D&C Plant and General Area EMP
143	4/4/12	Field audit of implementation of key requirements and sub-plans of the D&C Utilities Area EMP
144	13/4/12	Office audit of the implementation of the Baseline Marine Monitoring Program
145	13/4/12	Office audit of the implementation of the D&C Marine Area EMP

Audit No	Date	Scope
146	1/5/12	Office audit of implementation of the Environmental Management System (EMS), and the Environmental Management Representative's (EMR's) responsibilities and relevant requirements of the Project Deed
147	2/5/12	Office audit of documentation and records related to requirements of the D&C EMP
148	2/5/12	Field audit of implementation of key requirements and sub-plans of the D&C Plant and General Area EMP
149	7/5/12	Field audit of implementation of key requirements and sub-plans of the D&C Utilities Area EMP
150	8/5/12	Office audit of the implementation of the Baseline Marine Monitoring Program
151	8/5/12	Office audit of the implementation of the D&C Marine Area EMP
152	12/6/12	Office audit of implementation of the Environmental Management System (EMS), and the Environmental Management Representative's (EMR's) responsibilities and relevant requirements of the Project Deed
153	13/6/12	Office audit of documentation and records related to requirements of the D&C EMP
154	13/6/12	Field audit of implementation of key requirements and sub-plans of the D&C Plant and General Area EMP
155	13/6/12	Field audit of implementation of key requirements and sub-plans of the D&C Utilities Area EMP
156	13/6/12	Office audit of the implementation of the Baseline Marine Monitoring Program
157	13/6/12	Office audit of the implementation of the D&C Marine Area EMP

## 5 AUDIT FINDINGS AND CONCLUSIONS

### 5.1 Audit findings

During the reporting period a total of three formal audit findings were raised, all of these Areas for Improvement. A list of all the audit findings, as well as corrective and preventive actions to the end of June 2012 taken by AquaSure and TDJV to close the findings is given in Appendix 1.

A summary of the numbers of audit findings is given in Table 1 below.

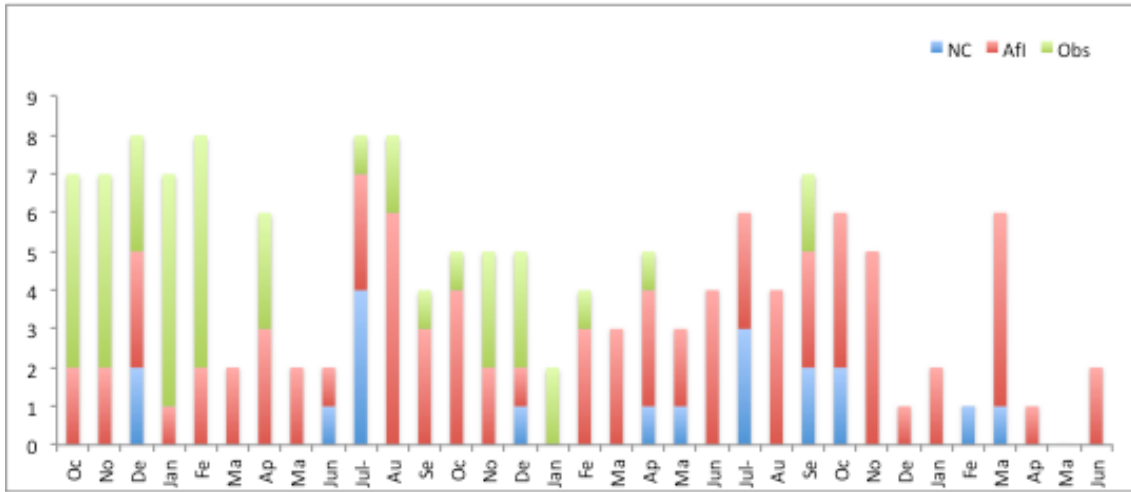
**Table 1. Summary of environmental audit findings Q2 2012**

<b>Audit finding type</b>	<b>No. Open at April '12</b>	<b>No. Raised Apr - June '12</b>	<b>No. Closed Apr - June '12</b>
Non Compliance	3	0	0
Area for Improvement	6	3	3
Observation	0	0	0
<b>Totals</b>	<b>9</b>	<b>3</b>	<b>3</b>

The number of audit findings raised this reporting period continued the fall as noted in previous reporting periods. This is consistent with the nature of the Project activities. Work along the Utilities alignment is almost complete, and at the Plant site construction activities are increasingly under cover and on paved surfaces, while the commissioning activities are yet to be fully underway. This reduces the overall environmental risk of construction activities.

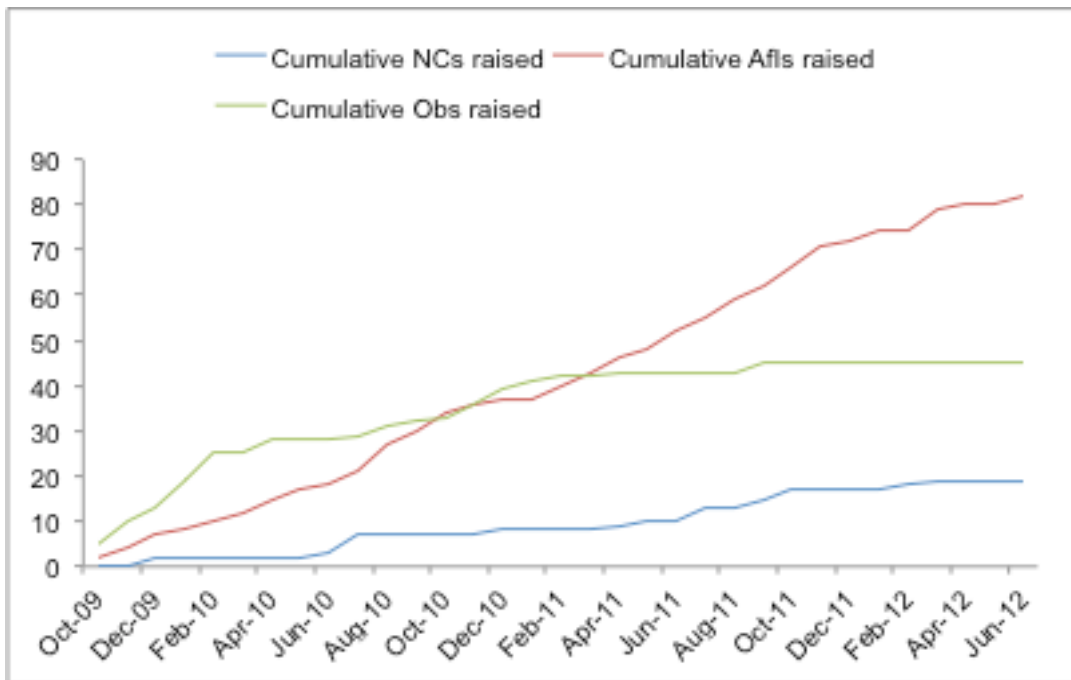
The number of each type of audit finding raised each month since project inception is given in Figure 4 below.

**Figure 4. Audit findings by category.**



The overall number of audit findings raised (and closed) since the project started is given in Figure 5 below.

**Figure 5. Cumulative number of audit findings, Project inception to date.**



The audit findings raised during the reporting period were related to documentation, and do not reflect on ground environmental risks. Several Areas for Improvement were closed during the reporting period, and the overall number of audit findings open at the start of the period was the same as that open at the end of the period.

No Non-compliances were raised during the reporting period.

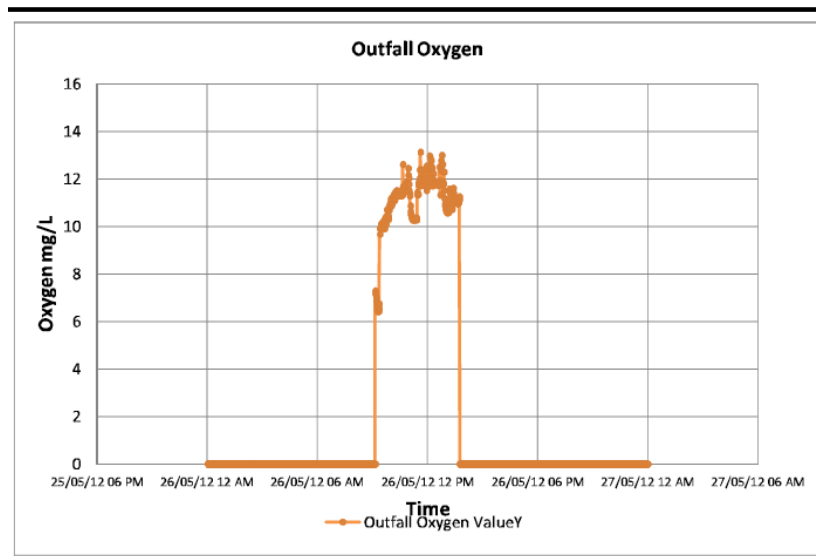
Activities at the plant site continued to be focused on mechanical and electrical works, which are of lower environmental risk than the earlier works dominated by civil activities. Commissioning activities commenced late in the reporting period with the commissioning of the seawater lift pumps, flushing of water from the intake and outlet tunnels, and circulation of seawater around the intake and outlet tunnels and the pump chambers.

Some of the construction activities at the plant site are shown in Figures 6 and 7 below.

**Figure 6. Final bio-retention basin takes shape, Plant Site, June 2012**



**Figure 7. Monitoring discharges, Plant Site, June 2012**





The primary activities along the Utilities alignment related to reinstatement. This work has been suspended over winter, as conditions are too wet to allow work to continue. The main environmental risk relates to the potential for areas of which had not been reseeded before winter to generate sediment. The audits found that appropriate sediment and erosion control has been installed in relevant areas.

Some of the construction activities along the utilities alignment site are shown in Figures 8 and 9 below.

**Figure 8. Waterway reinstatement, Utilities alignment, April 2012.**



**Figure 9. Sediment and erosion control, Utilities alignment, April 2012**



## **5.2 Audit conclusions**

The conclusions in relation to the objectives for the Environmental Audits in the Project Deed are given below.

### **5.2.1 Operation of the Environmental Management System**

The AquaSure Environmental Management System (EMS) provides the overall framework for environmental management for the project. The EMS continues to operate effectively. IR&EA and external audit findings relate to minor issues, largely concerned with documentation.

### **5.2.2 Implementation of each component of the EMP**

The D&C EMP and the Area EMPs, including the Commissioning Environmental Sub Plan remained effective in guiding on-ground environmental management. The environmental risk profile of construction activities continues to decrease as work along the utilities alignment is almost complete, and activities at the plant site are increasingly under cover.

### **5.2.3 Other Environmental requirements**

Construction related Environmental Performance Requirements are integrated into the relevant sub plans of the Area EMPs. Accordingly, the audits of the EMPs provide assurance that the Performance Requirements are being met. In addition, construction requirements and methodologies are defined in Site Establishment Packages and Temporary Works Packages, which refer to the D&C EMP and the Performance Requirements. These packages are certified by the IR&EA.

The design related Performance Requirements are integrated into the relevant Design Package. The IR&EA certification of the Design Packages includes assurance that the related performance requirements have been adequately addressed.

During the reporting period there were no material audit findings which would suggest that the Performance Requirements had not been met. It is noted that a Non-compliance relating to construction waste management has remained open for some time.



## Appendix 1. Environmental audit findings Q2 2012

The following table summarises the audit findings which were open at the beginning of the reporting period, and those raised during the reporting period.

AUDIT NO.	DATE	TYPE.	FINDING NO.	FINDING	ACTION	STATUS
84	11/05/11	N	84/01	<b>D&amp;C EMP Resource Efficiency Sub Plans. Waste Management Report 2010.</b> Data are not available to support the statements of recycling in the Waste Management Report. The amount of recyclable waste in general waste has not been reliably quantified. Data are not well presented and do not clearly identify how recycling rates were generated.	<p>TDJV response:</p> <p>A Waste Assessment consultant has been engaged to conduct on site waste assessments for both the Plant Site and Utilities Corridor. The first round of assessments will be conducted on 15 and 16 June 2011 and will continue on a monthly basis. The assessments will be used to develop and assess quantifiable monthly achievements of waste targets. Quarterly reviews of the waste data will commence in the second quarter 2011 against the waste assessment data obtained.</p> <p>June 2011: Actions are on-going July 2011: Waste assessments have been done, waiting for report.</p> <p>August 2011: Draft waste assessment report received by TDJV for comment. TDJV will review second monthly assessment before setting targets.</p> <p>September 2011: Monthly data gathering to continue. Development of targets to be done recognising the stage of construction.</p> <p>October 2011: TDJV is developing a monthly reporting approach, with reporting against targets and recommendations developed in the previous month. This will take into account the stage of construction and anticipated wastes.</p> <p>November 2011: Project wide waste report has been received from consultant. This includes an action list. The waste assessments are to be continued each month. Waste targets are to be tracked.</p> <p>December 2011: Draft October Waste Assessment sighted, which provides whole of project waste data and actions.</p> <p>January 2012: The quarterly reviews of waste data are to</p>	Remains open

AUDIT NO.	DATE	TYPE.	FINDING NO.	FINDING	ACTION	STATUS
					<p>commence this quarter.</p> <p>February 2012: A draft of the quarterly review is due within a week.</p> <p>March 2012: The quarterly review is not yet done.</p> <p>April 2012: The draft quarterly report is being reviewed. Draft report for Q4 2011 sighted.</p> <p>May 2012: The second quarterly waste audit will commence during the next month.</p> <p>June 2012: The Q4 2011 report is now finalised. March 2012 monthly report sighted. No site wide overview of waste generation characteristics and disposal is available from these reports. E.g. waste metal in separated metal recycling bins is not being captured in the data.</p>	
113	7/11/11	Afl	113/02	<b>AquaSure EMS, 10.3.1 AquaSure continual improvement.</b> There is no regular or systematic approach to capturing and disseminating best practice and lessons learnt from the Project.	<p>December 2011: An appropriate response to this is being considered by AquaSure</p> <p>January 2012: An effective mechanism for capturing issues is being developed.</p> <p>February 2012: no further progress.</p> <p>March 2012: no further progress.</p> <p>April 2012: The EMR has collated lessons learnt and circulated to TDJV. <b>Finding closed.</b></p>	Finding Closed Audit No 140 April 2012

AUDIT NO.	DATE	TYPE.	FINDING NO.	FINDING	ACTION	STATUS
131	7/02/12	N	131/01	<p><b>D&amp;C EMP Utilities Area EMP, Att L MIRA Schedule.</b> Post construction monitoring of areas of known significant species has not been conducted in accordance with the timing requirements of the EPBC Listed Species Management Strategy. It is noted that PLJV has commenced discussions with SEWPAC to refine these monitoring requirements.</p>	<p>TDJV response (summarised):</p> <p>The EPBC Act Listed Species Management Strategy outlines post construction monitoring for EPBC Act listed threatened (endangered or vulnerable) species that were considered likely to be adversely affected by the construction and or operation of the Victorian Desalination Project. The post construction monitoring requirements have been summarised below. [...]</p> <p>The Management Strategy defines the Post-construction Phase as ‘activities once the VDP is operational, such as site restoration and rehabilitation, and EPBC Act listed species management and monitoring requirements’ (Section 2.2 Definitions). For Growling Grass Frog and Southern Brown Bandicoot, no point in the construction phase is identified as a trigger for the commencement of post construction monitoring to differ from this definition. For these species, the post construction monitoring has therefore been planned to commence once habitat at known or potential sites has been restored, which would attract the species to recolonise the disturbed area. The sites of known of potential habitat for Growling Grass Frog and Southern Brown Bandicoot are currently being reinstated and as such the post construction monitoring for these species will commence in the coming months.</p> <p>In the case of the threatened freshwater fish (Australian Grayling and Dwarf Galaxias) however, the Post Construction Phase management actions and mitigation measures (Section 20.5 and 21.5) specify that post construction monitoring should commence ‘one week after the waterway has been traversed’ with subsequent surveys occurring one month after crossing and then quarterly thereafter. As such the non-compliance is taken to apply to the threatened freshwater fish only. Post construction monitoring for threatened freshwater fish will therefore commence as soon as practicable at the sites of known habitat. The commencement of post construction monitoring will include the following survey and assessment within the</p>	Remains open

AUDIT NO.	DATE	TYPE.	FINDING NO.	FINDING	ACTION	STATUS
					<p>construction zone as well as at an up and down stream reference sites at each waterway including:</p> <ul style="list-style-type: none"> <li>• Assessment of habitat values;</li> <li>• Trapping over two days;</li> <li>• One session of dip netting, seine netting and electro fishing;</li> <li>• In situ water quality sampling (pH, conductivity, DO and turbidity).</li> </ul> <p>The timing of the surveys is to occur as follows:</p> <ul style="list-style-type: none"> <li>• First survey as soon as practical (within the next month).</li> <li>• Second survey to occur within the following month.</li> <li>• Quarterly thereafter.</li> </ul> <p>As this non-compliance applies to the conditions of the EPBC Act approval, the Department of Sustainability, Environment, Water, Population and Communities (SEWPaC) will be notified of the status of the monitoring.</p> <p>March 2012: SEWPaC has been verbally advised of the contravention of the monitoring requirements.</p> <p>April 2012: SEWPAC has been provided with written notification. An initial response has been received from SEWPAC requesting further information. Ecology Partners has been engaged to undertake the monitoring. Three rounds of monitoring have been commissioned.</p> <p>May 2012: The post-construction monitoring has not started as a whole. SEWPAC has been notified. SEWPAC has asked for further information, which has been provided. No response was received from SEWPAC during April. Fish monitoring has been started at some waterways where works have been completed. Results from the monitoring have not yet been received by TDJV.</p> <p>June 2012: No further correspondence from SEWPAC.</p>	

AUDIT NO.	DATE	TYPE.	FINDING NO.	FINDING	ACTION	STATUS
134	9/03/12	Afl	134/01	<b>AquaSure EMS. 8.2 Competence training and awareness.</b> The EMR has not audited the implementation of training and awareness programs by the D&C contractor.	<p>April 2012: not yet done, planned for inclusion in a commissioning readiness audit late in April.</p> <p>May 2012: the EMR has audited, but not yet written up the audit report. The audit included assessment of the commissioning readiness.</p> <p>June 2012: audit of commissioning readiness included training. <b>Finding closed.</b></p>	Finding Closed Audit No 152, June 2012
135	7/03/12	Afl	135/01	<b>D&amp;C EMP Training, Attachment H.</b> There is no definition of the requirement for 'General Environmental training' identified in Attachment H, and no records to demonstrate implementation of this training.	<p>April 2012: No action</p> <p>May 2012: Training matrix amended, but not yet completed and approved.</p> <p>June 2012: No further progress.</p>	Remains open
135	7/03/12	N	135/02	<b>D&amp;C EMP, 9.5.2 TDJV internal audits.</b> There has been no satisfactory progress on developing and implementing an effective internal audit process.	<p>TDJV response:</p> <p>TDJV recommenced the internal audit schedule on 15 March 2012. The TDJV internal audits will focus on the D&amp;C EMP document management, changed EMP requirements and high risk activities as defined in the area risk registers, current and pending significant environmental issues and as identified during the Environmental Managers (Ems) Meetings. Each quarterly audit schedule will be developed during the Environment Managers meeting prior to the quarter commencing but the audits will be undertaken across each of the Plant and General, Utilities and Marine areas and will be conducted in conjunction with the AquaSure EMR audits where possible. The quarterly audit schedule will comprise a general audit of D&amp;C EMP compliance and implementation and three subject/issue specific audits. It is anticipated that the topics will change as required; however, the timing of the schedule will remain in place.</p> <p>April 2012: The next internal audit is scheduled for later in April.</p> <p>May 2012: Internal audit on resource efficiency conducted in previous week, but report not yet completed.</p> <p>June 2012: Thiess Business Unit audited on behalf of TDJV. Reviewed commissioning. No final audit report for the resource</p>	Remains open

AUDIT NO.	DATE	TYPE.	FINDING NO.	FINDING	ACTION	STATUS
					efficiency audit available.	
136	8/03/12	Afl	136/01	<b>D&amp;C EMP, Plant and General Area. Hazardous Materials Sub Plan.</b> At least six examples of containers of diesel and oils stored unbanded were observed around the site.	<p>April 2012: A number of containers of diesel were observed to be unbanded.</p> <p>May 2012: The environmental team has sent advice to the work crews to rectify storage practices and to store fuels in suitable locations.</p> <p>June 2012: A number of examples of jerry cans of diesel stored on bare ground were observed.</p>	Remains open
137	6/03/12	Afl	137/01	<b>D&amp;C EMP, Utilites Area, ASS Management Sub Plan. Post construction monitoring.</b> Post construction groundwater monitoring in ASS areas is required three-monthly following completion of construction. This monitoring has not been scheduled or commissioned.	<p>April 2012: Bores are in place and Chadwicks will continue to monitor. Sighted email requesting monitoring continue. <b>Finding closed.</b></p>	Finding Closed Audit No 143 April 2012
139	7/03/12	Afl	139/01	<b>D&amp;C EMP Marine Area.</b> There has been no inspection of activities or review of environmental management for marine works since the pre-works checks.	<p>TDJV response: Not yet provided</p> <p>April 2012: No further action</p> <p>May 2012: No change.</p> <p>June 2012: Records of inspections or environmental overview of marine works will be provided by the contractor when the works are completed.</p>	Remains open
141	13/04/12	Afl	141/01	<b>D&amp;C EMP. 9.3 Nonconformity, corrective and preventive action.</b> The TDJV Audit Action register has not been maintained. Priorities for corrective and preventive actions assigned in the action register are not based on environmental risk. Internal TDJV and AquaSure audit findings are not reported monthly.	<p>TDJV response: Not yet provided</p> <p>May 2012: No action.</p> <p>June 2012: No action</p>	Remains open
153	13/06/12	Afl	153/01	<b>D&amp;C EMP. 7.1 Environmental Policy.</b> A new TDJV Environmental Policy was authorised earlier this year, but has not been communicated to Project personnel or included in environmental induction and awareness material. There are no records to demonstrate a review of the D&C EMP to ensure consistency with the revised	<p>TDJV response: Not yet provided</p>	Remains open

AUDIT NO.	DATE	TYPE.	FINDING NO.	FINDING	ACTION	STATUS
				Policy.		
154	13/06/12	Afl	154/01	<b>D&amp;C EMP. Commissioning Sub Plan.</b> The Commissioning Environmental Monitoring and Control Procedure document control information indicates that the TDJV Commissioning Manager approved the Procedure for issue on 31/3/2012 before the AquaSure EMR and the TDJV Environment Manager reviewed it for adequacy (during May 2012). The Procedure has not been formally included as part of the TDJV controlled document system (InCite). The Commissioning Environmental representative advised that the Procedure had been distributed to the commissioning leads; however, there are no records to demonstrate that the requirements of the Procedure had been communicated to the commissioning team before commissioning commenced.	TDJV response: Not yet provided	Remains open