

Victorian Desalination Project



Area 1 - D&C Marine Area Environmental Management Plan

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D&C Marine Area EMP

Amendment

Date	Rev-Ver	Amendment Description	Initials
08.02.2009	A Draft	Original Issue for inclusion in tender	█
08.05.2009	B Draft	Complete EMP submission	█
17.06.2009	C Draft	Revised EMP combining pipeline and power & Agency comments	█
15.07.2009	D Draft	Address Agency comments	█
19.08.2009	E Draft	Address IR &EA, State and Agency comments	█
27.08.2009	C-01	Issued for Certification	█
16.11.2009	00-00	EMR review & Area Environmental Manager review	█
21.12.2009	00-01	Complete EMS/EMP Submission to State	█
30.06.2010	00-02	Complete EMS/EMP Major Revision Submission to State	█
03.09.2010	00-03	Major Revision	█

Authorisation

This document complies with the requirements of the Thiess Degrémont Joint Venture (TDJV) and is authorised for use by the undersigned:

Function	Name	On Behalf of	Signed	Date
Reviewed by	█	TDJV		06/09/2010
Approved by	█	TDJV		06/09/2010
Approved by	█	TDJV		06/09/2010
Authorised by	█	AquaSure		06/09/2010
Consent	█	The State		07/10/2010
Review and Assent	█	IR&EA		02/09/2010



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D&C Marine Area EMP

1 Purpose and application

1.1 Purpose

The purpose of this AEMP is to enable the achievement of the environmental performance requirements of the project and to comply with environmental legislation for the design and construction phase of the marine structures for the Victorian Desalination Project. The AEMP establishes the environmental management controls to be implemented.

This AEMP EMP describes TDJV's system for minimising and managing environmental risks associated with project design and construction activities. The EMP has been prepared in conformance with AquaSure's Environmental Management System (EMS) Manual and with reference to AS/NZS ISO 14001:2004.

This AEMP is subsidiary to the D&C EMP. Attachment A provides a summary of how this AEMP meets the requirements of the AquaSure EMS Manual, particularly with respect to the Project Deed.

1.2 Application

This AEMP applies to TDJV, its consultants and subcontractors in designing and constructing the marine structures for the Victorian Desalination Project.

This AEMP will be developed, implemented and reviewed as set out in the D&C EMP.

All personnel must comply with the requirements of this AEMP.

ATTACHMENT A – Compliance Ready Reference

Appendix S3 Environmental Requirements Clause	EMP Reference
1 General Requirements	Addressed in AquaSure EMS Manual
2 Environmental Management System and Environmental Management Representative	Addressed in AquaSure EMS Manual
3 Environmental Management Plans (EMPs)	D&C EMP Section 6
3(a)(i) Overarching Project EMP consistent with the EMS	D&C EMP
3(a)(ii) Discrete EMPs (Component Specific EMPs) consistent with the Project EMP	D&C Section 6.2.2 and this AEMP
3(b) Each EMP must address the potential environmental impacts of the project throughout the project term and be incorporated into an operating framework which is readily understood by intended users	This AEMP and D&C EMP Section 6.2
3(c) Each discrete EMP must, as a minimum, include the following:	
3(c)(i) an outline of the regulatory framework under which the Works and Temporary Works associated with that component will be undertaken, including a list of required Approvals and the timeframes and information needed for obtaining these	D&C EMP Section 7.5 AEMP Attachment E, Attachment F
3(c)(ii) identification of environmental conditions and issues, particularly where there are sensitive areas, and potential impacts as assessed by Project Co, including those matters described in relevant studies described in the Reference Documents	D&C EMP Section 6.2 and 7.4 AEMP Attachment C, Attachment I (Sub Plans)
3(c)(iii) identification of the environmental risks to be managed and the management measures and methodologies to be taken to meet the Environmental Requirements set out in this Appendix S3, and the risk assessment procedures to be applied in evaluating siting, design, mitigation and offset measures	D&C EMP Section 7.4 AEMP Attachment C, Attachment I (Sub Plans)
3(c)(iv) contingency measures to be adopted if significant environmental risks are either identified through the risk assessment process required under paragraph (iii) or otherwise encountered during the Project Term	D&C EMP Section 8.6 AEMP Attachment I (Sub Plans), Attachment K
3(c)(v) performance objectives and criteria consistent with Schedule A to this Appendix to provide a clear basis of accountability for environmental outcomes	D&C EMP Section 7.2 and 7.5 AEMP Attachment G
3(c)(vi) management strategies and methodologies address subparagraphs (a) to (d) above, the following Environmental Management System elements	
3(c)(vi)(A) environmental policy and planning	D&C EMP Section 7
3(c)(vi)(B) resources, roles, responsibilities and authorities	D&C EMP Section 5
3(c)(vi)(C) competence, induction, training and awareness including the methods and means by which environmental management requirements will be incorporated into day-to-day work activities (for example, JSEA, design standards, work pack method statements, pre-start checklist and “tool box” training) and incorporating the requirements of section 5 of this Appendix S3;	D&C EMP Section 8.2
3(c)(vi)(D) documentation	D&C EMP Section 6.2
3(c)(vi)(E) control of environmental documents;	D&C EMP Section 8.4

Appendix S3 Environmental Requirements Clause	EMP Reference
3(c)(vi)(F) environmental operational control	D&C EMP Section 8.5
3(c)(vi)(G) emergency preparedness and response incorporating the requirement of section 4 of this Appendix S3	D&C EMP Section 8.6 AEMP Attachment I (Sub Plans), Attachment K
3(c)(vi)(H) pre-construction surveys	D&C EMP Section 6.2.3 AEMP Attachment I (Sub Plans)
3(c)(vi)(I) monitoring and measurement including specific procedures to be adopted during construction and operations to ensure compliance with the Deed, including the Environmental Requirements and environmental conditions of any Approval under any Environmental Law	D&C EMP Section 9.1 and 9.2 AEMP Attachment L
3(c)(vi)(J) performance evaluation, including compliance	D&C EMP Section 9.2
3(c)(vi)(K) communication and complaints handling, including procedures for stakeholder management, management of interaction with landowners and dispute resolution processes	D&C EMP Section 8.3
3(c)(vi)(L) Incident management and communication procedures sufficient to meet the requirements of section 4 in this Appendix S3, including Incident reporting, Incident and nonconformity investigation, corrective and preventive action	D&C EMP Section 8.6 AEMP Attachment K
3(c)(vi)(M) management and control of records	D&C EMP Section 9.4
3(c)(vi)(N) reporting and auditing to ensure compliance with ISO 14001 auditing requirements, the Environmental Requirements, clause 13.10 of the Deed and section 7 in this Appendix S3	D&C EMP Section 9.5 and 10.1 AEMP Attachment L
3(c)(vi)(O) management review, including management performance monitoring of the implementation and effectiveness of the Environmental Management System	D&C EMP Section 10.2
3(c)(vii) timeframes for commencement, carrying out and completion of measures	Throughout D&C EMP and AEMP
4 Emergency/Environmental Incident Procedures	D&C EMP Section 8.6 AEMP Attachment I (Sub Plans), Attachment K
5 Training	D&C EMP Section 8.2.3 AEMP Attachment H
6 Control of Associates	AquaSure EMS Manual
7 Reporting and Auditing Requirements	D&C EMP Section 9.5 and 10.1 AEMP Attachment L



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ATTACHMENT B – Project Components



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ATTACHMENT C – Environmental Risk Register



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ATTACHMENT D – List of Technical Records, References and Documents



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ATTACHMENT E – Environmental Legislation Register



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ATTACHMENT F – Environmental Licence, Permit and Approvals Register



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ATTACHMENT G – Environmental Obligations Register



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ATTACHMENT H – Environmental Training Matrix



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ATTACHMENT I – Environmental Sub Plans

I1 - Coastal Processes and Activities

I2 - Hazardous Materials

I3 - Resource Efficiency and Waste Management

I4 - Marine Flora & Fauna

I5 - Helicopter Management

I6 - Marine Pest & Pathogen Management

I7 - Underwater Noise



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ATTACHMENT J – Environmental Inspection Checklist

- J.1 TDJV Environmental Inspection Checklist (Monthly)
- J.2 TDJV Environmental Inspection Checklist (Weekly)
- J.3 TDJV Environmental Subcontractor Inspection Checklist



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ATTACHMENT K – Environmental Incident Response Plan



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ATTACHMENT L – Monitoring, Inspection, Reporting and Audit Schedule