

DURALIE COAL MINE
EROSION AND SEDIMENT CONTROL PLAN

AUXILIARY DAMS ADDENDUM

DISTRIBUTION SUMMARY

Copy sent to:	Revision	Date	Purpose
Duralie Coal	ESCP-Aux Dam-A	12/12/08	Final
Department of Planning	ESCP-Aux Dam-A	12/12/08	Final
Environment Protection Authority	ESCP-Aux Dam-A		Information

TABLE OF CONTENTS

<u>Section</u>		<u>Page</u>
1	PURPOSE OF THIS DOCUMENT	1
	1.1 DESIGN CRITERIA	1
2	EROSION AND SEDIMENT CONTROL MEASURES	2
3	REFERENCES	3

LIST OF TABLES

Table 1	Sediment Control Structures – Capacity Requirements
---------	---

LIST OF FIGURES

Figure 1	Auxiliary Dams Location
----------	-------------------------

1 PURPOSE OF THIS DOCUMENT

This document is an addendum to the Duralie Coal Mine (the Project) Erosion and Sediment Control Plan (ESCP) (DCPL, 2002). Erosion and sediment control measures described in this addendum cover works associated with the construction of proposed Auxiliary Dams 1, 2 and 3.

Erosion and sediment controls presented in this document are indicative and may be modified where necessary based on site-specific conditions. Particular reference should be made to Section 5 of the Site Water Management Plan.

This addendum has been prepared in accordance with development consent condition 38 (i) and the water management principles presented in the Duralie Coal Environmental Impact Statement (EIS) (DCPL, 1996), Project Statement of Environmental Effects (Resource Strategies, 1998) and Commission of Inquiry submissions. Erosion and sediment control strategies presented in this addendum will be carried out in accordance with the Project ESCP (DCPL, 2002) as approved by the NSW Department of Land and Water Conservation (DLWC – now Department of Water and Energy (DWE)) on 10 June 2002.

DCPL will retain appropriate Contractors to undertake the various works. This ESCP Addendum has been prepared to assist the Contractor undertaking the works in the implementation of appropriate environmental management measures during the construction of the Project. Where there is any conflict between the provisions of this ESCP Addendum and the Contractor's obligations under the Contract including the various statutory requirements (i.e. licences, permits, consent conditions and relevant laws) the Contract and statutory requirements are to take precedence. In the case of any real or perceived ambiguity between elements of this ESCP Addendum and the above statutory requirements the Contractor shall first request clarification from the Principal and/or Superintendent prior to implementing that element of this ESCP Addendum over which the ambiguity is identified.

1.1 DESIGN CRITERIA

Table 1
Sediment Control Structures – Capacity Requirements

Sediment Control Structure	Function	Design Capacity
Upslope diversion drains	Reduce runoff from undisturbed areas to disturbed areas	Capable of passing the peak flow generated by the 1 in 20 year 1 hour rainfall event ¹
Downslope collection drains	Intercept and convey disturbed area runoff water to sediment dams	Capable of passing the peak flow generated by the 1 in 20 year 1 hour rainfall event ¹
Sediment dams	Settlement of sediments in runoff from disturbed areas	Volume to store the runoff produced by the 1 in 20 year 1 hour storm event ²
Sediment dam spillway channels	Facilitate the passage of flows in excess of the sediment dam storage capacity	Capable of passing the peak flow generated by the 1 in 20 year critical duration rainfall event

1 In accordance with DLWC (now DWE) conditions of approval for the Project ESCP (received 10 June 2002)

2 Assuming a runoff coefficient of 0.8

2 EROSION AND SEDIMENT CONTROL MEASURES

The Vegetation Clearance Protocol (VCP) will be followed for the proposed works. Note that only a small number of trees are expected to be removed during dam and associated diversion drain construction.

It is anticipated that construction work will commence in either December 2008 or early 2009. The subject area is shown within Figure 1.

Erosion and sediment controls will include:

- Minimising the invert grade within the upslope diversion drain above Auxiliary Dam 1 to limit mobilisation of soils;
- Utilising an existing well grassed slope to convey a non-focussed overland flow of water from the discharge point of the upslope diversion drain to Diversion Drain Dam 2 (DDD2 - an existing dam);
- Prior to grass cover establishment within the upslope diversion drain, installing a series of cross invert sections of silt fence within the drain;
- Utilizing DDD2 as a sediment dam (down grade of other primary means of sediment capture such as silt fencing) for both the upslope diversion drain and Auxiliary Dam 1 embankment construction;
- Utilizing the Main Water Dam (MWD) as a sediment dam for capture of sediment generated by construction of both Auxiliary Dams 2 and 3 (again, down grade of other primary means of sediment capture such as silt fencing). Note that no upslope clean water diversion is required for either Auxiliary Dam 2 or 3 since the Main Water Diversion Dam will serve this purpose; and
- Exclusion of cattle from structures which may be adversely impacted by the presence of cattle through selective placement of fencing.

It is also proposed to construct an unsealed road from the existing infrastructure area to the dam construction site. This road will enable the transportation of clay won as a consequence of advancing mining operations (and currently stored within the mining footprint) for use in dam wall building. It is proposed to construct the road using suitable sub-base and sheeting materials which have limited potential to release fines during wet weather.

An existing sediment dam (SD5), with supplementation by additional small sediment dams, if required, to be sited along the proposed road, will be utilised for controlling sediment generated through road construction and use. The capacity of SD5 will be enlarged if the proposed road increases the catchment reporting to that dam. Use of silt fencing or some other appropriate method of containing sediment will be employed in area where a sediment dam is not considered necessary. It is proposed, where practical, to isolate clean and dirty water catchments in order to limit the volume of dirty water to be managed.

Topsoil Management and Performance Monitoring

Topsoil management and performance monitoring will be conducted in accordance with the ESCP (DCPL, 2002). It is proposed that temporary topsoil stockpiles will be fully located within the catchment serviced by the above stated control works.

3 REFERENCES

DCPL (1996) *Duralie Coal Environmental Impact Statement.*

DCPL (2002) *Duralie Coal Mine Erosion and Sediment Control Plan.*

DLWC (2002) *Correspondence from Department of Land and Water Conservation.*

Resource Strategies (1998) *Proposed Alterations to Duralie Coal Project Statement of Environmental Effects.*

DCPL (2008) *Duralie Coal Auxiliary Dams Statement of Environmental Effects*

FIGURE

