

Cue Energy Bass Strait Seismic Survey Programme

ENVIRONMENT PLAN SUMMARY

for

CUEBASS08

March 2008



1 INTRODUCTION

Galveston Mining Ltd (100% subsidiary of Cue Energy Resources) and Exoil Ltd proposes to undertake two two-dimensional (2D) marine seismic surveys (MSS) in offshore in Commonwealth waters in the Bass Basin. The survey is called CUEBASS08 and is operated by Cue Energy Resources. The proposed surveys are in Permit areas T/37P and T/38P centred approximately 100 km and 120 km respectively from the nearest point of Victoria on the mainland; and 100 km from the north coast of Tasmania. The survey will be conducted over approximately 30 days within the period March to end-April 2008.

2 DESCRIPTION OF SURVEY ACTIVITIES

The marine seismic survey will be conducted from a specialised vessel, the *MV Pacific Titan*. The signal source will be from a single airgun array towed behind the vessel at a depth of approximately 5 to 6 m and fired at intervals of 25 m (approximately 10 seconds). The acoustic source array will consist of a single airgun array with a volume of 0.052 m³ (3,200 cui). As a survey proceeds, the air-gun array is recharged with air from a compressor on board the towing vessel. The sound energy source will have an operating pressure of approximately 13,500 kPa (~2000 psi). The source produces sound pulses within a few metres in the order of 220 dB re 1uPa-m at frequencies extending up to approximately 110 Hz.

The survey is scheduled to occur over approximately 30 days within the period March to end-April 2008.

3 LOCATION

The proposed surveys are in Permit areas T/37P and T/38P centred approximately 100 km and 120 km respectively from the nearest point of Victoria on the mainland; and 100 km from the north coast of Tasmania.

The bounding coordinates (GDA94 MGA UTM 50S) for the survey area (covering permit areas T37/P and T/38P) of the Bass Strait 2D seismic surveys are listed in Table 1.

Table 1: Bounding coordinates of the proposed survey areas

location point	Latitude			Longitude		
	degrees	minutes	seconds	degrees	minutes	seconds
A	39	40	00	145	30	00
B	39	35	00	146	30	00
C	40	25	00	146	40	00
D	40	40	00	145	40	00

4 SURROUNDING ENVIRONMENT

4.1 BATHYMETRY AND SEAFLOOR

The survey areas lie in the central part of the Bass Basin, a basin elongated from southeast to northwest, formed by a sinking trough around 70-80 million years ago with a 90 m deep basin in the middle, and a broad ring of 80 m depth. Bass Strait has a unique geometry consisting of a broad shallow region, which descends abruptly to very deep water on each side. The southern part of Bass Strait is dominated by mud-sized sediments (grainsize <0.06 mm), in addition to some very fine sand (grainsize 0.1 mm). The northern part of central Bass Strait is dominated by coarse sand (grainsize 0.5 mm) with a large, very coarse patch in the centre between Wilsons Promontory and King Island. The sediments closer inshore, to the south and east are much coarser, in the range of gravel to boulder size.



4.2 FAUNA

There are no listed threatened communities or recorded sensitive environments within the survey areas.

Species diversity appears to be particularly high in Australia's southeast marine region. Wilson and Allen (1987) note that species endemism, in almost every group of marine animals in southern and in particular in south eastern Australia, is very high (usually over 90%). Southern Australia has a long east-west coastline with a long geological period of isolation from other similar environments.

Review of online databases held by Department of the Environment, Water, Heritage and the Arts (DEWHA) (formerly the Department of Environment and Heritage) indicates that there is a total of 62 Marine Listed Species, under the *EPBC Act* as Endangered, Vulnerable, Migratory or Cetacean, including birds, that may occur, or the species habitat may occur, within or near to the entire survey area (refer to Table 2).

Table 2 EPBC Act Protected Species potentially occurring in the survey area

Species	Common name	Threatened Species Category	Listed Migratory species	Listed Marine species
Whales				
<i>Balaenoptera acutorostrata</i>	Minke Whale			Cetacean
<i>Balaenoptera edeni</i>	Bryde's Whale		✓	Cetacean
<i>Balaenoptera musculus</i>	Blue Whale	Endangered	✓	Cetacean
<i>Caperea marginata</i>	Pygmy Right Whale		✓	Cetacean
<i>Eubalaena australis</i>	Southern Right Whale	Endangered	✓	Cetacean
<i>Globicephala macrorhynchus</i>	Short-finned Pilot Whale			Cetacean
<i>Megaptera novaeangliae</i>	Humpback Whale	Vulnerable	✓	Cetacean
<i>Orcinus orca</i>	Killer Whale, Orca		✓	Cetacean
Dolphin				
<i>Delphinus delphis</i>	Common Dolphin			Cetacean
<i>Grampus griseus</i>	Risso's Dolphin			Cetacean
<i>Lagenorhynchus obscurus</i>	Dusky Dolphin		✓	Cetacean
<i>Tursiops truncatus s. str.</i>	Bottlenose Dolphin			Cetacean
Shark				
<i>Carcharodon carcharias</i>	Great White Shark	Vulnerable	✓	
Fish				
<i>Syngnathid (26 species)</i>	Pipefish, Seahorse and Seadragon			Listed
Mammals				
<i>Arctocephalus forsteri</i>	New Zealand Fur-seal			Listed
<i>Arctocephalus pusillus</i>	Australian Fur-seal			Listed
Birds				
<i>Catharacta skua</i>	Great Skua			Listed
<i>Diomedea amsterdamensis</i>	Amsterdam Albatross	Endangered	✓	Listed



Species	Common name	Threatened Species Category	Listed Migratory species	Listed Marine species
<i>Diomedea antipodensis</i>	Antipodean Albatross	Vulnerable	✓	Listed
<i>Diomedea dabbenena</i>	Tristan Albatross	Endangered	✓	Listed
<i>Diomedea epomophora</i>	Southern Royal Albatross	Vulnerable	✓	Listed
<i>Diomedea exulans</i>	Wandering Albatross	Vulnerable	✓	Listed
<i>Diomedea gibsoni</i>	Gibson's Albatross	Vulnerable	✓	Listed
<i>Diomedea sanfordi</i>	Northern Royal Albatross	Endangered	✓	Listed
<i>Halobaena caerulea</i>	Blue Petrel	Vulnerable		Listed
<i>Macronectes giganteus</i>	Southern Giant-Petrel	Endangered	✓	Listed
<i>Macronectes halli</i>	Northern Giant-Petrel	Vulnerable	✓	Listed
<i>Neophema chrysoqaster</i>	Orange-bellied Parrot	Critically Endangered	✓	Listed
<i>Prototroctes maraena</i>	Australian Grayling	Vulnerable		
<i>Pterodroma mollis</i>	Soft-plumaged Petrel	Vulnerable		Listed
<i>Thalassarche bulleri</i>	Buller's Albatross	Vulnerable	✓	Listed
<i>Thalassarche cauta</i>	Shy Albatross	Vulnerable	✓	Listed
<i>Thalassarche chlororhynchos</i>	Yellow-nosed Albatross			Listed
<i>Thalassarche chrystostoma</i>	Grey-headed Albatross	Vulnerable	✓	Listed
<i>Thalassarche impavida</i>	Campbell Albatross	Vulnerable	✓	Listed
<i>Thalassarche melanophris</i>	Black-browed Albatross	Vulnerable	✓	Listed
<i>Thalassarche salvini</i>	Salvin's Albatross	Vulnerable	✓	Listed

4.3 SOCIO-ECONOMIC ENVIRONMENT

There are no marine reserves, World Heritage properties, areas listed or nominated on the Register of the National Estate, or listed Ramsar wetlands within the survey area. The survey area does not impinge on any existing or proposed marine parks or nature reserves.

Many freight and fishing ports are situated in Bass Strait. The main fishing methods used in central Bass Strait are gillnetting, scallop dredging and lobster trapping, as well as some squid jigging. The main species caught by the various fisheries are listed in Table 3.

Despite the variety of fishing methods, the southern central part of Bass Strait is virtually untouched by commercial fishing. Most fishing activities are concentrated close to the coast (depths <60 m), and between King Island and Cape Otway. The muddy central basin has very low intensity fishing effort.



Table 3 Commercial fisheries and gears used in Bass Strait

Common Name	Fisheries
Eastern school whiting	Danish seine
Flathead	Danish seine
Jackass morwong	Trawl (low numbers)
Ling	Gillnet, trawl, dropline & bottom longline (low numbers)
Spotted warehou	Gillnet & trawl
Gummy shark	Gillnet, dropline & bottom longline
School shark	Gillnet, dropline & bottom longline
Elephant fish	Gillnet & trawl
Saw shark	Gillnet & trawl
Whiskery shark	Gillnet
Southern rocklobster	Rock lobster (SE states)
Eastern rocklobster	Rock lobster (SE states)
Blacklip abalone	Abalone (SE states)
Greenlip abalone	Abalone (SE states)
Southern scallop	Scallop (SE states & Commonwealth)

(Larcombe et al. ,2002)

Bass Strait is heavily used for passenger traffic, as well as freight movements, between mainland Australia and Tasmania. Furthermore, it is also a transit route for shipping traffic connecting the eastern and western ports of Australia. Parts of the survey areas are intersected by the Melbourne to Burne and Melbourne to Devonport shipping corridors as well as several lesser shipped routes linking northern Tasmania and the eastern seaboard of Australia.

5 RISK ASSESSMENT

The principal environmental risks and potential environmental effects of seismic activity have been determined on the basis of previous seismic experience, the generic environmental risks outlined in Swan *et al.* 1994 and review of specific literature related to acoustic disturbance. Ongoing identification of potential hazards will occur through Job Hazard Analysis and toolbox meetings.

The environmental risks associated with the proposed seismic operations have been assessed by a methodology that:

1. Identifies the activity and the environmental aspects associated with it
2. Defines the potential environmental effects of the activity
3. Identifies the likelihood of occurrence
4. Identifies the consequences of potential environmental

Table 4 summarises the key environmental aspects and the survey related activities that may lead to these aspects being adversely affected. It is important to note that in identifying the hazards, pathways and disturbances; consideration was given to exposure to normal and extreme conditions.



Table 4: Survey activity and potential environmental aspects interactions

Activity	Aspect							
	Physical Presence	Noise	Sediment impacts	Nutrient addition	Hydrocarbon Contamination	Biodiversity	Greenhouse gases	Solid Waste Disposal
Routine Events								
Survey vessel movement	X	X						
Support vessel	X	X						
Seismic energy source		X						
Power generation		X					X	
Sewage and greywater				X				
Discharge of foodscraps				X				
Deck drainage					X			
Waste								X
Non-Routine or Accidental Events								
Anchoring (and retrieving anchors)	X		X					
Hydrocarbon spill			X	X	X	X		X
Chemical spill				X	X			X
Introduced species						X		
Loss of equipment			X					

The assessed risks have been ranked using a likelihood and consequence matrix that is consistent with that described within AS/NZS 4360. Table 5 shows the Cue Energy risk matrix that associates the probability of an event occurring and the consequences to derive a characterisation of environmental risk. A summary of the risk assessment outcome is provided in Table 6.



Table 5 HSE Risk Matrix

		Severity of consequences without safeguards					
		Low level impacts on environment. No physical effect	Micro-effects on the environment Medical treatment requiring hospitalisation Minor social impact	Moderate effects on environment Moderate to irreversible disability Ongoing social issues	Serious environmental impact Single fatality Ongoing serious social issues	Very serious environment Multiple fatalities Very serious widespread social impacts	
		1	2	3	4	5	
Likelihood of occurrence	Rare –Event occurs once every 1,000 – 10,000 years	1	Low	Low	3	Low	Medium
	Unlikely – Event occurs once every 100-1,000 years	2	Low	Low	Medium	Medium	High
	Possible – Event occurs once every 10 – 100 years	3	Low	Medium	Medium	12	High
	Likely – Event occurs once every 1-10 years	4	Low	Medium	High	High	High
	Almost certain– Occurs most than once per year	5	Medium	High	High	High	High



Table 6 Summary of environmental risk assessment

Aspect / Source of Risk	Potential Environmental Effects	Likelihood	Consequence	Risk
Vessel Presence	Disruption or interference to shipping	Possible	Low	Low
Vessel Presence	Disruption to fishing vessels or interference with catch	Possible	Low	Low
Vessel Presence	Whale-vessel collision	Unlikely	Micro-effect	Low
Operation of acoustic source	Disturbance from discharge of the airgun arrays to Baleen Whales Toothed Whales and Dolphins Seals and Sealions Fish Benthic invertebrates and plankton	Unlikely Unlikely Unlikely Unlikely Rare	Low Low Low Low Low	Low Low Low Low Low
Anchoring	Damage and/or destruction of seafloor habitats from anchoring and vessel grounding	Possible	Micro-effect	Low
Nutrients	Damage to sensitive resources from discharge of sewage, putrescible waste,	Rare	Micro-effect	Low
Waste disposal	Impact to marine environment from incorrect disposal of chemicals and solid and hazardous wastes	Likely	Low	Low
Biodiversity	Introduction of marine pests leading to establishment of pest species	Rare	Serious	Low
Fuel and oil spills	Hydrocarbon spill to decks	Likely	Low	Low
Fuel and oil spills	Damage to or loss of streamer resulting in loss of fluid	Likely	Low	Low
Fuel and oil spills	Leak from survey vessels fuel tanks (>80L)	Unlikely	Moderate	Medium

6 MANAGEMENT OF ENVIRONMENTAL RISK

To either eliminate potential environmental risks and effects for Cue Energy's Bass Basin seismic survey programme, or to reduce them to as low as reasonably practicable (ALARP), a number of key control and mitigation measures must be implemented. The management actions and strategies for control of the significant environmental risks associated with the proposed survey are described in the following sections.

	Physical presence of survey vessel and equipment
Source	Survey vessel, support vessel, streamers
Environmental Objectives	No significant impact to seabed habitat Minimise adverse effects to marine biota No significant impact on fishing or shipping activities in the region No collisions or near misses
Legislative Controls	EPBC Act, 1999 P(SL)A, 1967 P(SL)(MoE) Regulations, 2000 Australian Maritime Safety Authority Act, 1990 Navigation Act, 1912



Physical presence of survey vessel and equipment	
Standards	P(SL)A 1967, s.124 P(SL)(MoE) Regulations 2000, r.13 and 14 APPEA Code of Environmental Practise Cue Energy HSE Policy Cue Energy HSE Management System
Measurement Criteria	Avoidance Measures: Temporal avoidance of whale migrations by timing of survey to occur outside of main migratory period is to be implemented Information on survey vessel location and activities are to be forwarded to AMSA for inclusion into Marine Notices Survey location is offshore in deep water, away from areas commonly used by fishing or recreational vessels Navigation lights and markers are to be in place Standard marine communications systems will be in place Seabed habitat type has been reviewed and no sensitive habit or rock outcrops will be affected Vessel-Whale interaction procedures are to be implemented to avoid interference with whales Mitigation Measures: Ongoing consultation with local users
Predicted Outcome and Monitoring	Environmental impact is expected to possible and low, considering: Temporal avoidance of whale migrations Small area affected compared to area of habitat available Wide distribution of similar community types in the region Exclusion of relatively small area from shipping and commercial fisheries Monitoring Whale interactions to be recorded and reports forwarded to DEWHA Vessel interactions requiring avoidance manoeuvres to be recorded

The introduction of noise to the marine environment	
Sources	Seismic source, survey vessel, support vessel
Environmental Objectives	No significant adverse effect on marine biota No significant impact on coastal or island communities
Legislative Controls	EPBC Act, 1999 P(SL)(MoE) Regulations, 2000
Standards	EPBC Act Regulations Pt 8 P(SL)(MoE) Regulations 2000, r.13 and 14 APPEA Code of Environmental Practise Cue Energy HSE Policy Cue Energy HSE Management System EPBC Act Regulations 2000 (Part 8) DEWHA 'manner prescribed' conditions EPBC Act Policy Statement 2.1 Survey Vessel Contracting Company Environmental Management Procedures
Measurement Criteria	Avoidance Measures: Temporal avoidance of whale migrations by timing of survey to be implemented DEWHA Guidelines (EPBC Act Policy Statement 2.1) to be in place and adhered to during survey, including; 'Soft start' procedures 10 minute continuous whale watch every hour



The introduction of noise to the marine environment	
	Power down procedures if whales within 2km Stop work procedures if whales within 1km Mitigation Measures: Independent MMO to be onboard during survey activities Responsibilities for monitoring, responding to and recording whale sightings clearly identified and conveyed to vessel personnel
Predicted Outcome and Monitoring	Environmental impact is expected to be, almost certain and minor with low consequence and medium risk, considering: The short-term of survey at any location exposed to noise Avoidance and mitigation measures in place Monitoring Dedicated Marine Mammal Observer to be present on vessel and supported by trained crew member Whale sightings will be recorded and forwarded to DEWHA Cue Energy Site Representative to monitor 'soft start' to verify that procedures are appropriate to meet EP requirements

Disturbance to the seabed	
Source	Vessel anchoring;
Environmental Objectives	No significant impact to seabed habitat No significant impact to seabed biological communities No adverse effects to marine biota
Legislative Controls	EPBC Act 1999 P(SL)A, 1967 P(SL)(MoE) Regulations, 2000
Standards	P(SL)A 1967, s.124 P(SL)(MoE) Regulations 2000, r.13 and 14 APPEA Code of Environmental Practise Cue Energy HSE Policy Cue Energy HSE Management System
Measurement Criteria	Avoidance Measures: No anchoring except in event of emergency Mitigation Measures: Relatively short duration of disturbance Treatment Measures: Any lost equipment will be recovered wherever practicable
Predicted Outcome and Monitoring	Environmental impact is expected to be possible and micro-effect consequence, considering: Small area affected compared to area of habitat available Wide distribution of similar community types in the region Monitoring Any lost equipment that is not able to be recovered will be recorded, including a description of the equipment and coordinates where lost.

Sewage and greywater discharged to ocean	
Sources	Laundry; Showers; Hand basins; Toilets
Environmental	No reduction in ambient water quality



Sewage and greywater discharged to ocean	
Objectives	No adverse effects on marine biota No adverse aesthetic effects.
Legislative Controls	EPBC Act 1999 P(SL)A, 1967 P(SL)(MoE) Regulations, 2000 Protection of the Sea (Prevention of Pollution From Ships) Act, 1993
Standards	<i>P(SL)A 1967</i> , Schedule c. 222 (4) P(SL)(MoE) Regulations 2000, r.29 (1) Protection of the Sea (Prevention of Pollution From Ships) Act 1993, Division 2 APPEA Code of Environmental Practise ANZECC Guideline for Fresh and Marine Water Quality Cue Energy HSE Policy
Measurement Criteria	Avoidance Measures: Sewage treatment plant on survey vessel is to with MARPOL requirements Sewage and putrescible wastes will not be discharged within 12 nautical miles of land Mitigation Measures: Sewage and greywater will be disposed of in accordance with MARPOL 73/78 Annex IV and Clauses 222 and 616 of the Schedule of the P(SL)A
Predicted Outcome and Monitoring	Environmental risk of damage to sensitive resource from discharge of sewage and greywater is expected to be rare with micro-effect consequences, considering: Small volumes and nutrient loads Strong ambient currents Rapid dilution and dispersion Monitoring: No monitoring proposed

General non-hazardous wastes produced during survey	
Sources	Packing materials, empty containers, scrap materials
Environmental Objectives	Minimise incremental increase to environmental impact associated with onshore disposal as far as possible Maximise efficient resource utilisation
Legislative Controls	EPBC Act 1999 P(SL)(MoE) Regulations 2000 Environmental Protection Act 1986 (WA) Protection of the Sea (Prevention of Pollution From Ships) Act 1983
Standards	APPEA Code of Environmental Practise Protection of the Sea (Prevention of Pollution From Ships) Act 1983' (Cth); 'MARPOL 73/78 Annex IV Survey Vessel Contracting Company Environmental Management Procedures Survey Vessel Garbage Management Plan Cue Energy HSE Policy
Measurement Criteria	Avoidance Measures: No solid wastes to be discharged overboard Limit waste creation at site by application of the waste management heirarchy Survey and support vessels to have waste management plan in place that has been reviewed by Cue Energy HSE Advisor and found to, at least, meet all of MARPOL requirements for waste management (including recording of amounts) Waste containers are to have covers to prevent material being blown overboard or placed in



General non-hazardous wastes produced during survey	
	<p>areas where material cannot be blown overboard</p> <p>Mitigation Measures:</p> <p>Segregation of all waste at site, onshore disposal, recycling where practicable (note 'practicable' in this context includes a consideration of the net benefit of recycling compared to disposal for the particular waste stream in question)</p> <p>Waste disposed of to licensed receival facilities</p>
Predicted Outcome and Monitoring	<p>Environmental impact is expected to be short-term and low, considering:</p> <p>Segregation of wastes</p> <p>Only disposal to appropriate waste management facilities</p> <p>Relatively small volumes</p> <p>Monitoring</p> <p>Vessel garbage log maintained as required by MARPOL</p>

Management of hazardous wastes produced during survey	
Sources	Waste hazardous materials, empty containers
Environmental Objectives	<p>Minimise incremental increase to environmental impact associated with onshore disposal as far as possible</p> <p>Maximise efficient resource utilisation</p>
Legislative Controls	<p>EPBC Act 1999</p> <p>P(SL)(MoE) Regulations 2000</p> <p>Environmental Protection Act 1986 (WA)</p> <p>Protection of the Sea (Prevention of Pollution From Ships) Act 1983</p>
Standards	<p>APPEA Code of Environmental Practise</p> <p>Protection of the Sea (Prevention of Pollution From Ships) Act 1983' (Cth); 'MARPOL 73/78 Annex IV</p> <p>Survey Vessel Contracting Company Environmental Management Procedures</p> <p>Survey Vessel Garbage Management Plan</p> <p>Cue Energy HSE Policy</p>
Measurement Criteria	<p>Avoidance Measures:</p> <p>No hazardous wastes to be discharged overboard</p> <p>Limit waste creation at site by application of the waste management heirarchy</p> <p>Survey and support vessels to have waste management plan in place that has been reviewed by Cue Energy HSE Advisor and found to, at least, meet all of MARPOL requirements for waste management (including recording of amounts)</p> <p>Hazardous waste to be segregated and stored in dedicated, appropriately labelled, waste containers</p> <p>Waste containers are to have covers to prevent material being blown overboard or placed in areas where material cannot be blown overboard</p> <p>Mitigation Measures:</p> <p>Segregation of all waste at site, onshore disposal, recycling where practicable (note 'practicable' in this context includes a consideration of the net benefit of recycling compared to disposal for the particular waste stream in question)</p> <p>Waste disposed of to licensed receival facilities</p>
Predicted Outcome and Monitoring	<p>Environmental impact is expected to be short-term and low, considering:</p> <p>Segregation of wastes</p> <p>Only disposal to appropriate waste management facilities</p> <p>Relatively small volumes</p> <p>Monitoring</p> <p>Vessel garbage log maintained as required by MARPOL</p>



Management of marine pest species	
Sources	Ballast water, marine fouling
Environmental Objectives	No introduction of marine pest species
Legislative Controls	EPBC Act 1999 P(SL)(MoE) Regulations 2000 Quarantine Act 1908 Navigation Act 1912
Standards	APPEA Code of Environmental Practise Australian Ballast Water Management Requirements Cue Energy HSE Policy
Measurement Criteria	Avoidance Measures: No ballast water maybe discharged from internationally trading vessels in Australian water without express <u>written</u> permission from AQIS
Predicted Outcome and Monitoring	Environmental risk is expected to be low, considering: The 'rare' probability of introduction and establishment with controls in place through AQIS Monitoring If vessel is mobilising from international port copy of Ballast Water Log to be forwarded to AQIS If vessel is mobilising from international port copy of QPAR and any subsequent approvals (or otherwise) from AQIS for discharge of ballast water is to be maintained.

Management of potential fuel and oil spills	
Sources	Damage to or loss of streamer resulting in loss of fluid, Leak from survey vessels fuel tanks
Environmental Objectives	Minimise occurrence of fuel and oil spills
Legislative Controls	EPBC Act 1999 P(SL)(MoE) Regulations 2000 Environmental Protection Act 1986 (WA) Protection of the Sea (Prevention of Pollution From Ships) Act 1983
Standards	APPEA Code of Environmental Practise Protection of the Sea (Prevention of Pollution From Ships) Act 1983' (Cth); 'MARPOL 73/78 Annex IV AMSA Marine Notice 36/2002 P(SL)A Schedule 1995, Clause 220 P(SL)A Schedule 1995, Clause 285 Survey Vessel SOPEP (Shipboard Oil Pollution Emergency Plan) Cue Energy HSE Policy Survey Vessel contractor company environmental management procedures Survey Vessel Garbage Management Plan
Measurement Criteria	Avoidance Measures: Selection of Contractor includes as priority consideration of ability of vessel to conduct activities in safe manner Implementation of good navigation practises at all times Designated containment areas onboard the vessel for storage of oils, greases and streamer fluid Sufficient spill response equipment on board to respond to foreseeable spill events Personnel responsibilities are clearly identified Streamers are segmented to limit potential spill volume



Management of potential fuel and oil spills	
	Mitigation Measures: SOPEP Procedures comply with MARPOL 73/78 requirements Fuel spill contingency procedures are in place and operational Appropriate actions are taken to minimise pollution Any recovered wastes are disposed of to licensed receival facilities Stocks of absorbent materials onboard the survey vessel must be checked for their adequacy and replenished as necessary prior to the commencement of activities. Dispersants must not be used without approval of the Statutory Authority.
Predicted Outcome and Monitoring	Environmental risk is expected to be low, for spills <80L and medium for spills >80L Monitoring MARPOL <i>Oil Record Book</i> kept up to date SOPEP exercises carried out to be recorded Any spills to be reported as described in Section 6.3

7 FRAMEWORK FOR ENVIRONMENTAL MANAGEMENT

Cue Energy is committed to safeguarding the environment and minimising health and safety risks to our employees, contractors and the communities in which we work. Cue Energy has a written corporate Health Safety and Environmental Policy (that provides a public statement of the corporate commitment to protecting the environment during operations).

All activities conducted during Cue Energy's Bass Strait seismic survey programme will comply with legislative requirements established under Commonwealth and state government regulatory frameworks.

7.1 AUDIT REVIEW AND IMPROVEMENT

Activities are monitored locally against HSE objectives, standards and measurement criteria defined within this EP. Two types of audit and review are conducted.

1. Compliance Audits An audit of the seismic survey vessel will be carried out by relevant Cue Energy team members or independent assessors prior to the start of operations to ensure that procedures and equipment are in place to enable compliance with the accepted EP.

2. Site Inspections. The Cue Energy Site Representative is responsible for conducting periodic. The frequency of inspection is to be once prior to commencement, once within 48 hours of commencement and thereafter as required based on professional judgement of the Site Representative

All environmental incidents, including near misses and community complaints, are to be reported, investigated, analysed and documented.

Information gathered from incident investigations is to be analysed to identify and monitor trends and develop prevention programmes. Corrective or preventative action taken to eliminate the causes of potential incidents will be commensurate with the environmental or business risk. Any regulatory violations are to be reported to the Cue Energy HSE Advisor who, in addition to reporting to appropriate regulatory authorities, will report through to the company's board of directors

A review will be conducted of the environmental management at completion of Cue Energy's Bass Strait seismic survey programme to assess its suitability, adequacy and effectiveness. This will include:



1. Results of audits and inspections
2. Any incident reports and any associated corrective action requirements
3. Extent to which environmental objectives and targets were met
4. Any recommendations for improvement.

8 CONSULTATION

Cue Energy has consulted with interested stakeholders, including professional fishermen, Tasmanian Fishing Industry Council, South East Fishing Association, Australian Fisheries Management Authority and Sea Food industry Victoria. Further, we have placed an advert in the Tasmanian magazine 'Fishing Today' to increase awareness of the Cue survey.

The seismic survey was referred to the DEWHA on 21st August 2007 as part of the assessment process a description of the proposed activity and proposed management measures was made publicly available for a two week period on the DEWHA notifications web site.

Other shipping users in the area will be advised of the survey presence byway of normal navigation practises, which includes notification to AMSA of the survey activities and subsequent AMSA maritime notices to mariners (a process managed by AMSA).

9 CONTACT DETAILS OF NOMINATED LIAISON

Dr Desmond Leech
Senior Geologist

Cue Energy Resources Limited.
Level 21, 114 William Street,
Melbourne, Victoria 3000.
Australia

Tel (03) 9670 8668

Fax (03) 9670 8661