

OR- 454

**BASS BASIN T/27P**

**OIL SPILL CONTINGENCY PLAN**

Approved by: \_\_\_\_\_

Date: \_\_\_\_\_

Issue Number: \_\_\_\_\_

Checked by:

Date: \_\_\_\_\_

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15, 16	Support Vessel Master (x 2)
17	Helicopter Base Manager
18, 19	Tasmanian Mineral Resources
20	Department of Environment and Land Management
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The contributors cannot and do not accept liability for any loss, damage or injury whatsoever resulting from any suggestion or omission in this document nor for the use of any response procedure or practice reflected herein.

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**Glossary**

AGAL	Australian Government Analytical Laboratory
AIP	Australian Institute of Petroleum
AMOSC	Australian Marine Oil Spill Centre
AMOSPlan	Australian Marine Oil Spill Plan
AMR	Australian Maritime Resources
AMSA	Australian Maritime Safety Authority
BTCE	Bureau of Transport and Communications Economics
CLASS (1,2,3)	Classification of a <i>GLOBEX</i> Emergency
DELM	Department of Environment and Land Management (Tasmania)
DNRE	Department of Natural Resources and Environment (Victoria)
DEP	Department of Environment Protection
EARL	East Asia Response Limited
EMT	Emergency Management Team
ER	Emergency Response
ERG	Emergency Response Group
ERP	Emergency Response Plan
ETA	Expected Time of Arrival
FWADC	Fixed Wing Aerial Dispersant Capability
<i>GLOBEX Far East</i>	<i>GLOBEX Far East</i> Houston, Texas
MIC	Man In Charge
MODU	Mobile Offshore Drilling Unit
MOSES	Marine Oil Spill Equipment System
MRCC	Marine Rescue Control Centre
MSDS	Material Safety Data Sheet
TMR	Tasmanian Mineral Resources
OSCP	Oil Spill Contingency Plan
OSR	Oil Spill Response
OSRL	Oil Spill Response Limited
OSSC	Oil Spill Service Centre
SMS	Safety Management System
PAZ	Prohibited Anchorage Zone
PIC	Person In Charge (Offshore Installation Manager)
QEST	QEST Consulting Engineers
SOPCO	State Oil Pollution Control Officer (Tasmania)
Tas.	Tasmania
TIER (1,2,3)	Classification of a <i>GLOBEX</i> Oil Spill Incident
Vic.	Victoria

## **FOREWORD**

- This plan details organisational responsibilities, actions, reporting requirements and resources available to *GLOBEX Far East* to ensure effective and timely management of an oil spill during their drilling operations in permit area T/27P of the Tasmanian administered areas of Bass Strait.
- This plan describes the overall coordination of a response to an oil spill from any *GLOBEX Far East* operated and/or contracted facility in Bass Strait area of Tasmanian waters (T/27P permit area). The plan interfaces with:
  1. *GLOBEX Far East* Drilling Emergency Response Plan
  2. *GLOBEX Far East* Bridging Document
  3. *GLOBEX Far East* Safety Management System.
- This plan also complies with the following:
  - Commonwealth Petroleum (Submerged Lands) Act 1967;
  - Victorian Petroleum (Submerged Lands) Act 1982;
  - Schedule – Specific Requirements as to Offshore Petroleum Exploration and Production 1997; and;
  - Directions made under the P(SL)A by Tasmanian Mineral Resources.

## **PURPOSE**

- It is intended for this plan to act as a guide to *GLOBEX Far East* operating policies. Whilst the procedures contained should be followed to the greatest possible extent during any incident, variations based on sound management and/or engineering judgment and operational experience may be authorised by the *GLOBEX Far East* Emergency Response Group Leader, as appropriate, who is deemed to be in complete control during an oil spill response.
- THERE IS A STATUTORY REQUIREMENT TO REPORT ANY OIL SPILL GREATER THAN 80 LITRES (0.5 BBLs) TO THE DEPARTMENT OF ENVIRONMENT AND LAND MANAGEMENT (DELM) FOR RESPONSE ADVICE AND ASSISTANCE AND TO TASMANIAN MINERAL RESOURCES (TMR).

Note: Spills up to 80 litres (0.5 bbls) require in-house reporting only.

## **OBJECTIVES**

- The *GLOBEX Far East* approach to oil spill management is based on the following:
  1. Tactical response to, and overall management of, a spill will be carried out by the Emergency Response Group (ERG) in the area where the emergency is located.
  2. Support to the ERG will be provided, as required, by the *GLOBEX Far East* Emergency Management Team (EMT) based in Houston U.S.A.
  3. Action will be prompt and appropriate resources devoted to ensure the most effective management of any oil spill.
  4. Communication will be timely and accurate in the event of an oil spill.

## **STRATEGY**

- Permit area T/27P is in a remote location situated in Western Bass Strait between Victoria and Tasmania. The results of trajectory modelling included in section 040 of this document clearly show the very low risk of any spilled oil reaching landfall (including nearer reefs and Islets), at least within a 96 hour period.
- *GLOBEX Far East's* initial response strategy therefore would be to continuously monitor any oil spill and follow the Oil Spill Action Plan (figure 12.0) in section 060 of this document. This Action Plan provides the guidelines to monitor and evaluate the risks presented by any spilled oil. It also provides the decision options to disperse, or attempt mechanical recovery, of spilled oil if it appears there is a risk to shorelines, shoals or any other sensitive environments.

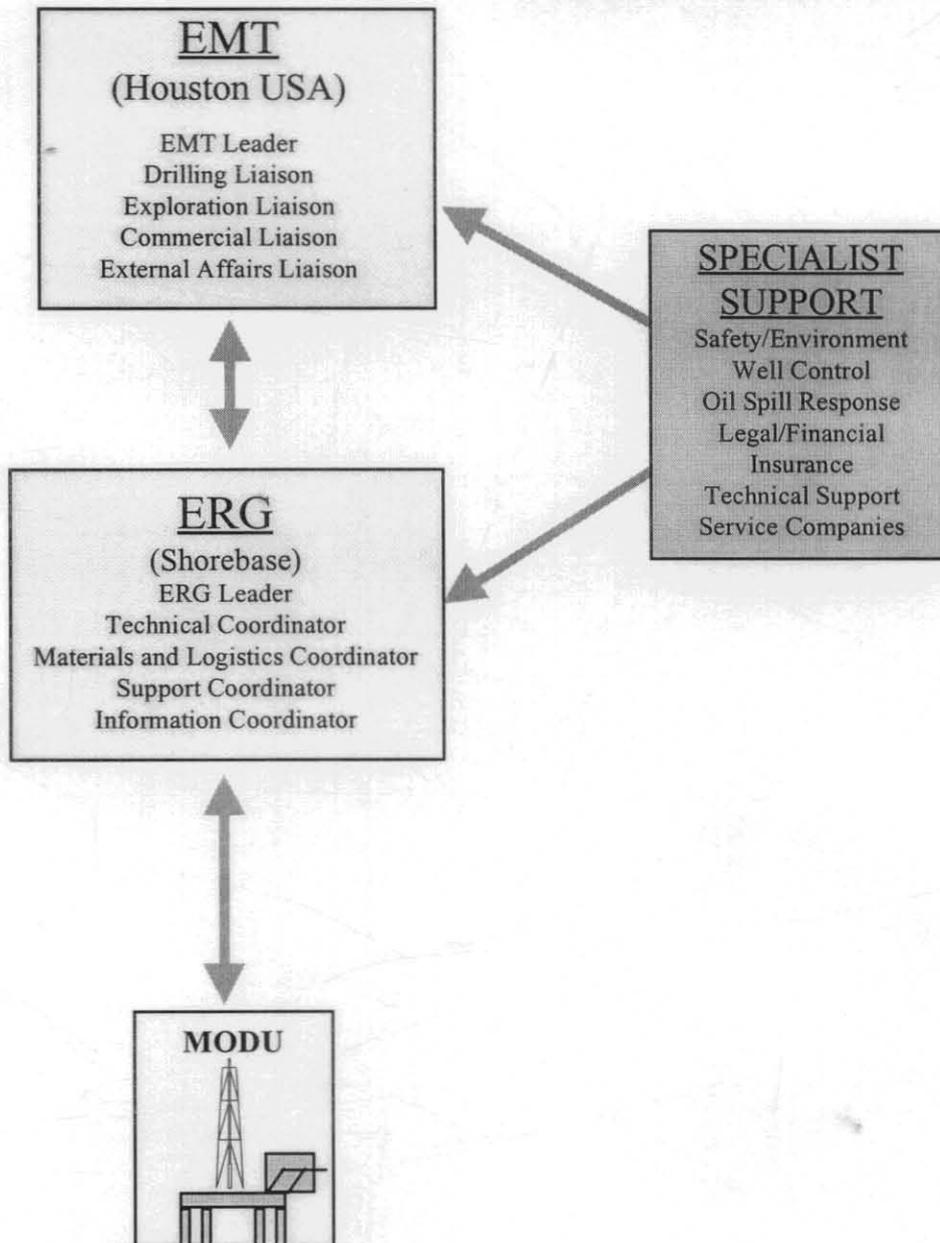
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FIGURE 1.0:

LEGEND

-  = Operations Site
-  = ERG (Emergency Response Group)
-  = EMT (Emergency Management Team)
-  = Specialist Support



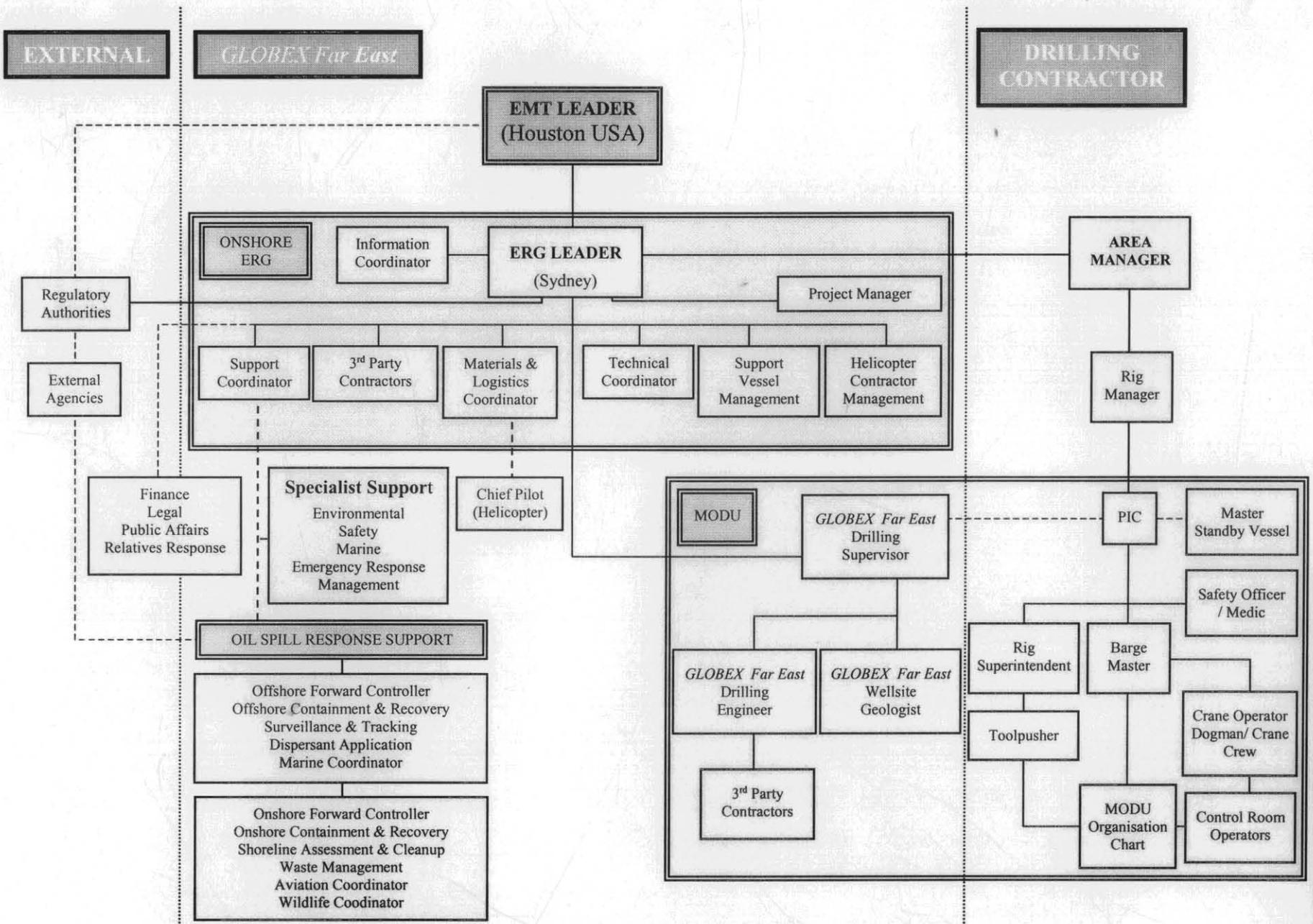


Figure 1.1: GLOBEX Far East EMERGENCY RESPONSE ORGANISATION CHART

**FIGURE 2.0:**

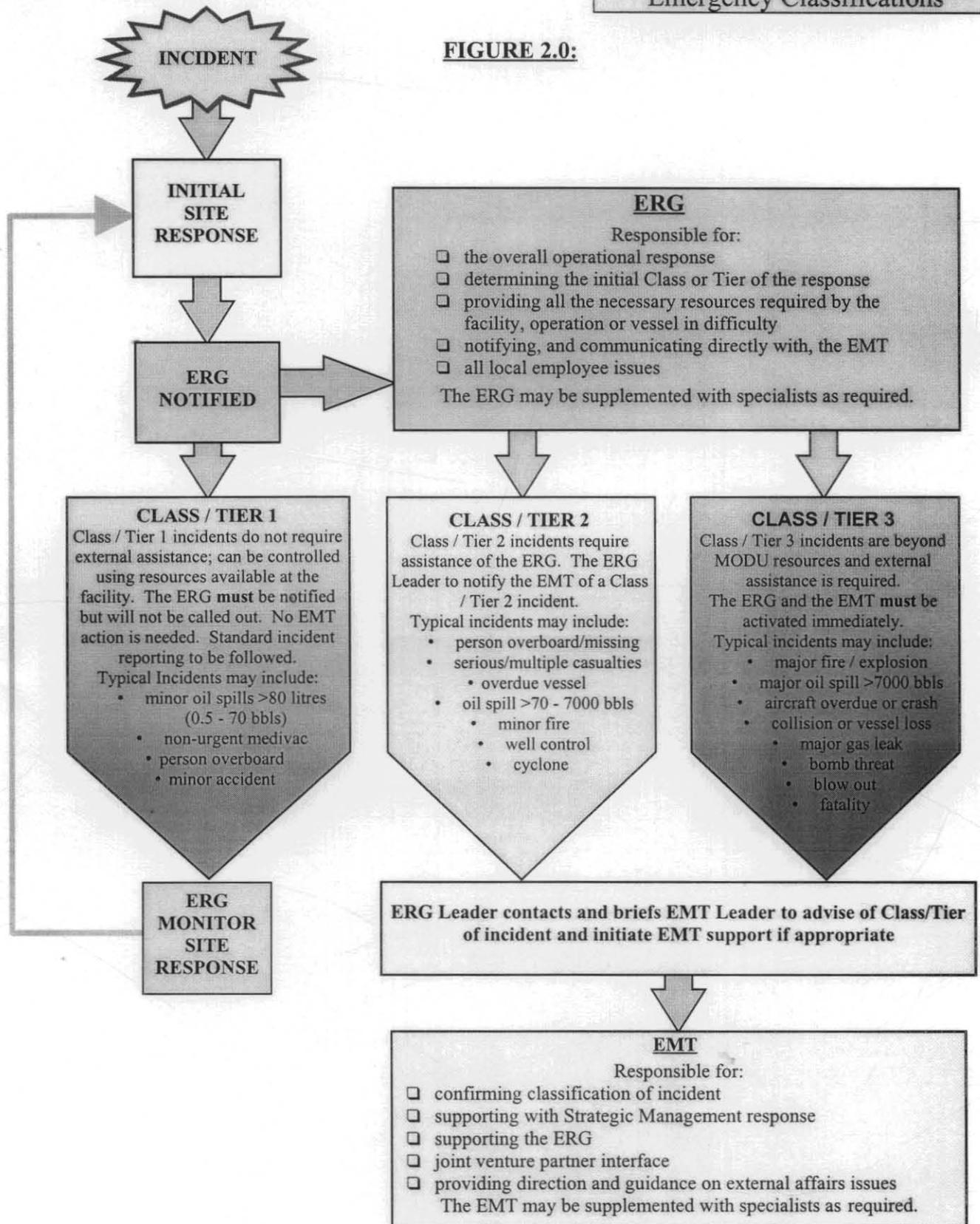


FIGURE 3.0:

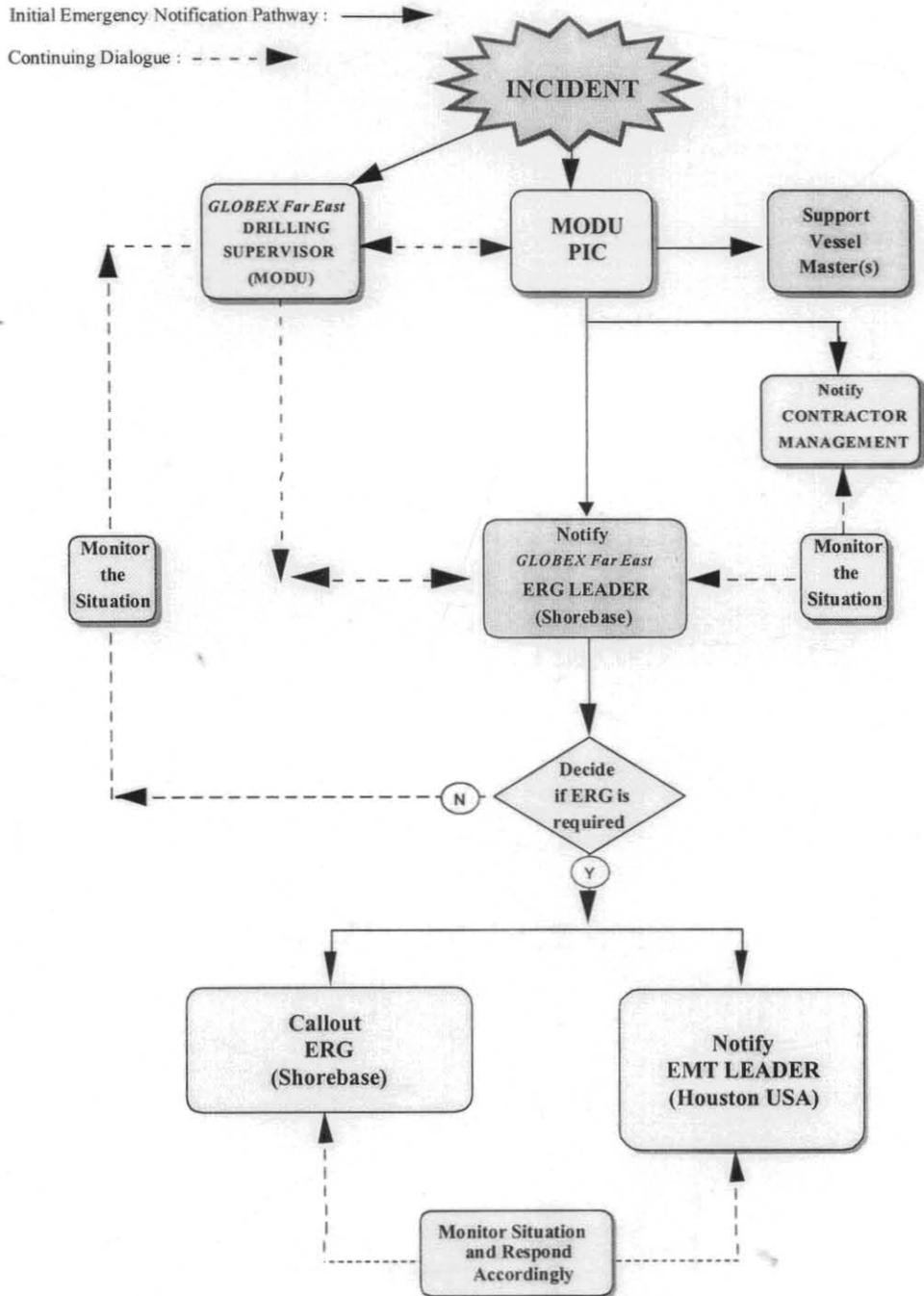
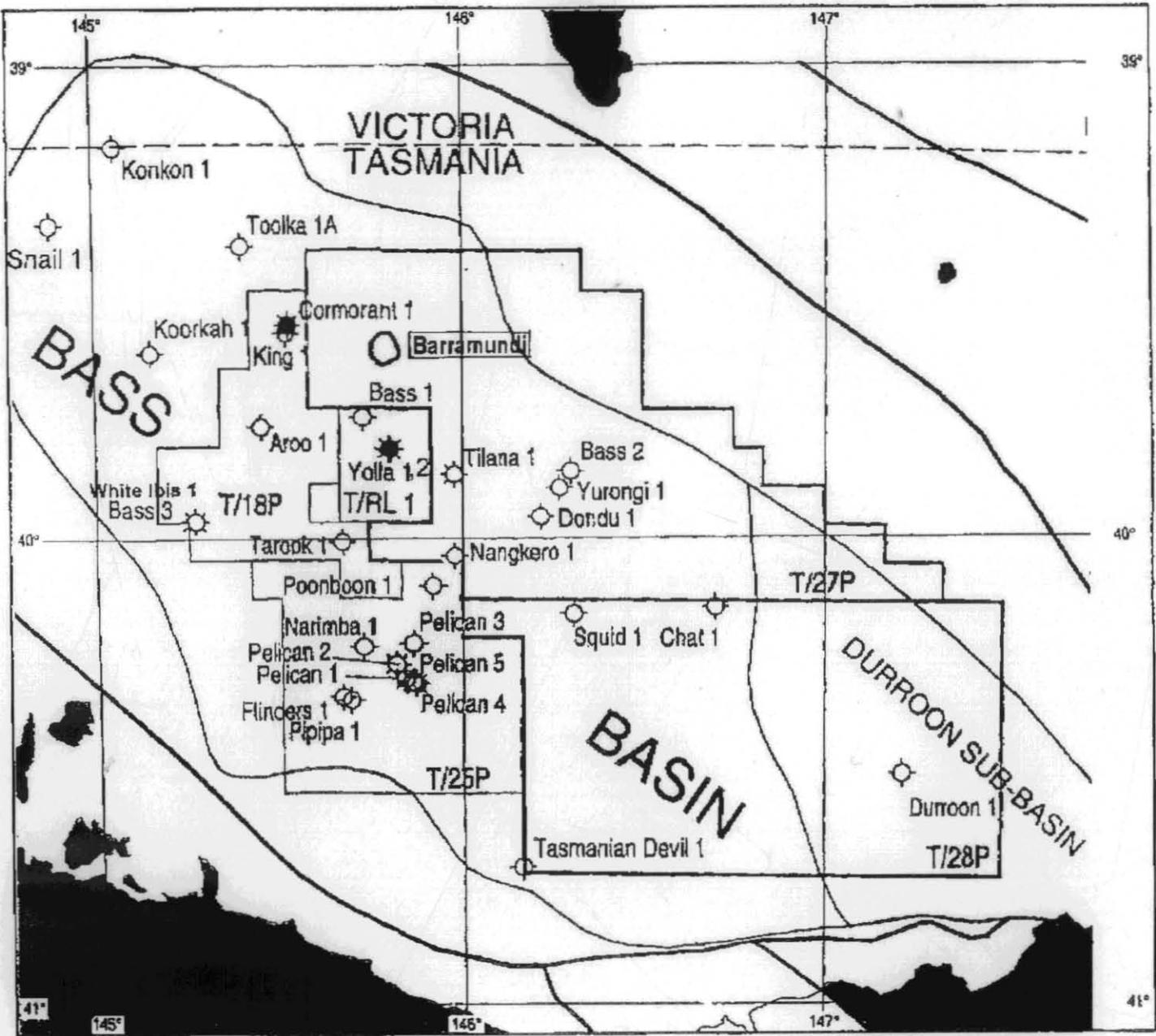


FIGURE 4.0:



## DIVISION OF RESPONSIBILITY

The concepts of "Primary Agency" and "Lead Agency" are detailed as follows:

- ❑ The "Primary Agency" means the agency having the statutory responsibility for the area in which a pollution incident occurs.
- ❑ The "Lead Agency" means the agency having operational responsibility to take action to respond to marine pollution incidents.
- ❑ For *GLOBEX Far East* facilities, the "Primary Agency" will be the Department of Environment and Land Management (DELM) and the "Lead Agency" will be *GLOBEX Far East*.

## OIL INDUSTRY RESPONSIBILITIES UNDER THE NATIONAL PLAN

Statutory responsibility for oil spill response is always with a government agency.

The oil industry responsibilities are in the "Lead Agency" area. These responsibilities are detailed in the figure below:

**FIGURE 5.0: LEAD AGENCY RESPONSIBILITIES**

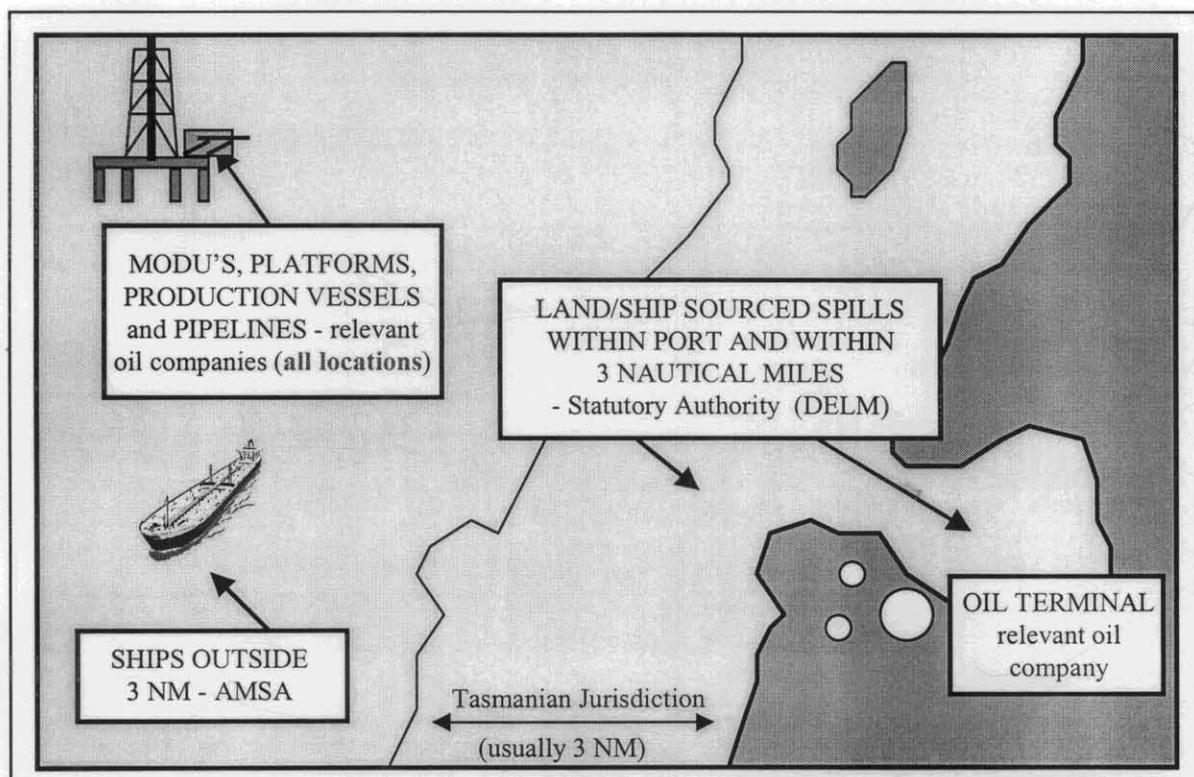
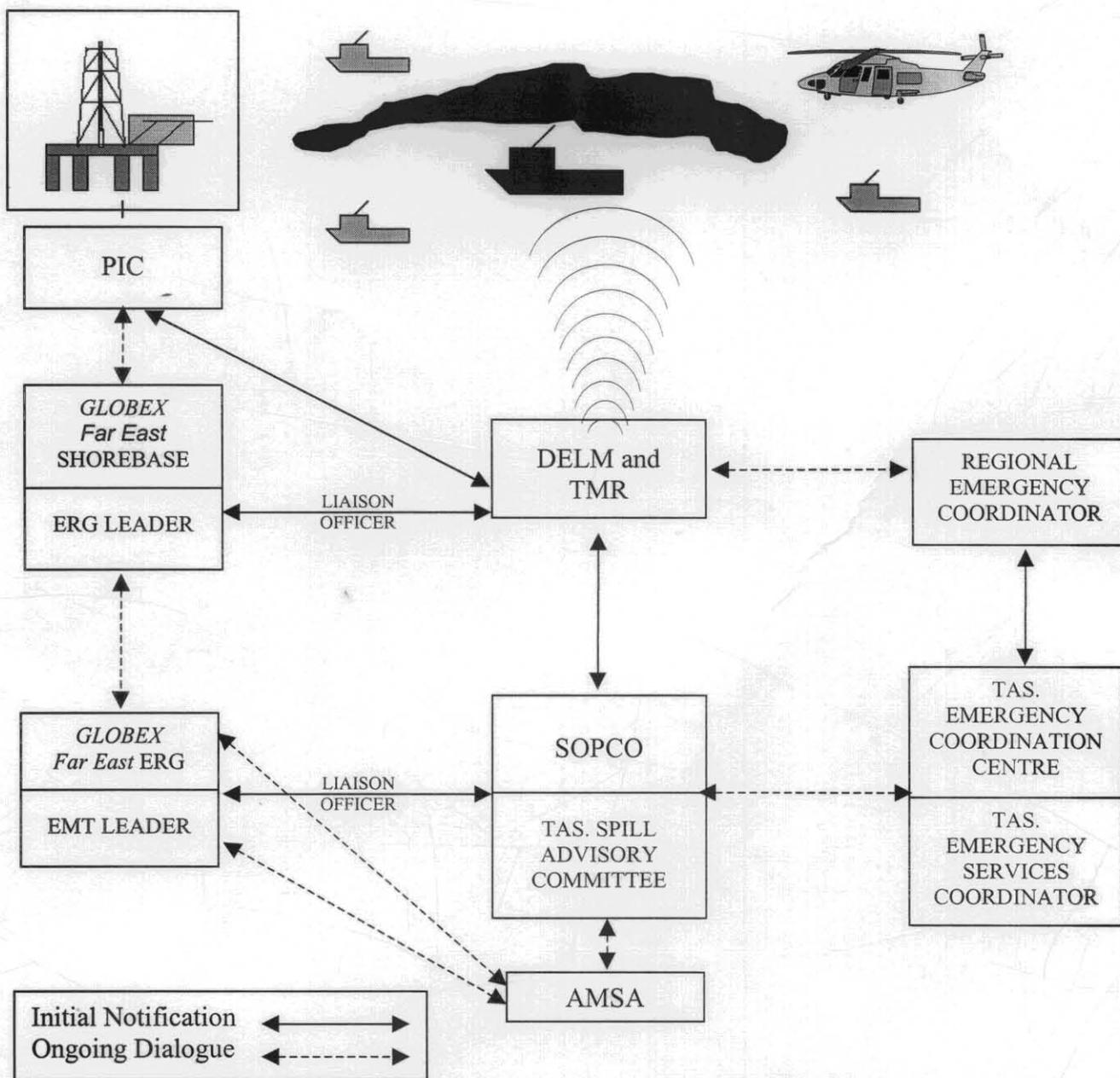


FIGURE 6.0:



In Tasmanian waters, the Government Lead Combat Authority for marine oil pollution operational response is the Department of Environment and Land Management (via the State Oil Pollution Control Officer (SOPCO)).

The Incident Command Centre will vary according to the incident, if the spill occurs while in a harbour, the relevant Port Authority Command Centre would be utilised, if the spill is external to the harbour, the State Incident Command Centre will be activated. Contact details are in Section 080, Contact Directory.

**OSCP FORM 001: POLLUTION REPORT**

<b>Location:</b>	<b>Date:</b>	<b>Time:</b>
------------------	--------------	--------------

\*TIER 1  \*TIER 2  \*TIER 3  \*Tick whichever is applicable.

1. SPILL OBSERVER :.....PIC: .....
2. MATERIAL SPILLED : .....
3. APPARENT SOURCE / CAUSE : .....
4. TIME AND DATE SPILL OCCURRED : ..... Hrs ...../...../.....
5. LOCATION OF SPILL : LAT:..... LONG:.....
6. IS SPILL CONTINUING : YES / NO
7. IF YES, ESTIMATED RATE OF RELEASE : .....(m<sup>3</sup>/Kilolitres per day) .....(bbl per day)
8. VOLUME OF DISCHARGE : A) ESTIMATED .....m<sup>3</sup>/Kilolitres .....bbl  
B) KNOWN.....m<sup>3</sup>/Kilolitres.....bbl
9. SIZE OF SPILL: (PLOT ON CHART) .....
10. RATE AND DIRECTION OF SLICK MOVEMENT : .....
11. OIL SLICK TYPE : CONTINUOUS..... WINDROWS .....
- APPEARANCE ON WATER : .....
12. ESTIMATED AVERAGE THICKNESS : .....

**CURRENT METEOROLOGICAL DATA**

13. TEMPERATURE : AIR.....°C
14. WIND : SPEED.....Knots. DIRECTION.....
15. PRECIPITATION : .....
16. VISIBILITY : .....
17. FORECAST : .....

**CURRENT OCEANOGRAPHIC DATA**

18. TEMPERATURE : AIR °C ..... SEA °C.....
19. TIDE STATE : .....
20. CURRENTS : SPEED .....Knots, ms<sup>-1</sup> DIRECTION.....
21. SEA STATE : 1 ..... 2 ..... 3 ..... 4 ..... 5 ..... 6+ .....
22. AVERAGE WAVE HEIGHT : ..... Metres PERIOD ..... Seconds
23. REMARKS : .....

<b>Prepared By:</b>	<b>Phone:</b>
<b>Company/Agency:</b>	<b>Fax:</b>
<b>Position:</b>	<b>Mobile:</b>
<b>Signature:</b>	

### OSCP FORM 002: INCIDENT SITREP

(To Be Completed When Updating Incident Information)

<b>Location:</b>		<b>Update No:</b>		<b>Date:</b>		<b>Time:</b>		
<b>Priority:</b>	<b>Urgent:</b> <input type="checkbox"/>	<b>Immediate:</b> <input type="checkbox"/>		<b>Standard:</b> <input type="checkbox"/>				
<b>Incident:</b>	Medical <input type="checkbox"/>	Fire <input type="checkbox"/>	Personnel <input type="checkbox"/>	Aviation <input type="checkbox"/>	Fatality <input type="checkbox"/>			
Explosion <input type="checkbox"/>	Marine <input type="checkbox"/>	Well Control <input type="checkbox"/>		Oil Spill <input type="checkbox"/>				
Other: _____								
<b>Injuries:</b>	No. of Fatalities		No. of Serious Injuries		No. of Minor Injuries			
<b>DO NOT LIST NAMES ON THIS FORM - Report names verbally to ERG Leader</b>								
<b>Injuries This Report:</b>								
<b>Updated Weather</b>	Dry <input type="checkbox"/>	Wet <input type="checkbox"/>	Windy <input type="checkbox"/>	Wind Direction	Wind Speed			
<b>Forecast:</b>	Other: _____							
<b>Impact on Operations:</b>								
<b>External Assistance Mobilised:</b>	Govt. <input type="checkbox"/>	Mutual Aid <input type="checkbox"/>	External Agency <input type="checkbox"/>	Medical <input type="checkbox"/>	Police <input type="checkbox"/>	Fire <input type="checkbox"/>		
Other: _____								
<b>Forward Response Plan:</b> More detailed information on OSCP Form 003: Activity Log								
<b>Next 30 Mins:</b>								
<b>Next 6 Hrs:</b>								
<b>Next 12 Hrs:</b>								
<b>Last External Contact:</b>								
Agency	Time	By	Agency	Time	By	Agency	Time	By
Aviation			Govt.					
Medical								
Police								
<b>ERG Room Incumbents: (Role and Person)</b>								
Note: Mark any speculative information with an asterisk (*).								
<b>Prepared by:</b>				<b>Approved by:</b>				
Distribution: ERG <input type="checkbox"/>				EMT <input type="checkbox"/>				







**OSCP FORM 006: DAILY WORK REPORT**

<b>Location:</b>	<b>Date:</b>	<b>Time:</b>
------------------	--------------	--------------

**CHRONOLOGY OF ACTIVITIES:**

Date	Time	Sequence of Events

Equipment Used Including Name of Contractor and Operating Time:  
(Use reverse side if required) :

Vessel/Aircraft/Vehicle: .....

Booms/Skimbers/Spray Equip: .....

Consumables: .....  
(Dispersants, sorbents, etc).

Personnel, Position and Hours Worked (All personnel; use reverse side if required)

Casual Labour: .....  
.....

Equipment Operators: .....

Description and Number of Disposal Loads: .....  
.....

Supervisor:.....

<b>Prepared By:</b>	<b>Phone:</b>
<b>Company/Agency:</b>	<b>Fax:</b>
<b>Position:</b>	<b>Mobile:</b>
<b>Signature:</b>	

**OSCP FORM 007: SHORELINE ASSESSMENT REPORT**

<b>Location:</b>	<b>Date:</b>	<b>Time:</b>
------------------	--------------	--------------

Specific Location:..... Map (No.):..... Map Reference:.....  
 Name of Beach or Location Description: .....

**Reasons For Assessment:** (Tick as appropriate)

Public Report	Government Authority Request	Known Spill (Pre-Clean)
Known Spill (Post-Clean)	Exercise Only	

OIL DISTRIBUTION AND CHARACTER												
Parameter	Lower Intertidal Zone			Mid Intertidal Zone			Upper Intertidal Zone			Supratidal		
	Coastal Type											
Percentage Oil Cover												
Oil Band Width												
Length of Coast Oiled												
Depth of Oiling												
Surface Oil Thickness												
Appearance												
Debris Present												
Oiled Debris												

**NOTES:**

<b>Prepared By:</b>	<b>Phone:</b>
<b>Company/Agency:</b>	<b>Fax:</b>
<b>Position:</b>	<b>Mobile:</b>
<b>Signature:</b>	

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## 001. GENERAL DESCRIPTION

- The purpose of this section is to define initial and ongoing roles and responsibilities of various personnel responding to, or supporting, an Oil Spill Emergency Response. Clearly defined and understood “roles” and responsibilities, minimise confusion and ensure all essential emergency response activities are considered and carried out and to assist the resumption of normal operations as quickly as possible after the conclusion of the emergency.
- The “roles” are not a fixed selection of prescribed rules or duties, rather a flexible series of prompts, designed to cater for an escalation or change in the severity of any emergency. The “role” methodology is not designed to reflect a corresponding position, or title, within the *GLOBEX Far East* organisational structure nor is it designed to cater for every likely or specific emergency event. It is also not intended for every prompt to be reacted to sequentially, or to be reacted to at all, only to be considered as pro-active suggestions, appropriate to the incident response required at the time.
- During the response period, personnel are advised to always keep a log showing key events and times which should be given to the ERG Information Coordinator at the end of the incident. Consideration should also be given to the use of photography to document incident events where possible.

### 001.1 Oil Spill Response Support

- The safety of personnel and the vessel or facility concerned and the environment is the primary concern at all times during the emergency response to an oil spill incident. In addition, the primary oil spill response role of the vessel or facility concerned is to eliminate the source of the spill, regardless of size.
- Oil Spill Response Support is available to the ERG Leader including advisory and specialist assistance. The operational component of the support consists of two groups;
  - Field Operations led by the Offshore and Onshore Forward Controllers, and
  - Field Support led by the ERG Leader.
- Personnel initially assuming a *GLOBEX Far East* “role” may change during an emergency as more senior or appropriate personnel respond, it is essential therefore, that personnel assuming the “role”, clearly communicates to all personnel concerned, who has assumed the “role” at all times.

**Initial Actions****INSTALLATION / FACILITY / VESSEL****WITNESS**

1. Activate Manual Call Point immediately
2. Report nature and location of the oil spill / slick to the Control Room immediately
3. Attempt to isolate the source of the spill if trained and safe to do so OR:
4. Follow emergency alarm procedures and go to muster point
5. An observer of an oil slick, away from the facility, must notify the Control Room immediately and stand by for instructions from the PIC

**PIC**

1. Follow all relevant emergency procedures applicable to the incident
2. Confirm observation, source and extent of spill
3. Ensure immediate action is taken to isolate the source of the spill
4. Notify Shorebase of the details of the spill and if any external assistance is required to control and/or monitor the spill
5. Liaise closely with ERG
6. Transmit Pollution Report (OSCP Form 001) to Shorebase
7. Immediately alert the Masters of supply vessels and Pilots of helicopters in the vicinity
8. Monitor movement of the spill
9. Determine the need for, and request nearby supply vessels to prepare for, application of dispersant and/or propeller agitation if appropriate
10. Ensure SECURITE Navigation Warning is issued if appropriate
11. Transmit regular Incident SitRep (OSCP Form 002) and other relevant proformas to Shorebase
12. Keep ERG informed of local weather conditions and sea state
13. Maintain personal log of events, actions, messages and decisions; provide to ERG Information Coordinator at the conclusion of any incident

**GLOBEX Far East EMERGENCY RESPONSE GROUP**

(See Next Page)

**Initial Actions****INSTALLATION / FACILITY / VESSEL****SHOREBASE PERSON TAKING CALL**

1. Call out *GLOBEX Far East* ERG Leader

**ERG LEADER****PRE-EMERGENCY**

1. Maintain familiarisation with the *GLOBEX Far East* OSCP, the key emergency respondents and the respective notification and callout requirements
2. Establish/maintain "goodwill" contact with all relevant response agencies, their key personnel and respective notification and callout requirements

**EMERGENCY ACTIONS**

3. Confirm callout and ETA if afterhours
4. Refer to OSCP procedures and role checklists; utilise ER Log
5. Follow *GLOBEX Far East* emergency notification pathway (010-003)
6. Maintain close liaison with the installation/facility/vessel and provide oil spill response services as requested
7. Consider mobilising ERG Oil Spill Response Support
8. If more than 80 ltrs (0.5 bbls) spilled; report to TMR/DELM (refer Contact Directory)
9. Activate and request spill trajectory predictions from Environmental Specialist
10. Ensure surveillance of oil spill by fixed wing aircraft or helicopter is initiated, weather conditions are being monitored and dispersant preparations are under way if appropriate
11. If the spill is/becomes, unmanageable for existing resources notify TMR/DELM for declaration of spill status and assistance (see Section 010-002 Emergency Classifications)
12. Follow general media response and external communications procedures throughout the incident (refer ERG Leader role checklist in Drilling ERP)
13. Refer to SMS for post incident investigation methodology and procedures
14. Maintain personal log of events, actions, messages and decisions; provide to ERG Information Coordinator at the conclusion of any incident

**GLOBEX FAR EAST MATERIALS AND LOGISTICS COORDINATOR****PRE-EMERGENCY**

1. Maintain familiarisation with the *GLOBEX Far East* OSCP, the key emergency respondents and the respective notification and callout requirements
2. Establish/maintain "goodwill" contact with all relevant response agencies, their key personnel the respective notification and callout requirements

**EMERGENCY ACTIONS**

3. Organise initial observation and dispersant spraying aircraft/support vessels as needed
4. Ensure dispersant preparations for aerial application are under way as required
5. Liaise with TMR/DELM/AMSA for assistance as necessary
6. If necessary order additional quantities of National Plan approved dispersant from DELM/AMSA/AMOSC, and arrange transport
7. If spill residue likely to make landfall, mobilise personnel/equipment to landfall site

**Initial Actions**

**INSTALLATION / FACILITY / VESSEL**

**ENVIRONMENT SPECIALIST**

**PRE-EMERGENCY**

- 1. Maintain familiarisation with the *GLOBEX Far East* OSCP, the key emergency respondents and the respective notification and callout requirements
- 2. Establish/maintain "goodwill" contact with all relevant response agencies, their key personnel and the respective notification and callout requirements

**EMERGENCY ACTIONS**

- 3. Coordinate with and support TMR/DELM/AMSA in monitoring of the spill movement
- 4. Estimate the spill trajectory using vector analysis method or computer model (liaise with contracted computer model provider)
- 5. Obtain and monitor weather and tide/current conditions and keep other ERG members informed
- 6. Provide details of environmental resources at risk to the ERG

**GLOBEX Far East EMT .....To Advise and be Advised as Appropriate**

**Offshore Forward Controller**

**Remember.....**the primary Offshore Forward Controller's role is to minimise effects of an oil spill and direct cleanup operations without undue risk

**PRE-EMERGENCY**

1. Maintain familiarisation with the *GLOBEX Far East* OSCP, the key emergency respondents and the respective notification and callout requirements
2. Establish/maintain "goodwill" contact with all relevant response agencies, their key personnel and the respective notification and callout requirements

**EMERGENCY ACTIONS**

3. Confirm callout and ETA if afterhours
4. Refer to OSCP procedures and role checklists; utilise ER Log
5. Establish Offshore Forward Control and assume responsibility for offshore response operations
6. Liaise with Onshore Forward Controller and ERG Leader for incident briefing, response strategy development and likely resource requirements
7. Brief personnel and contractors in your charge with response strategy and remind them of the need for safe working practices
8. Prepare resource allocation register
9. Request necessary communications network link-up
10. Initiate offshore assessments and report status to ERG Leader
11. Request additional communications as appropriate
12. Ensure incident Health and Safety system is implemented and continually monitored
13. Advise on likely waste management requirements
14. Assess and provide appropriate guidance regarding incident hazards/risks to life and property
15. Liaise with and advise requirements of Aviation and Marine operations roles
16. Monitor effectiveness of security, safety and medical care arrangements
17. Supervise surveillance and tracking operations
18. Coordinate and monitor dispersant operations
19. Liaise with containment and recovery operations
20. Liaise with *GLOBEX Far East* Shorebase Materials and Logistics Coordinator to determine extent of initial and ongoing catering/janitorial/accommodation services required
21. Interface with Emergency Services and take instructions, if given, as appropriate
22. Arrange for ongoing weather forecasts
23. Remain on call; when off duty
24. Consider need for relief of personnel in your charge
25. Consider relief/support for your role; prepare handover reports and plans
26. Debrief personnel in your charge before standing them down
27. Continually monitor/adapt requirement plans for escalation or reduction of incident needs
28. Supply data on committed costs to ERG Information Coordinator
29. Maintain personal log of events, actions, messages and decisions; provide to ERG Information Coordinator at the conclusion of any incident

**Offshore Containment and Recovery**

**Remember.....**the primary Offshore Containment and Recovery role is to supervise all aspects of containment and recovery operations on water, including requisitioning and deployment of personnel and equipment

**EMERGENCY ACTIONS**

1. Confirm callout and ETA if afterhours
2. Refer to OSCP procedures and role checklists; utilise ER Log
3. Liaise with Off-Shore Forward Controller for incident briefing and likely requirements
4. Brief personnel and contractors in your charge with response strategy and remind them of the need for safe working practices
5. Request and supervise mobilisation of relevant containment and recovery equipment and prepare a resource allocation register
6. Monitor containment and recovery effectiveness and progress
7. Develop response strategy and coordinate containment and recovery operation
8. Request necessary communications network link-up
9. Consider need for work permit system
10. Assess and request temporary storage facilities
11. Liaise with Waste Management personnel and advise on likely requirements
12. Provide input to induction procedures of response personnel and contractors
13. Liaise with Primary Response Authority throughout
14. Remain on call throughout incident; when off duty
15. Consider need for relief of personnel in your charge
16. Consider relief/support for your role; prepare handover reports and plans
17. Debrief personnel in your charge before standing them down
18. Continually monitor/adapt requirement plans for escalation or reduction of incident needs
19. Make arrangement for return, cleaning and checking of materials/equipment
20. Supply data on committed costs to ERG Information Coordinator
21. Attend primary debrief before standing down
22. Maintain personal log of events, actions, messages and decisions; provide to ERG Information Coordinator at the conclusion of any incident

**Surveillance and Tracking**

**Remember.....**the primary Surveillance and Tracking role is to coordinate and provide expertise in matters relating to aviation surveillance and recording of incident

**EMERGENCY ACTIONS**

1. Confirm callout and ETA if afterhours
2. Refer to OSCP procedures and role checklists; utilise ER Log
3. Liaise with Forward Controller(s) for incident briefing and likely requirements
4. Brief personnel and contractors in your charge with response strategy and remind them of the need for safe working practices
5. Assemble surveillance equipment, maps and charts
6. Request surveillance flights to view and record details of spill movement
7. Ensure location and other relevant details are updated on spill surveillance maps in Forward Control Centre(s)
8. Obtain projected spill trajectories from contracted computer model provider
9. Provide accurate incident surveillance and other relevant details to ERG Information Coordinator for inclusion on incident charts in ERP room
10. Prepare surveillance input for planning meeting
11. Video and photograph incident site for a permanent record
12. Remain on call throughout incident; when off duty
13. Consider need for relief of personnel in your charge
14. Consider relief/support for your role; prepare handover reports and plans
15. Debrief personnel in your charge before standing them down
16. Continually monitor/adapt requirement plans for escalation or reduction of incident needs
17. Make arrangement for return and checking of materials/equipment
18. Supply data on committed costs to ERG Information Coordinator
19. Attend primary debrief before standing down
20. Maintain personal log of events, actions, messages and decisions; provide to ERG Information Coordinator at the conclusion of any incident

Dispersant Application

**Remember.....**the primary Dispersant Application role is to coordinate and supervise overall dispersant application operation

**EMERGENCY ACTIONS**

1. Confirm callout and ETA if afterhours
2. Refer to OSCP procedures and role checklists; utilise ER Log
3. Liaise with Off-Shore Forward Controller for incident briefing and likely requirements
4. Brief personnel and contractors in your charge with response strategy and remind them of the need for safe working practices
5. Provide details on dispersant type stockpiles and availability
6. Provide relevant support information to Off-Shore Forward Controller and Dispersant support personnel
7. Ensure location and other relevant details are updated on spill surveillance maps in Forward Control Centre(s)
8. Liaise with TMR/DELM/AMSA/AMOSC on availability of 'Fixed Wing Aerial Dispersant Capability' (FWADC)
9. Liaise with Marine/Aviation Coordinators for workboat and/or aircraft availability for observation and dispersant application
10. Request transportation of dispersant stocks and application equipment to loadout points
11. Liaise with Off-Shore Forward Controller and Dispersant support personnel in formulating dispersant use options and plan
12. Check if Government approval for dispersant use has been given
13. Ensure all safety clothing and equipment is in place for dispersant handling
14. Liaise with dispersant application personnel
15. Identify requirements for additional immediate and long term stocks of dispersant
16. Maintain comprehensive documentation of all dispersant application activities
17. Coordinate and oversee all dispersant application contractor(s) activities
18. Compile and continually review all relevant information regarding sensitive areas
19. Stay informed with predicted wind and weather forecasts
20. Monitor effectiveness of dispersant use
21. Remain on call throughout incident; when off duty
22. Consider need for relief of personnel in your charge
23. Consider relief/support for your role; prepare handover reports and plans
24. Debrief personnel in your charge before standing them down
25. Continually monitor and adapt requirement plans for escalation or reduction of incident needs
26. Make arrangement for return and checking of materials/equipment
27. Supply data on committed costs to ERG Information Coordinator
28. Attend primary debrief before standing down
29. Maintain personal log of events, actions, messages and decisions; provide to ERG Information Coordinator at the conclusion of any incident

## Aviation Coordinator

**Remember.....**the primary Aviation Coordinator role is to make available aircraft and ground crews for incident response operations

**EMERGENCY ACTIONS**

1. Confirm callout and ETA if afterhours
2. Refer to OSCP procedures and role checklists; utilise ER Log
3. Liaise with Forward Controller(s) for incident briefing and likely requirements
4. Brief personnel and contractors in your charge with response strategy and remind them of the need for safe working practices
5. Arrange safety induction of personnel and contractors around aircraft
6. Liaise and maintain contact, with Aviation incident response contractor(s)
7. Liaise with Surveillance and Tracking on requirements for spill monitoring flights
8. Determine availability of contractor aircraft
9. Process and coordinate requests for aircraft
10. Liaise with relevant authorities re; approvals required for aircraft operations
11. Liaise with Forward Controller(s) to make available aircraft, trained air and ground crews to operate surveillance flights, transfer of personnel, deployment and operation of dispersant spray buckets
12. Request air space restrictions around incident site as appropriate
13. Remain on call throughout incident; when off duty
14. Consider need for relief of personnel in your charge
15. Consider relief/support for your role; prepare handover reports and plans
16. Debrief personnel in your charge before standing them down
17. Continually monitor and adapt requirement plans for escalation or reduction of incident needs
18. Make arrangement for return and checking of materials/equipment
19. Supply data on committed costs to ERG Information Coordinator
20. Attend primary debrief before standing down
21. Maintain personal log of events, actions, messages and decisions; provide to ERG Information Coordinator at the conclusion of any incident

**Marine Coordinator**

**Remember.....**the primary Marine Coordinator role is to provide vessels, equipment and personnel to monitor, contain, recover or disperse spills on water and to arrange for expertise in ship salvage, cargo containment and cargo transfer should vessel(s) be involved in an incident

**EMERGENCY ACTIONS**

1. Confirm callout and ETA if afterhours
2. Refer to OSCP procedures and role checklists; utilise ER Log
3. Liaise with Off-Shore Forward Controller for incident briefing and likely requirements
4. Brief personnel and contractors in your charge with response strategy and remind them of the need for safe working practices
5. Liaise with relevant authorities in requesting water traffic control if necessary
6. Arrange for advice on vessel salvage and monitor salvage operations as appropriate
7. Maintain a direct contact link with relevant Forward Controller(s)
8. Monitor effectiveness of marine response techniques
9. Remain on call throughout incident; when off duty
10. Consider need for relief of personnel in your charge
11. Consider relief/support for your role; prepare handover reports and plans
12. Debrief personnel in your charge before standing them down
13. Continually monitor and adapt requirement plans for escalation or reduction of incident needs
14. Make arrangement for return and checking of materials/equipment
15. Supply data on committed costs to ERG Information Coordinator
16. Attend primary debrief before standing down
17. Maintain personal log of events, actions, messages and decisions; provide to ERG Information Coordinator at the conclusion of any incident

**Wildlife Coordinator**

**Remember.....**the primary Wildlife Coordinator role is to monitor wildlife and their habitats which are affected or potentially affected by an oil spill and/or associated clean-up; to facilitate requests from Wildlife rescue agencies for equipment and personnel required to capture, transfer, clean, rehabilitate and release oiled wildlife (with rafting seabirds identified as most probable wildlife affected)

**PRE-EMERGENCY**

1. Maintain familiarisation with the *GLOBEX Far East* OSCP, Environmental Management Plan, the key emergency respondents and the respective notification and callout requirements
2. Establish/maintain "goodwill" contact with all relevant environmental response agencies, their key personnel and their respective notification and callout requirements

**EMERGENCY ACTIONS**

3. Confirm callout and ETA if afterhours
4. Refer to OSCP procedures and role checklists; utilise ER Log
5. Liaise with ERG leader/Forward Controller(s) for incident briefing and likely requirements
6. Brief personnel and contractors in your charge with response strategy and remind them of need for safe working practices
7. Collect and provide information concerning wildlife and habitats affected/threatened by spill
8. Monitor status of affected/threatened wildlife and their habitats for duration of spill/cleanup
9. Support government/wildlife agencies in implementation of methods to exclude wildlife from affected/potentially affected areas
10. Liaise with Tracking/Surveillance/Technical Advisers to develop plan to identify and protect wildlife and associated habitats affected/potentially affected by spill or spill clean-up
11. Liaise with relevant Commonwealth/State/local wildlife agencies, including local wildlife and/or conservation groups
12. Facilitate requests from wildlife rescue agencies for equipment and personnel required to capture, transfer, clean, rehabilitate and release oiled wildlife
13. Activate relevant contract resources as required
14. Assist in set-up of rehabilitation sites (including sourcing necessary permits) if requested by a government agency
15. Maintain a direct contact link with relevant Forward Controller(s)
16. Monitor effectiveness of wildlife response techniques
17. Remain on call throughout incident; when off duty
18. Consider need for relief of personnel in your charge
19. Consider relief/support for your role; prepare handover reports and plans
20. Debrief personnel in your charge before standing them down
21. Continually monitor and adapt requirement plans for escalation or reduction of incident needs
22. Make arrangement for return and checking of materials/equipment
23. Supply data on committed costs to ERG Information Coordinator
24. Attend primary debrief before standing down
25. Maintain personal log of events, actions, messages and decisions; provide to ERG Information Coordinator at the conclusion of any incident

**Onshore Forward Controller**

**Remember.....**the primary Onshore Forward Controller role is to minimise effects of an oil spill and direct cleanup operations without undue risk

**PRE-EMERGENCY**

1. Maintain familiarisation with the *GLOBEX Far East* OSCP, the key emergency respondents and the respective notification and callout requirements
2. Establish/maintain "goodwill" contact with all relevant response agencies, their key personnel and the respective notification and callout requirements

**EMERGENCY ACTIONS**

3. Confirm callout and ETA if afterhours
4. Refer to OSCP procedures and role checklists; utilise ER Log
5. Establish Forward Control and assume responsibility for onshore OSR operations
6. Liaise with Offshore Forward Controller and ERG Leader for incident briefing, response strategy development and likely resource requirements
7. Brief personnel in your charge with response strategy
8. Arrange initial shoreline assessments, request maps depicting prioritised areas for protection or clean-up and report status to ERG Leader
9. Request mobilisation of field communications
10. Assess and provide appropriate guidance in regard to local incident site hazards or risks to life and property (quicksand, limited access, caves, wildlife etc.)
11. Consider need for work permit system
12. Determine access to affected area(s)
13. Determine optimum incident command points with Onshore OSR personnel and Offshore Forward Controller
14. Ensure incident Health and Safety system is implemented and continually monitored
15. Monitor effectiveness of security, safety and medical care arrangements
16. Review effectiveness of containment and recovery, shoreline clean-up and waste management operations
17. Liaise with *GLOBEX Far East* Shorebase Materials and Logistics Coordinator to determine extent of initial and ongoing catering/janitorial/accommodation services required
18. Interface with Emergency Services and take instructions as appropriate
19. Request ongoing weather forecasts
20. Conduct regular briefings with local authorities via ERG and EMT re. status of clean-up operations
21. Consider need for relief of personnel in your charge
22. Consider relief/support for your role; prepare handover reports and plans
23. Debrief personnel in your charge before standing them down
24. Continually monitor and adapt requirement plans to suit escalation or reduction of incident needs
25. Supply data on committed costs to ERG Information Coordinator
26. Maintain personal log of events, actions, messages and decisions; provide to ERG Information Coordinator at the conclusion of any incident

**Onshore Containment and Recovery**

**Remember.....**the primary Onshore Containment and Recovery role is to supervise all aspects of containment and recovery operations onshore, including requisitioning and deploying personnel and equipment

**EMERGENCY ACTIONS**

1. Confirm callout and ETA if afterhours
2. Refer to OSCP procedures and role checklists; utilise ER Log
3. Liaise with On-Shore Forward Controller for incident briefing and likely requirements
4. Brief personnel in your charge and remind them of safe work practices
5. Request mobilisation of relevant equipment and maintain resource allocation register
6. Determine access to affected areas
7. Provide input to induction procedures of response personnel
8. Request necessary communications network link-up
9. Develop containment and recovery strategy
10. Monitor containment and recovery effectiveness and progress; request additional DELM/AMSA/National Plan equipment as required
11. Consider need for work permit system
12. Determine and request temporary storage requirements
13. Advise on likely quantities of collected material requiring waste management
14. Remain on call throughout incident; when off duty
15. Consider need for relief of personnel in your charge
16. Consider relief/support for your role; prepare handover reports and plans
17. Debrief personnel in your charge before standing them down
18. Continually monitor/adapt requirement plans for escalation or reduction of incident needs
19. Make arrangement for return and checking of materials/equipment
20. Supply data on committed costs to ERG Information Coordinator
21. Attend primary incident debrief before standing down
22. Maintain personal log of events, actions, messages and decisions; provide to ERG Information Coordinator at the conclusion of any incident

**Shoreline Assessment and Cleanup**

**Remember.....**the primary Onshore Shoreline Assessment and Cleanup role is to provide an effective ongoing shoreline assessment operation including deployment of assessment personnel and equipment

**EMERGENCY ACTIONS**

- |  |                          |
|--|--------------------------|
| 1. Confirm callout and ETA if afterhours   | <input type="checkbox"/> |
| 2. Refer to OSCP procedures and role checklists; utilise ER Log  | <input type="checkbox"/> |
| 3. Liaise with On-Shore Forward Controller and Waste Management personnel for incident briefing, and likely requirements                       | <input type="checkbox"/> |
| 4. Brief personnel in your charge and remind them of safe work practices   | <input type="checkbox"/> |
| 5. Carry out shoreline assessment with Waste Management personnel and identify optimum locations for field control points                      | <input type="checkbox"/> |
| 6. Prepare resource allocation register  | <input type="checkbox"/> |
| 7. Request necessary communications network link-up  | <input type="checkbox"/> |
| 8. Determine access to affected area(s)  | <input type="checkbox"/> |
| 9. Consider need for work permit system  | <input type="checkbox"/> |
| 10. Coordinate initiation of onshore clean-up operations, monitor effectiveness and progress   | <input type="checkbox"/> |
| 11. Remain on call throughout incident; when off duty  | <input type="checkbox"/> |
| 12. Consider need for relief of personnel in your charge   | <input type="checkbox"/> |
| 13. Consider relief/support for your role; prepare handover reports and plans  | <input type="checkbox"/> |
| 14. Debrief personnel in your charge before standing them down   | <input type="checkbox"/> |
| 15. Continually monitor/adapt requirement plans to suit escalation or reduction of incident needs  | <input type="checkbox"/> |
| 16. Make arrangement for return and checking of materials/equipment  | <input type="checkbox"/> |
| 17. Supply data on committed costs to ERG Information Coordinator  | <input type="checkbox"/> |
| 18. Attend primary debrief before standing down  | <input type="checkbox"/> |
| 19. Maintain personal log of events, actions, messages and decisions; provide to ERG Information Coordinator at the conclusion of any incident | <input type="checkbox"/> |

#### Waste Management

**Remember.....**the primary Waste Management role is to supervise the management of waste, recovered oil and associated oil spill debris

#### EMERGENCY ACTIONS

1. Confirm callout and ETA if afterhours
2. Refer to OSCP procedures and role checklists; utilise ER Log
3. Liaise with On-Shore Forward Controller for incident briefing and likely requirements
4. Brief personnel and contractors in your charge and remind them of safe working practices
5. Carry out shoreline assessment with Waste Management personnel and identify optimum locations for field control points
6. Provide input to induction procedures of response personnel and contractors
7. Establish and maintain communication with Government Waste Management Representatives
8. Contact relevant Government agencies and obtain necessary permits and authorisations
9. Apply for personnel, equipment and services necessary to execute waste management/storage/transfer strategy
10. Ensure all PPE and safety equipment are in place for handling waste products
11. Coordinate waste management operations
12. Establish current lists of available waste storage, treatment facilities, specialist haulage contractors and disposal sites
13. Arrange waste management sites for recovered oil and oiled debris with EPA and clarify procedures and conditions to be followed
14. Arrange transport to haul and dispose of all waste material; with approved transporter
15. Monitor effectiveness of all waste management contractors activities as per approved methods
16. Remain on call throughout incident; when off duty
17. Consider need for relief of personnel in your charge
18. Consider relief/support for your role; prepare handover reports and plans
19. Debrief personnel in your charge before standing them down
20. Continually monitor/adapt requirement plans for escalation or reduction of incident needs
21. Make arrangement for return and checking of materials/equipment
22. Supply data on committed costs to ERG Information Coordinator
23. Attend primary debrief before standing down
24. Maintain personal log of events, actions, messages and decisions; provide to ERG Information Coordinator at the conclusion of any incident

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*Elements of environmental information in this section have been derived from the Dames & Moore Barramundi "Environmental Management Plan" report. For more environmental information; please refer to the report*

**Prediction of Risk Zone:****001.1 Physical Features****Wind Patterns**

Since 1956, three-hourly weather observations have been routinely made at King Island by the Bureau of Meteorology. Wave observations are also made from this station. The patterns indicate that winds from the southwesterly and northeasterly quadrants are typical. Winds from the southeasterly quadrant, whilst infrequent and not "typical" can be produced by strong weather systems that occasionally occur in the Tasman Sea. When these easterlies arise, their effect in the Bass Strait basin can be significant. In the event that real-time modelling of this region is required, wind data from King Island can be supplemented with data from Burnie and Cape Otway.

**Water Circulation**

The strength and direction of the water currents are generally predictable in the study area with tidal currents prevailing most of the time. For short periods (12 - 72 hours), the water currents can be influenced by the major eddies moving into Bass Strait from the Tasman sea, or perhaps by coastal trapped waves. If such currents are present and are of sufficient strength, they may influence the trajectory of the oil however, they are not important under "typical" conditions.

The strength of the tidal currents varies with the spring/neap cycle of the lunar month, which may also slightly modify the expected oil spill trajectory. However the distance of the drilling area from the shore and the consequent time of travel of the oil over several tidal cycles means that the time of tide would not have a critical effect on the timing and location of any beaching.

**Waves**

The wave climate of western Bass Strait is associated with prevailing westerly winds and results in wave heights in the range 2 - 5 m. Under extreme conditions, associated with intense low-pressure systems further to the south, significant wave heights for design conditions are likely to be in excess of 10m. However, to the east of King Island, there is significant attenuation of wave height due to change of topography and current interaction.

**01.2 Significant Marine Biological Communities****Benthic Communities**

The seabed of Bass Strait is characterised by a wide variety of grain sizes. Sediments in central Bass Strait are predominantly fine sand and mud where tidal currents are slowest. In faster current areas on the eastern and western margins of Bass Strait, the finer material has been generally winnowed out leaving coarser sand and shell material. The benthic communities (fauna living on it in the seabed) are expected to be impacted by the discharge of drill cuttings and drilling fluids that would have a localised smothering effect on the seabed in the immediate area of the rig. Existing benthic studies of Bass Strait and the continental shelf indicate a high diversity and a wide distribution of species present (Poore et al. 1985; Wilson & Poore 1987; Poore et al. 1993).

**Environmental Characteristics**

In most cases, the fauna has been examined with the main purpose of describing the species present. Descriptions of the fauna have been hampered by the poor state of knowledge of the species present and their characteristics prior to the surveys and need for revision of some invertebrate groups. Consequently, results are more advanced for some groups than others. However, some general conclusions have emerged. A major finding is the high marine species richness (Poore & Wilson 1993).

In general, the results from Museum of Victoria Bass Strait surveys indicate that:

- The fauna are indicative of endemic warm temperate southern Australian faunal element.
- The remarkably high numbers and diversity of a wide range of invertebrate groups has been a recurrent observation of all surveys in Bass Strait. This may be partly attributable to the stable biogenic sediments but even in areas of terrigenous sediments, diversity is high compared with equivalent areas of the northern hemisphere.
- Many species are widely distributed across the Bass Strait, suggesting heterogenous sediments and many microhabitats.
- There is evidence that the deeper central basin of Bass Strait, where finer sediments are found, does not favour some species.
- Some species with warm water affinities are found, their distribution influenced by the East Australia Current which carries their larvae into Bass Strait.
- Some separation of distributions resulting from the original Victoria-Tasmania land bridge are still evident.
- There is a strong influence of sediment types - particularly the dominance of the relatively stable shelly sediments of biogenic origin on the shelf and terrigenous sands confined to marginal environments and embayments.
- A significant component of the fauna is comparable only with fossil record material: some molluscs, bryozoans and brachiopods have been collected alive for the first time in Bass Strait.
- Some invertebrate groups are allied with fauna from Antarctic seas. In winter, the east coast of Tasmania is supplied with water from the sub-Antarctic, the overlap with the East Australia Current contributing to the high diversity.

The existing data have not been collected or analysed in a way to provide any detailed assessment of the fauna of specific areas such as the Barramundi 1 project area. Many of the faunal groups still have not been completely analysed and remain with the Museum of Victoria. However, the main finding of relevance is the wide distribution of the species and heterogeneity of benthic habitats within a small area. This implies that the Barramundi 1 project area does not contain any unique faunal elements, although this cannot be stated with certainty.

**Marine Birds and Mammals**

Many species may occur along the north coast of Tasmania. Those considered at most risk are the rafting and diving birds in the predicted spill path areas and for this reason, wader habitats outside any predicted landfall area have not been re-examined since 1992.

There are no known areas of significant offshore seabird accumulation within the study area although a number of species frequent the area for feeding, including prions, diving petrels, short-tailed shearwaters, cormorants, and little penguins. Fairy terns (which are listed under Victoria's *Flora and Fauna Guarantee Act 1988*) and albatrosses may also occur in the area. Significant areas of offshore aggregation normally occur along the continental shelf margin, particularly in areas of up-welling.

While the breeding colonies and accumulations of birds in near shore coastal areas around the colonies are not at risk from spills, feeding concentrations or individual sea-birds in open waters of central Bass Strait may be affected by an oil spill offshore. These birds would be prone to oil contamination because of their diving feeding habit.

Marine mammals (whales, dolphins and seals) could accidentally become contaminated in the event of a spill occurring during their presence in the area. The responses of marine mammals to drilling noise and ship movement is not adequately known although the supply vessel will have no more impact than the frequent shipping which passes through the region.

Leatherback turtles are generally very rare visitors to colder latitudes. In the extremely unlikely event of one being seen in the area of a spill, efforts will be made to cause it to alter course, away from oil or, if oiled, treated in whatever way possible.

Birds of coastal areas could be subjected to localised, short-term disturbances caused by the supply helicopter. The route between Essendon and the rig potentially overflies the coast at Red Cliff Head, Philip Island. However, the actual coastal crossing point of the helicopter flight path will be routed at the cruising altitude of 1000 m, so that any disturbance is not expected.

Bird migratory routes are predominantly in the eastern and western margins of Bass Strait; that is, across Flinders Island to Wilsons Promontory or across King Island to Cape Otway. The Barramundi site is potentially in line with the routes used by migrating land birds and may therefore have some positive impacts, in the provision of resting areas as well as negative impacts of flares (only in the event of production testing) and light induced disorientation.

Inclusion of a First-up Wildlife Response component of the contingency plan is advised in the event of sea birds (or mammals) becoming affected by a spill. Given the location of the project in mid-Bass Strait, wildlife such as rafting seabirds are most likely to be affected at sea. Oiled birds may be in dead or in poor condition by the time of landfall.

**001.3 Other uses****Commercial Uses**

Commercial activities that may be affected by exploratory drilling at Barramundi 1 include some commercial fisheries and shipping. The data describing commercial fisheries were originally collected as part of the environmental assessment for another proposed drilling program by Sagasco in 1992.

At that time, emphasis was placed on general consultation with community groups. Its purpose was to provide information to address possible misperceptions about exploration drilling (as distinct from production), to discuss potential concerns and in the process, to gain resource information. Although out dated, the data is still generally relevant in broad descriptions of the types of fisheries and coastal resources of the region as a whole.

The only commercial fisheries, which occasionally operate in the central Bass Strait basin, are the Bass Strait Shark Fishery and the Central Zone Scallop Fishery. For the South East (trawl) Fishery, the central region of Bass Strait is generally unproductive and not intensively fished.

For the purposes of *GLOBEX Far East's* proposed drilling at Barramundi 1, updates on these fisheries indicate that as with the South East Fishery, the central part of Bass Strait in which the Barramundi 1 lease area is among the most unproductive parts of the commercial fishing areas. For the shark fishery, most effort is concentrated around the Victorian coast and the edges of Bass Strait, while for scallops, the productive grounds are closer to King Island and the Furneaux group of islands. The shark fishery has been particularly stable over the past few years in terms of catches and distribution of the catches.

#### **Communications Cables**

Undersea optical fibre cables were installed along the seabed between northern Tasmania and Victoria during mid 1995. The proposed route of the cable passed through the T/RL1 lease, approximately 8 km from Barramundi 2. Agreements have been reached between the parties for the establishment of a Prohibited Anchorage Zone (PAZ) of 1km width either side of the cable route within the lease area. The proposed location and anchoring of the drilling rig Sedco 702 will not violate the PAZ.

#### 001.4 Potential Environmental Impact of Drilling Program

##### Drilling Mud and Cuttings

It is proposed that tricone bits will be used throughout the drilling. These bits produce cuttings of coarse grained sand size. The lithologies expected to be penetrated include limestone, marl, sandstone, and shale. Drilling is not expected to encounter any naturally radioactive or heavy mineral sands.

Cuttings produced from the initial drilling to 800 m depth will remain on the sea bed, initially forming a mound around the drilling well site. During the remaining drilling, cuttings and some drilling mud will be discharged over board to the surface (in an approximate ratio of 2 : 1 cuttings : mud) as described in Section 1.4, with some surplus mud being discharged at the completion of drilling. The total volume of drilling mud, (which has approximately 20% solids), expected to be released to the marine environment is 1000 m<sup>3</sup>. Thus the total volume of mud plus cuttings will be of the order of 1200 m<sup>3</sup>.

Toxicity of drilling muds and cuttings discharged to the seabed is often questioned in relation to marine offshore drilling and this was also raised in 1992 and 1995. Considerable research effort has focused on this issue worldwide. Although not used in Bass Strait, oil-based muds are known from studies in the North Sea to be associated with adverse impacts to marine benthos extending several kilometers from platforms in some cases (Olsgard & Grey 1995). Conversely, the water-based muds used in Australia are relatively benign environmentally (Swan et al. 1994).

Recent studies in Bass Strait (Terrens et al. 1998) have shown that in this high energy environment, detection of muds in sediments (as measured by elevation of barium) and changes to abundances and diversity of some benthic groups is of short duration and mostly limited to within 100m of the platform. Underwater video shows no evidence of mounding of cuttings beneath discharge points.

Thus, given the rapid dispersion and dilution in the open environment of Bass Strait and the short term nature of the discharge, significant adverse impacts to benthic fauna are not expected.

For further environmental information; refer to Dames & Moore Barramundi "Environmental Management Plan".

## Drilling Program Risk Assessment

The proposed drilling program is to a relatively shallow depth and it is not expected that drilling will penetrate any natural, over-pressure lithologies. It is expected that at these shallow depths, the reservoir objective would not have high hydrocarbon pressures and any "kick" would be relatively easy to control.

The risks of a major blowout during exploratory drilling are difficult to estimate accurately. Risks have been estimated as extremely low; less than one spill per 1500 drilling rig years. The Bureau of Transport and Communications Economics (BTCE) estimates the risk of one or more major oil spill from exploratory drilling platforms to be 26 percent in the next five years to 67 percent over a 20 year exposure period. However, BTCE consider these figures to be based on pessimistic assumptions as no major spills have occurred from platforms in Australia and the Australian offshore petroleum industry has spilled less than 400 barrels over 26 years of production (BTCE 1991).

The worldwide rate of spills greater than 1000 barrels from offshore production and exploration is 2.05 spills per billion barrels produced during the period from 1964 - 1980. Equivalent figures are 1.6 and 3.87, from pipelines and shipping respectively. Oil spills from offshore facilities are characterised by small spills and the rare occurrence of large spills. Australian spill statistics DPIE amount to 440 bbl (70 000L) up to 1991 (including spills greater than 320L). From 1965 - 1991, DPIE recorded 51 incidents, of which 29 were of at least 320L. Best estimates of oil spilled from Australian exploration and production are 600 barrels spilled in incidents involving >2 bbl.

However, while the risk of a major blowout is very low, it still remains a hazard if a blowout cannot be contained. In Australia there have been no significant oil spills during drilling for offshore platforms. There have been a total of six gas blowouts not involving the release of oil, which have been contained. The largest platform-related spill in Australia was in 1981 in Kingfish (in Bass Strait) when 10,000L of diesel (i.e. not production crude oil) spilled.

The BTCE has published risk statistics on spill rates, based on comparisons between Australian and a variety of US offshore exploration, production and transport data and for spills in the range 1,000 - 10,000 t.

From a spill rate of 0.24 per billion barrels (or 0.001L per gigalitre) from US offshore platforms, BTCE (as at 1991) estimated a probability of one or more major oil spills as much as 26 percent over the next five years and 44 percent over the next ten years. These predictions were considered in the BTCE report to be overly pessimistic on the basis that

- current Australian disciplines and conditions are superior to historical overseas conditions
- wide confidence limits of data
- spill rates from platforms have been declining in recent years.

From the available shipping accident statistics in the entire Sydney - Melbourne shipping routes through Bass Strait, there have been 4 incidents from 1981 - 1988, giving an accident rate of <0.1 per 1000 passages (BTCE 1991). Most spills from vessels come from operational discharges and accidents during fuelling in port; 12.5 percent from tanker accidents (DASETT 1995). Adherence to procedures for notification to mariners and normal warning procedures for shipping should ensure little or no risk of collision.

## **Environmental Monitoring Procedures**

Post-spill environmental surveys to determine the effect of a spill will be conducted if the oil comes into contact with any sensitive resources or shorelines. Surveys are not required if the spill disperses out to sea.

Once the area affected has been identified, surveys will be conducted, initially to determine the environmental impact of the spill, and subsequently to determine the rate and success of recovery of the affected habitats. Various monitoring techniques will be employed depending on the nature of the substrate and assemblage affected. Monitoring will include hydrocarbon analyses of sediments and biota.

A report detailing the results of the surveys and providing any recommendations for follow-up work will be produced and submitted to relevant Government authorities.

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**Table 1.0 Impact of Oil on Sensitive Marine Resources:**

HABITAT/ ORGANISM	EFFECTS OF OIL	RECOMMENDED RESPONSE
Offshore	Surface dwelling organisms may suffer (birds, mammals, plankton). Tainting of fish or prawns may occur from the water soluble fractions of the spilled oil. Plankton is expected to recover rapidly.	If there is potential for the oil to impact sensitive areas or shorelines disperse the oil in deep water. If not, leave alone and monitor its movement until the oil slick disperses naturally.
Exposed Rocky Shores and Headlands	Wave reflection will keep most of the oil offshore. Stranded oil will weather and rapidly disperse particularly in high energy coastlines.	Depending on degree of contamination, high or low pressure washing with sea water or leave alone for natural recovery. Use of dispersant should not be necessary.
Nearshore or in Coastal Waters	Sensitive, highly productive ecosystems such as mangroves, corals, seagrass and shellfish beds may be distributed in the shallow sub tidal and intertidal zones. The dilution potential is less than offshore and higher concentration of dispersed oil may persist.	Each of the sensitive ecosystems is addressed on an individual basis. For nearshore zones of sandy and gravel beaches dispersant use is a viable option if there is sufficient water circulation and flushing capacity for dilution.
Sandy Beaches	Depending on the grain size light oils can penetrate into the strata, heavy oils will tend to lie on the surface and can, on a low energy beach, form asphalt pavements over time. Wave action can assist in weathering but burial can also occur.	Dispersant use is a viable technique for exposed and well rinsed sandy beaches and should be applied ahead of the advancing tide. Dispersant use on low energy beaches is not recommended and either use manual or mechanical cleanup to remove the oil, giving due consideration to the potential for erosion. Lightly oiled beaches can be either disc cultivated or manually raked.

**Table 1.0 Impact of Oil on Sensitive Marine Resources (Cont'd):**

HABITAT/ ORGANISM	EFFECTS OF OIL	RECOMMENDED RESPONSE
Coral Reefs	Effects range from no effect on corals in deep, well flushed areas to mortality of entire colonies on emergent reefs. Decrease in coral and fish diversity, lack of colonisation by hermatyopic corals in reef areas subject to chronic pollution.	Dispersants can be used to prevent the floating oil reaching the reef but their use should be restricted to waters more than 10 metres deep. Deflection booms can be employed to keep oil away from shallow reef areas providing sea state permits their effective use.
Intertidal Sands and Mudflats.	If oiled, intertidal sands or mudflats tend to self clean, despite being in a low energy environment. This is due to the fact that oil is restricted to the surface by the sediment water which prevents deep penetration of the sediment by oil.	Use of sorbents on incoming tide to facilitate pick up of oil on high tide. Use of light booms and skimmers at high tide. Low pressure flushing is possible in some areas.
Seagrass beds.	Oil on the surface causes little or no impact on benthic seagrass beds. Human trampling and boat activity must be minimised	Dispersants use of offshore to protect seagrass beds is appropriate. It can also be used to treat oil over seagrass beds in water deeper than 10 m if the alternative is to allow oil to impact other sensitive habitats onshore. Avoid dispersant use in wade zone (1 m) seagrass beds as there could be lethal and sublethal effects of the dispersed oil on the biota residing in the seagrass beds.

**Table 1.0 Impact of Oil on Sensitive Marine Resources (Cont'd):**

HABITAT/ ORGANISM	EFFECTS OF OIL	RECOMMENDED RESPONSE
Mangroves	Mangroves are very sensitive to oil because coating of oil on the breathing roots can inhibit the supply of oxygen to the underground root systems and result in defoliation or death. Retention of oil in sediments can cause long term problems	If oiling is light to moderate, the mangroves should be left to recover naturally. Dispersant should be used offshore on oil that is approaching mangroves. Low pressure sea water flushing may be used to wash oil into collection booms providing access is available. Oily debris can be manually removed using shallow draught boats. Sorbents can be used to collect oil from mangrove margins and channels providing that they can be effectively recovered. Dispersants should not be used on oil stranded in mangroves. Deflection booms can also be used to divert oil away from mangrove communities.
Marine Mammals	It has been rare for whales, dolphins and dugongs to be directly affected following an oil spill. However there could be severe effects on food sources. Most mammals appear to detect and avoid oil slicks but juveniles are at risk from local oiling of rock pools	Secure oiled mammals and seek specialist assistance from the relevant government agency.
Birds	Birds using the water/air interface (such as divers) and those which forage in the intertidal zone (waders) are at risk. Treatment of oiled birds requires specialist expertise and the right facilities.	The use of dispersants will remove the oil from the water surface and reduce the probability of oiling of the plumage. Oiled birds should be secured and specialist assistance obtained from the relevant government agency. Consideration can be given to the use of scarer devices to keep birds away from oiled areas.

**Table 1.0 Impact of Oil on Sensitive Marine Resources (Cont'd):**

HABITAT/ ORGANISM	EFFECTS OF OIL	RECOMMENDED RESPONSE
Turtles	Floating oil may cause eye infections and illness through ingestion during feeding. Beached oil can have a severe effect on laying females and hatchlings.	Use deflection booms to divert oil away from nesting beaches. Give high priority to manually or mechanically cleaning those beaches which are known to be turtle nesting areas. Collect hatchlings as they leave the nests above the high water mark and transport offshore.
Fish	In offshore water they are highly mobile and are rarely affected. In inshore waters they may be at risk of tainting from dissolved hydrocarbon fraction.	An oil spill can cause loss of market confidence by the public. Bans on the fishing and harvesting of marine products may be imposed following a spill. Care must be exercised to prevent contaminated fish reaching the market. This should involve organised tasting by qualified personnel at the time of the spill.
Benthos	Plants and animals living on the seabed are at little risk of contamination by surface oil slicks in deeper waters. Inshore during rough weather, oil droplets may reach the seabed. Fresh crude oils and light refined products with a high proportion of toxic components can cause local damage to benthic species. The incorporation of oil into sediments can lead to residence times of several years with the possibility of sub-lethal effects and tainting of commercial species.	A ban on the harvesting of commercial species at the time of the spill. Periodic sampling of these species to ensure that there is no tainting. Most species will deplete over time once the oil is removed from the area.

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040-002	On-Scene Spill Modeling (OSSM) (Based on historical wind and current data and run for the proposed window the operations (June, July, September and October 1999)	4
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**Summary**

An Oil Spill Contingency Plan (OSCP) was prepared jointly by Dames & Moore and Labrador Petro Management Ltd in 1992 for proposed drilling of the nearby Yolla fields. This assessment area is near the proposed Barramundi 1 well and therefore relevant to the *GLOBEX Far East* OSCP. The OSCP environmental assessment related to exploration in the Cormorant, Yolla and Pipipa fields. Australian Marine and Offshore Group (AMOG) were commissioned to conduct a quantitative assessment of the risk that oil may strand on adjacent reefs or shorelines, should an accidental release of oil occur from the proposed operating area within Permit area T/27P. The On-Scene Spill Model (OSSM) was used which was developed by the U.S. National Atmospheric and Oceanic Administration (NOAA).

**North Tasmania**

In relation to coastal parks, reserves and sensitive coastal habitats of North Tasmania, the Tasmanian Department of Primary Industry, Water and Environment is currently in the process of updating the maps and information, with proposed protection zones in environmentally sensitive areas along the coast. While this update is in early stages, the extracts of the Coastal Resources Atlas provided in the 1992 report for the Yolla drilling program remains current. Since any oil potentially spilled in the Barramundi 1 area is not predicted to reach land, the descriptions of sensitive coastal environments and existing maps used in the documentation are available for background information only.

A location at Latitude: 32.67° S, Longitude: 145.74° E was used as the demonstrative site for the purpose of modelling. Because of the distance of the area from coastal zones, this modelling site can effectively represent the environmental risk from all drilling and operational sites within the area.

The risk assessment made use of a three-dimensional hydrodynamic model and an oil spill trajectory and fates model using the AMOG on scene spill modelling (OSSM). The modelling examined the potential for oil to be transported from the well site area to reefs or shorelines under the influence of wind and tidal conditions. The risk assessment modelling was based on historic records of the wind and weather conditions that have been experienced over this region. The following describes the results of the quantitative risk assessment:

**Results**

Results of the modelling are summarised in the following pages, which show the probability that spills may be transported to different locations around the well. Note that these are probability contours summarising the frequency with which locations were contacted by 200 independently modelled spills. They do not represent the likely extent of a single spill.

Dames & Moore's 1992 assessment indicated that none of the spill scenarios modelled for the Yolla, Pipipa and Cormorant sites resulted in any oil impacting with either the Victorian or Tasmanian coastline. Oil was predicted to reach the northern Tasmanian coastline from simulated spills from the Pipipa site under 2 percent of wind conditions and was predicted to reach the Victorian coastline from simulated spills from Cormorant under 3 percent of wind conditions.

These landfalls were predicted after 96 hours of winds of continuous direction, an unlikely event and one where considerable weathering of oil would be expected by the time of landfall. Recent discussions with the consultant who undertook the original modelling, have confirmed that the tidal and current inputs used at that time were from the current OSSM hydrodynamic model of Bass Strait. Wind conditions used for the modelling would also still be applicable.

The accompanying OSSM trajectories have been modelled for the Barramundi 1 location and confirm that it would be unlikely that a spill of either crude or diesel would result in any landfall. Winds are predominantly W-SSW and would tend to push any spill away from land. The scenarios in Dames & Moore's (1992) report for Sagasco's proposed exploratory drilling required constant NW winds of 9 – 13 knots for 4.5 days to achieve landfall from the Pipipa site. The scenario of ongoing winds in one direction is extremely unlikely. It is more likely that winds will shift around towards the west/south west and back again, increasing the time of the spill on water before landfall. After the period in question, the spill would have undergone significant loss of mass through evaporation and the landfall (if any) is most likely to be scattered tarballs.

Since any oil potentially spilled during exploratory drilling at Barramundi 1 is not predicted to reach land, descriptions of sensitive coastal environments, resources and areas of commercial, recreational and cultural importance and assessments of their vulnerability to oil spills are provided as background information in Dames & Moore (1992).

For potential environmental interactions of the exploratory drilling program through the physical presence of the MODU, the supporting activities or the impacts of oil spills on the oceanic environment of the permit and adjacent areas; see Section 030 - Environmental Information. This section also covers the physical features, areas of specific biological sensitivity and areas of commercial use. This environmental information is detailed further in Dames & Moore's Barramundi Environmental Management Plan (1998)

### **OSSM Modelling**

The OSSM oil spill trajectory modelling conducted by AMOG is currently used by the Australian Maritime Safety Authority (AMSA) for oil spill modelling during response operations within Australian waters.

Three hourly wind records from Cape Grim (Tasmania) covering the period 1988 to 1998 were obtained from the Bureau of Meteorology. The data for the period July to September were extracted from the records and were analysed for the percentage occurrence of winds on a 16-point wind rose and for differing speeds. The analysis indicated that winds were predominantly from the west for the period under consideration. As there was uncertainty regarding mobilisation of the drilling rig (the schedule could slip forward or backward by one month), the analyses were repeated using June winds and October winds separately. These additional analyses indicate (Figures 002.1 and 002.2) that scenarios developed using the July-September winds are also applicable for June and October.

Given the range of conditions expected in Bass Strait during the drilling period, individual records providing "worst case" conditions were identified within the seasonal wind data and extracted for use as input to the oil spill model. Oil spill modelling has typically used either constant winds in a given direction or stochastically generated wind based on an analysis similar to that described above. Over long periods such as presented herein, the former approach is unrealistic and overly conservative. The latter assumes that current wind condition is statistically independent of that at the preceding timestep. Under this approach, it is possible for a 40 knot northerly to be immediately followed by a 40 knot southerly.

Winds are produced by regional pressure systems and, unless the timestep between data points is sufficient that data points are independent, the latter approach is also unrealistic. As a result, it was decided that the modelling would be conducted using actual historical conditions rather than synthetically generated conditions.

The OSSM model was run using five different sets of wind conditions and two spill scenarios (a diesel spill over 2 hours and a medium crude spill over 4 hours). The results of the oil spill modelling are presented in Figures 1.0 to 10.0.

The following wind conditions provide the extremes:

*24/7/88 to 1/8/88 (julian: 205 to 213)*

Mild easterly strengthens through S to W to N over 24 hours to >45 knot westerly for 9 hours. Remains as 20-30 knot westerly for rest of period.

*24/7/89 to 29/7/89 (julian: 204 to 209)*

15 knot easterly shifting around to 35 knot NNE.

*2/8/95 to 7/8/95 (julian: 213 to 218)*

Wind shifts from W to S to W to S and reaches speeds up to 40 knots.

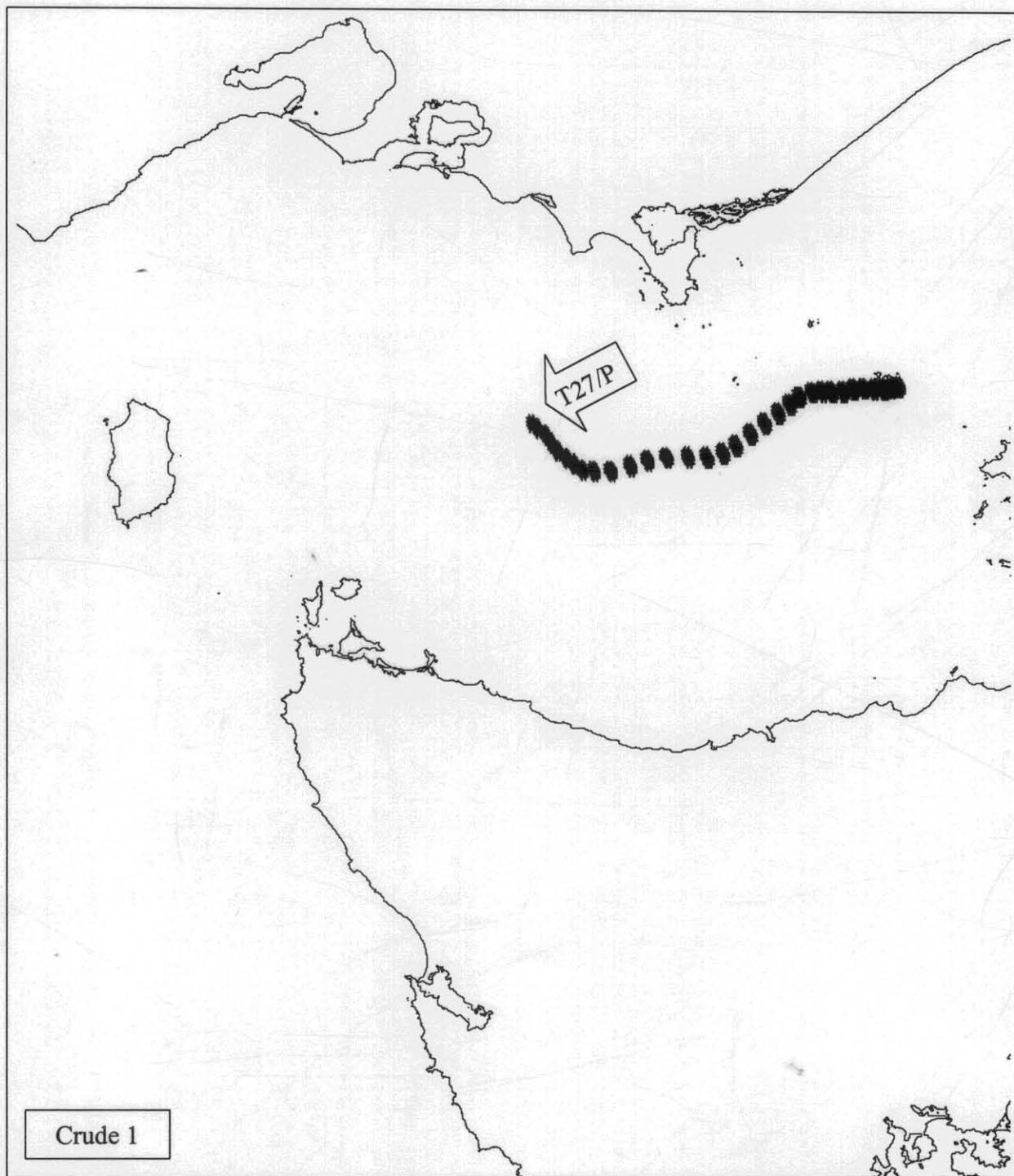
*31/8/97 to 5/9/97 (julian: 242 to 247)*

Mild easterly picks up to strong easterly (up to 40 knots) and returns to mild easterly.

*18/9/97 to 24/9/97 (julian: 260 to 266)*

E to S at 20-30 knots shifting to 40 knot NE.

Figure: 1.0



5 cm

Figure: 2.0

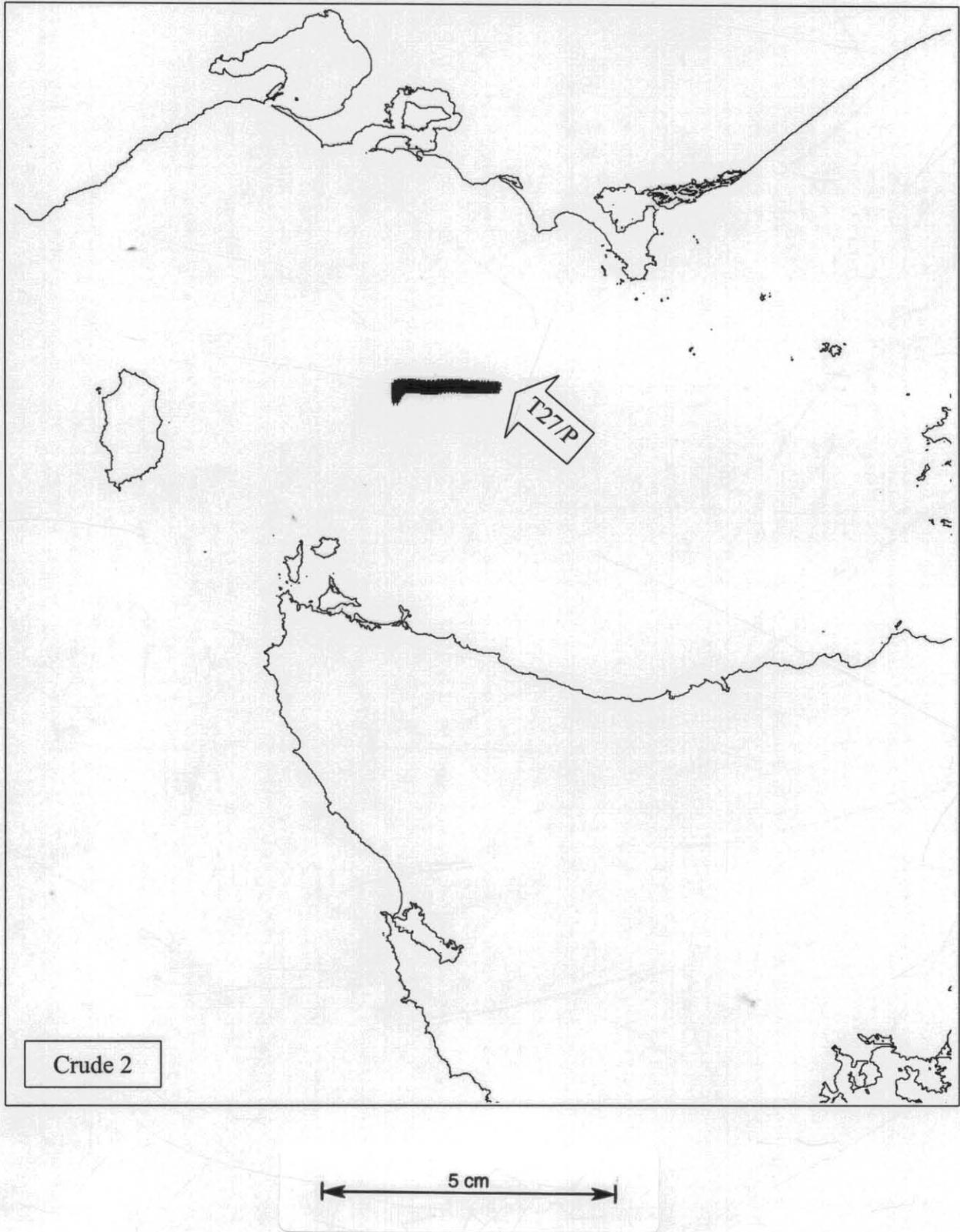


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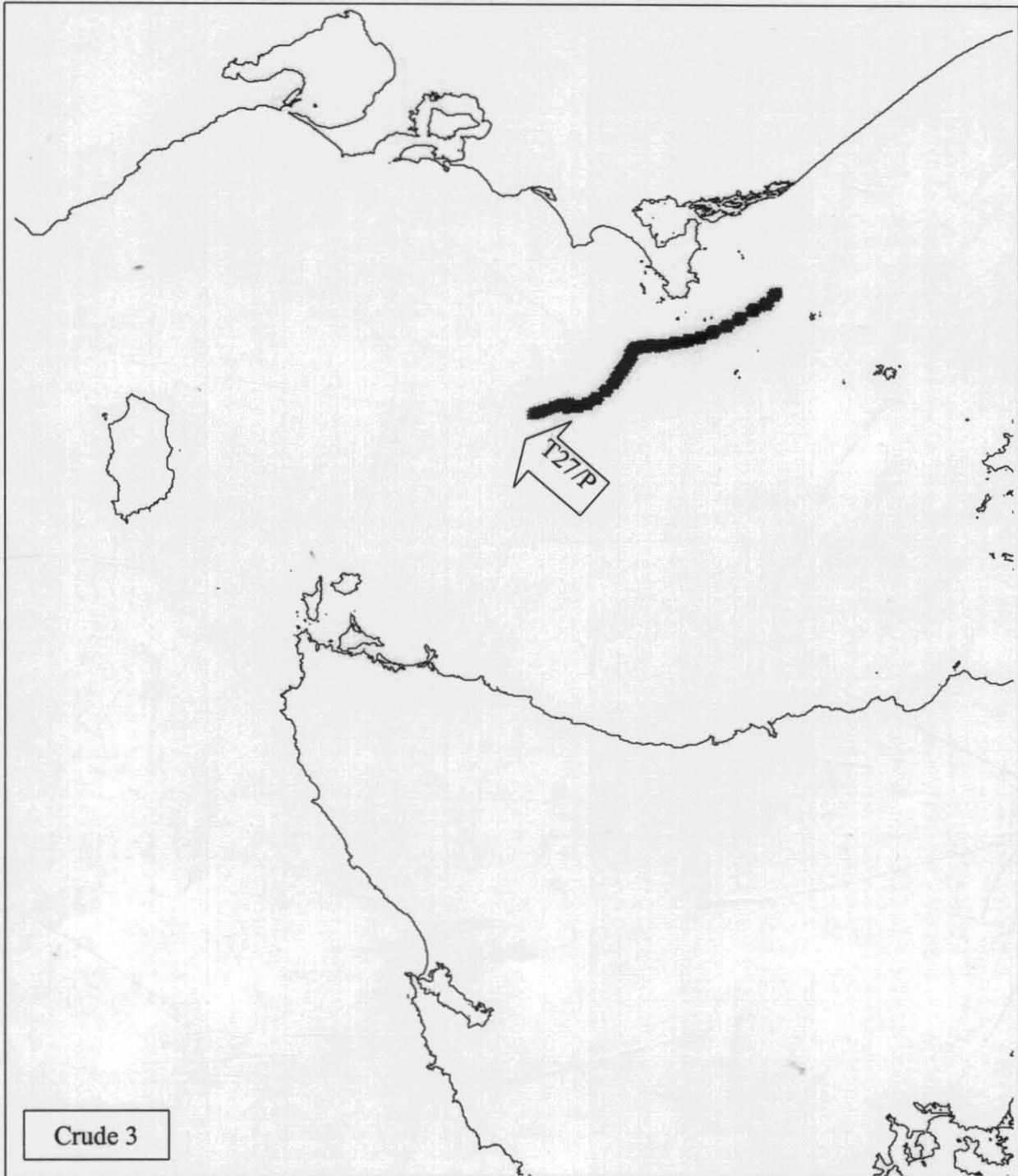


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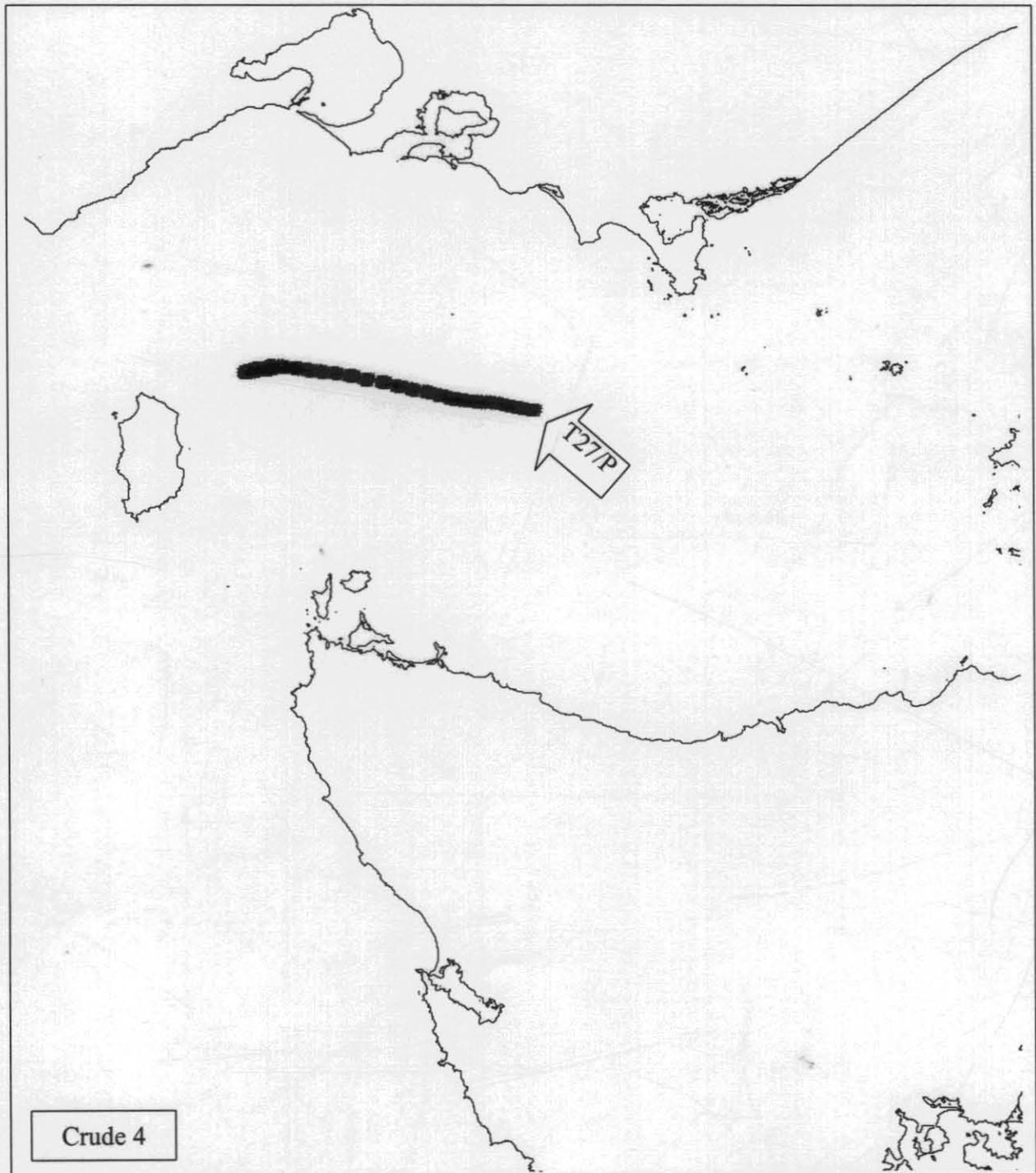


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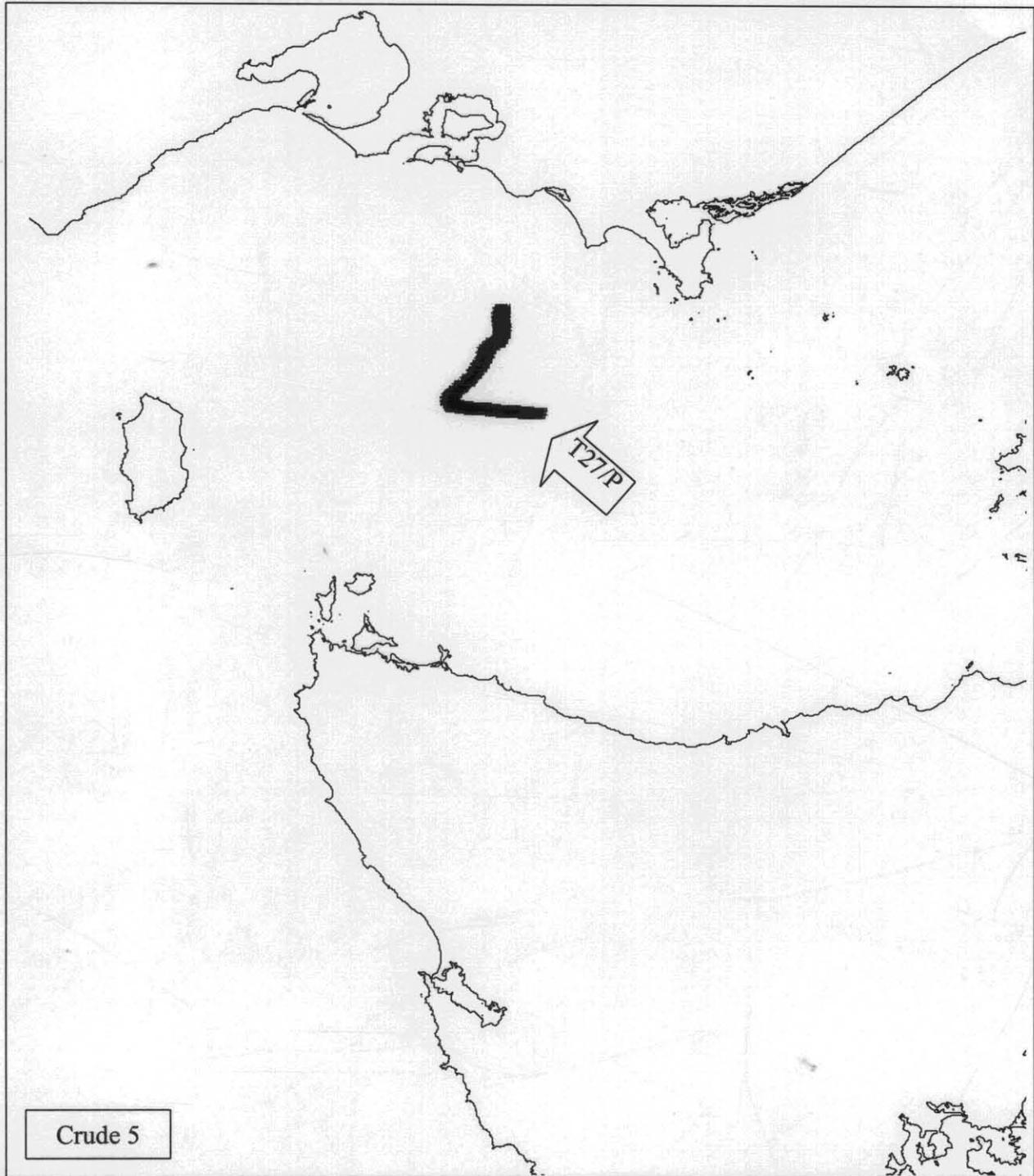


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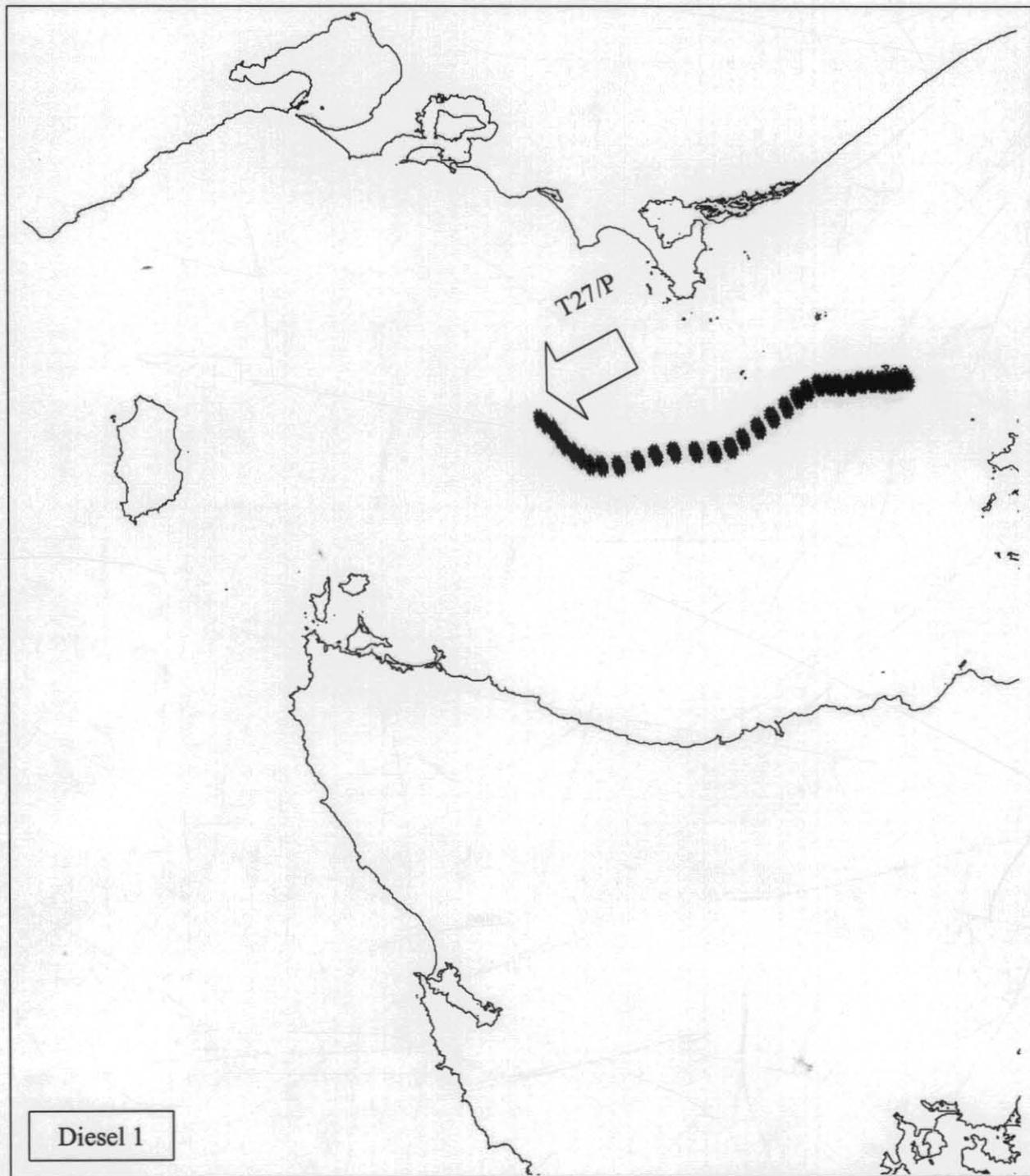


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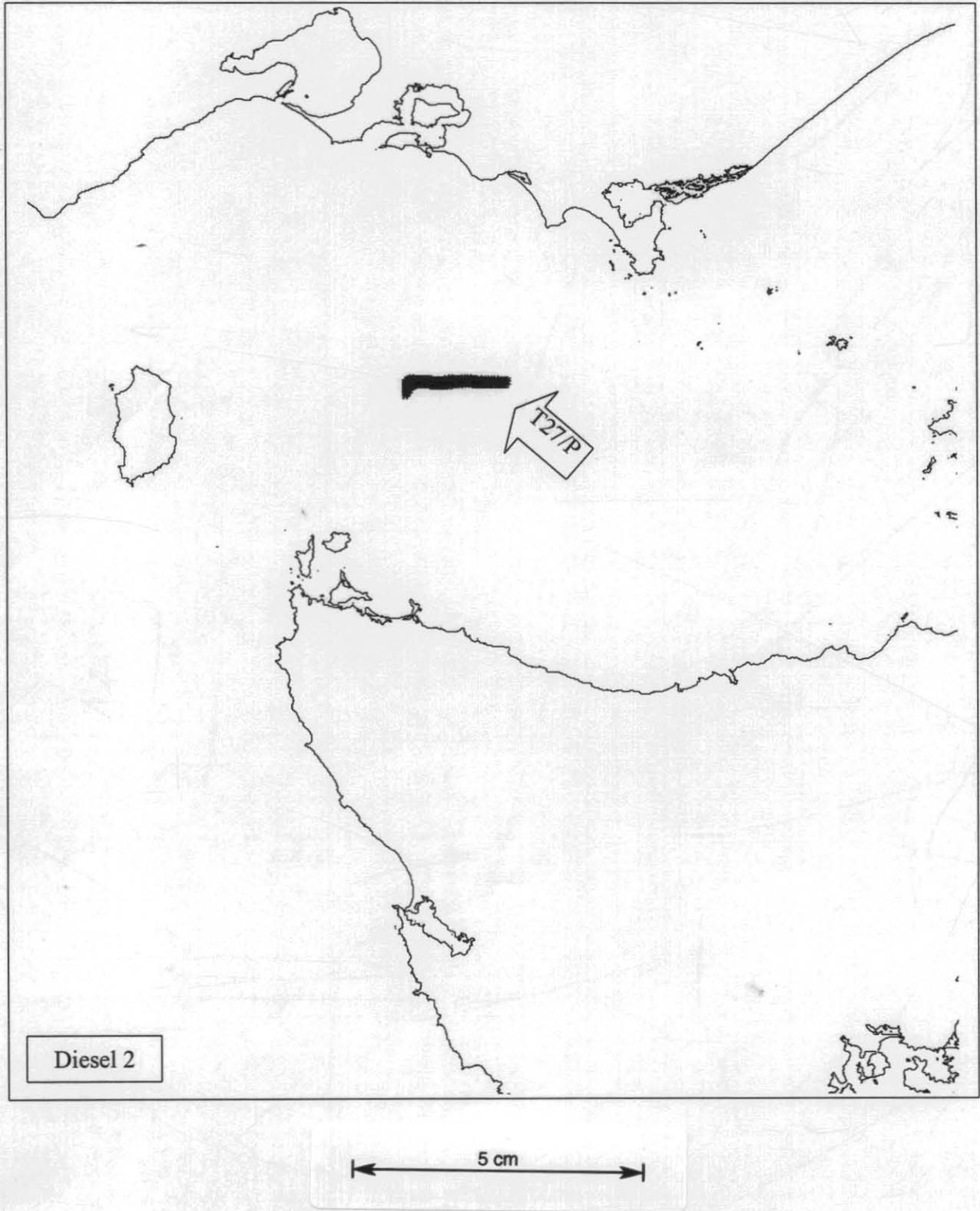


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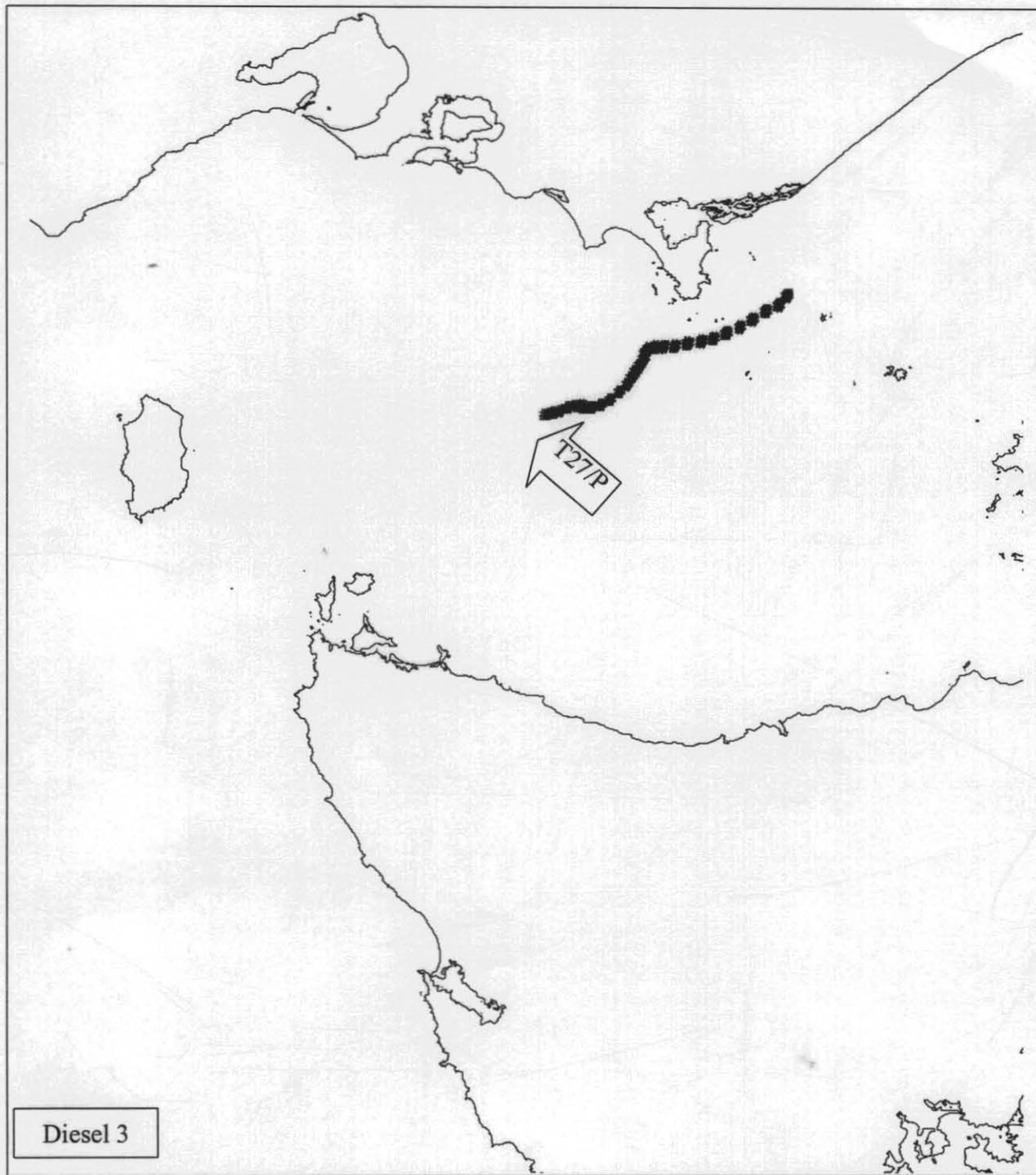


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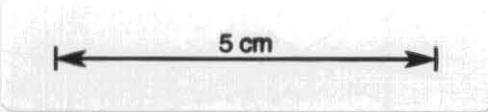
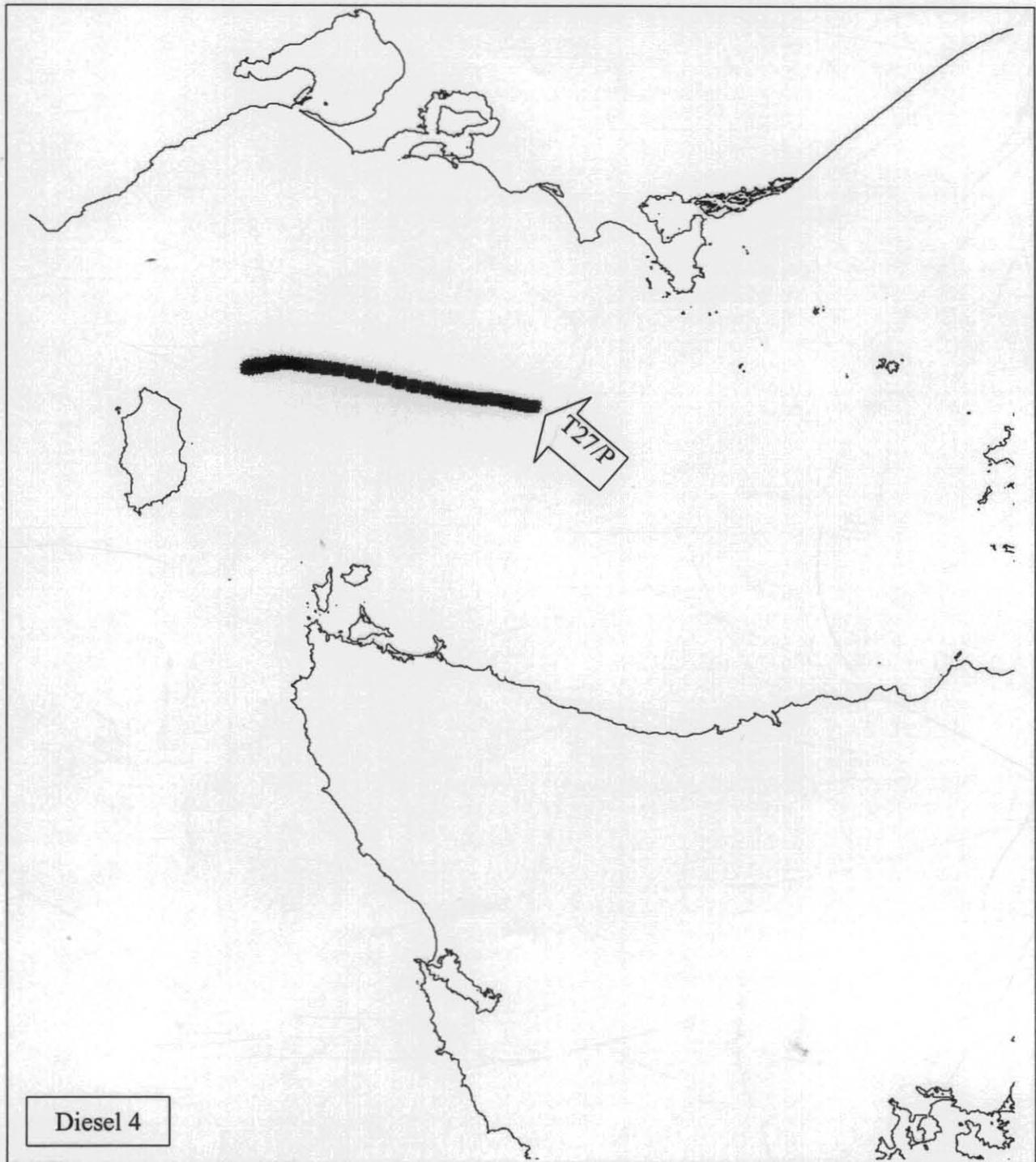
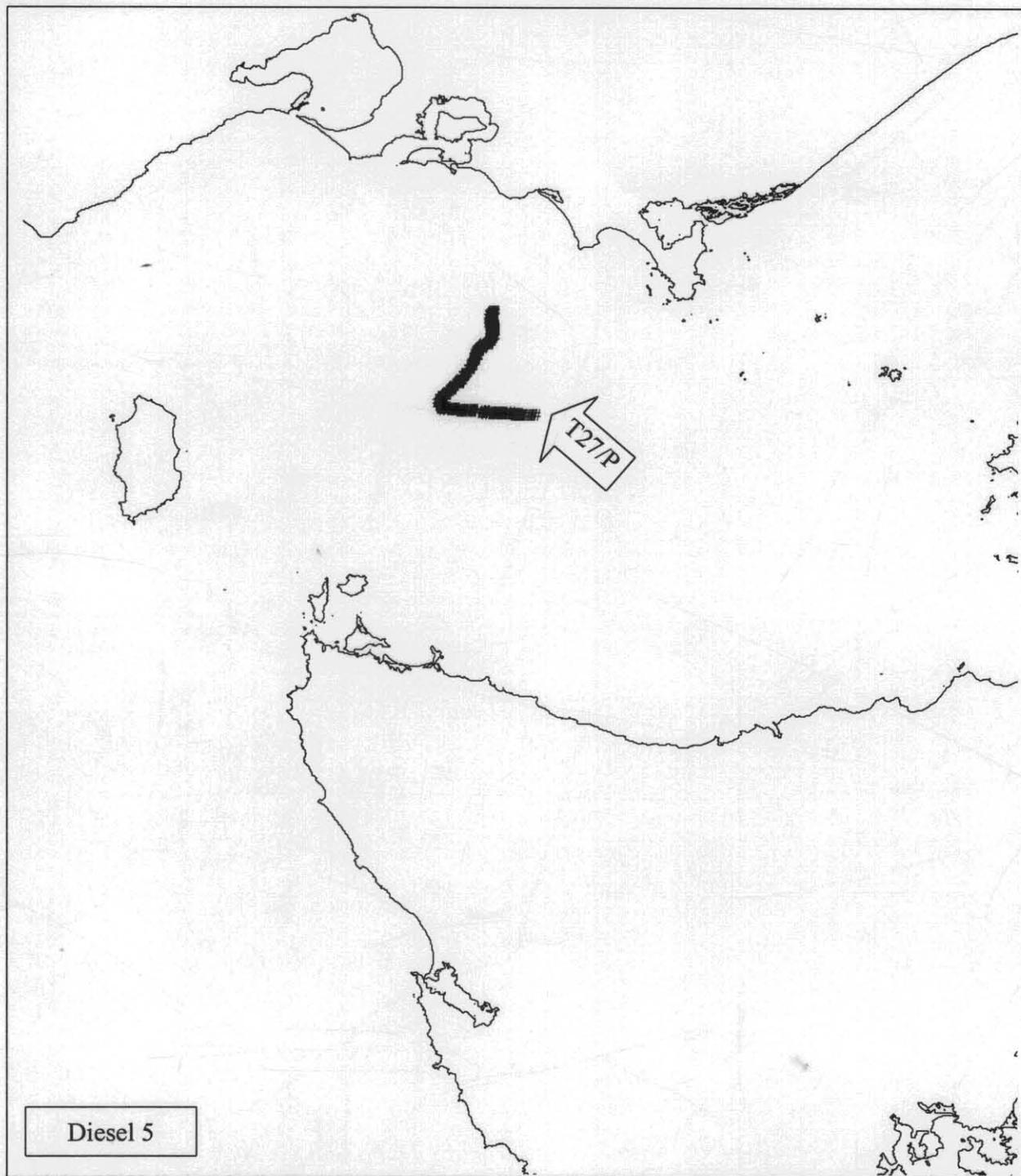
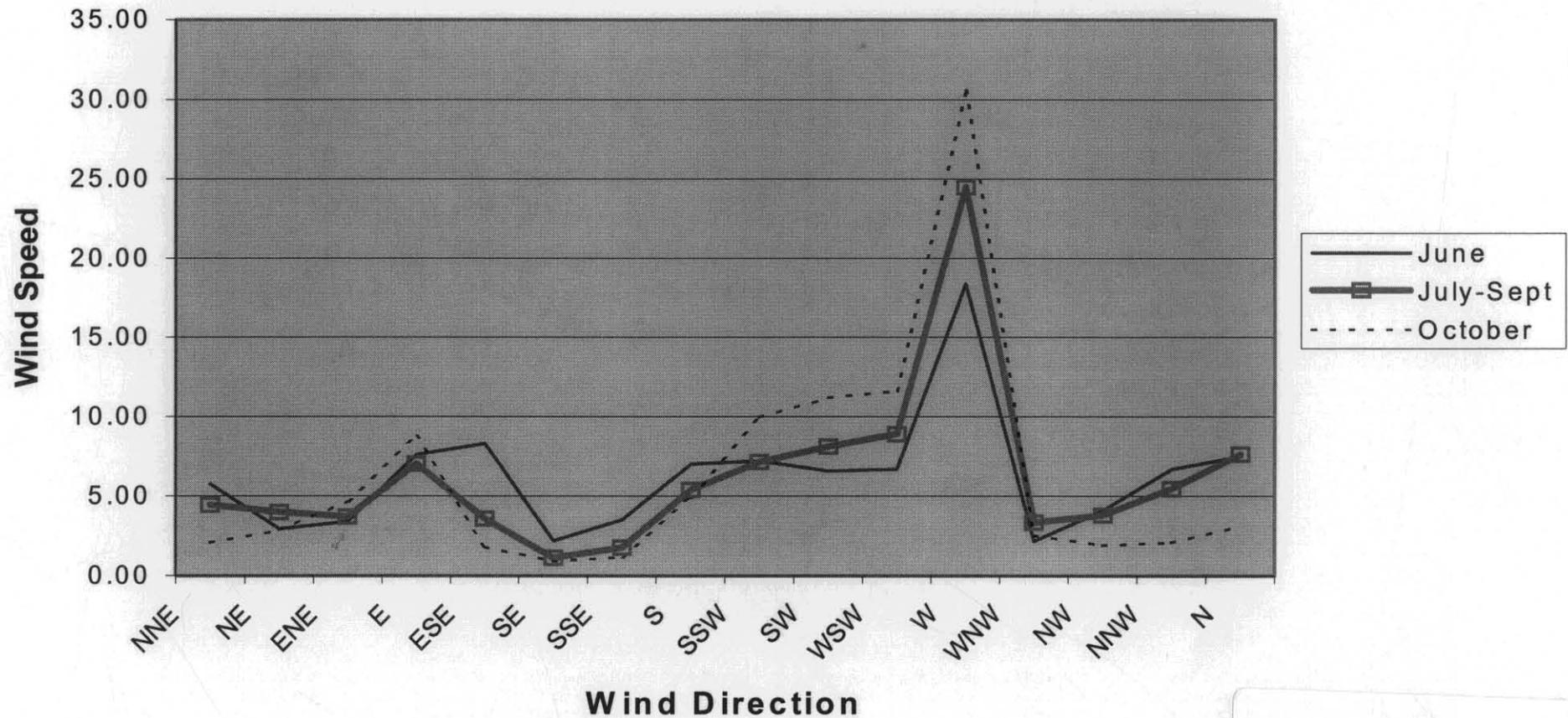


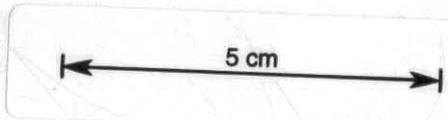
Figure: 10.0



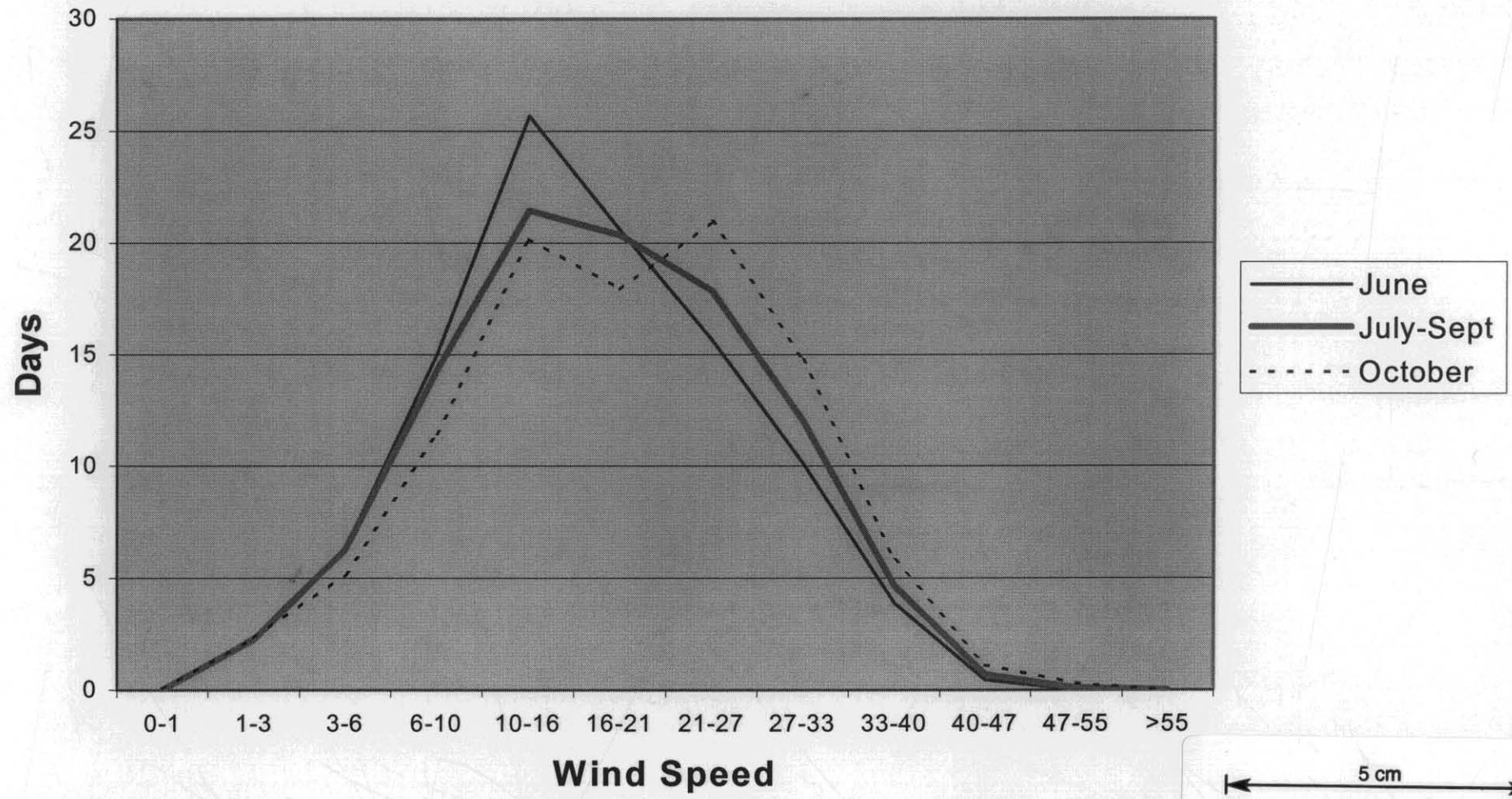
**Table: 002.1 Wind Direction Data**



546069



**Table: 002.2 Wind Speed Data**



546070

**Table 002.3 - Wind Analysis (Speeds in knots)**

Wind station: Cape Grim, Tasmania / Sampling rate: 3 hourly / Years analysed: 1988 - 1998

/ Months analysed: July - September

	0-1	1-3	3-6	6-10	10-16	16-21	21-27	27-33	33-40	40-47	47-55	>55	Total
NNE	0.00	0.06	0.30	1.12	1.47	0.79	0.54	0.17	0.00	0.00	0.00	0.00	4.45
NE	0.00	0.21	0.45	1.13	1.10	0.84	0.26	0.00	0.00	0.00	0.00	0.00	4.00
ENE	0.00	0.08	0.47	1.03	1.01	0.62	0.44	0.05	0.00	0.00	0.00	0.00	3.70
E	0.00	0.10	0.44	1.26	1.84	1.71	1.05	0.49	0.08	0.04	0.01	0.00	7.03
ESE	0.00	0.26	0.74	1.01	0.86	0.32	0.26	0.08	0.05	0.00	0.01	0.00	3.59
SE	0.00	0.06	0.38	0.36	0.29	0.03	0.00	0.00	0.00	0.00	0.00	0.00	1.12
SSE	0.00	0.08	0.16	0.36	0.69	0.42	0.06	0.01	0.00	0.00	0.00	0.00	1.78
S	0.00	0.17	0.36	0.64	1.06	1.21	1.14	0.65	0.17	0.00	0.00	0.00	5.40
SSW	0.00	0.18	0.16	0.52	1.10	1.32	1.58	1.53	0.69	0.08	0.00	0.00	7.16
SW	0.00	0.08	0.30	0.57	1.21	1.47	1.91	1.48	0.87	0.22	0.03	0.00	8.12
WSW	0.01	0.22	0.30	0.75	1.19	1.82	1.96	1.73	0.84	0.06	0.03	0.00	8.91
W	0.00	0.26	0.83	2.19	4.62	5.07	5.06	4.32	1.82	0.29	0.03	0.01	24.50
WNW	0.00	0.19	0.39	0.64	0.97	0.62	0.38	0.13	0.01	0.01	0.00	0.00	3.35
NW	0.00	0.13	0.39	0.67	0.92	0.84	0.61	0.23	0.00	0.00	0.00	0.00	3.80
NNW	0.00	0.06	0.25	0.79	1.26	1.51	1.05	0.47	0.08	0.00	0.00	0.00	5.46
N	0.00	0.12	0.39	1.27	1.86	1.75	1.53	0.67	0.04	0.00	0.00	0.00	7.63
Total	0.01	2.27	6.29	14.31	21.45	20.35	17.84	12.02	4.65	0.70	0.10	0.01	100.00

546071

**Table 002.4 - Wind Analysis (Speeds in knots)**

Wind station: Cape Grim, Tasmania / Sampling rate: 3 hourly / Years analysed: 1988 - 1998 / Months analysed: June

	0-1	1-3	3-6	6-10	10-16	16-21	21-27	27-33	33-40	40-47	47-55	>55	Total
NNE	0.00	0.16	0.48	1.53	1.73	1.29	0.56	0.00	0.00	0.00	0.00	0.00	5.76
NE	0.00	0.20	0.24	0.93	1.01	0.40	0.16	0.00	0.00	0.00	0.00	0.00	2.94
ENE	0.00	0.08	0.56	0.69	1.01	0.93	0.12	0.00	0.00	0.00	0.00	0.00	3.39
E	0.00	0.04	0.36	1.77	2.26	1.29	1.29	0.52	0.08	0.00	0.00	0.00	7.62
ESE	0.00	0.24	1.25	2.22	3.39	1.09	0.12	0.00	0.00	0.00	0.00	0.00	8.30
SE	0.00	0.20	0.40	0.64	0.73	0.20	0.00	0.00	0.00	0.00	0.00	0.00	2.18
SSE	0.00	0.20	0.16	1.01	1.17	0.81	0.16	0.00	0.00	0.00	0.00	0.00	3.51
S	0.00	0.20	0.20	0.85	1.45	1.49	1.37	1.17	0.28	0.00	0.00	0.00	7.01
SSW	0.00	0.04	0.08	0.40	1.21	1.49	1.61	1.53	0.69	0.16	0.00	0.00	7.21
SW	0.00	0.12	0.24	0.24	0.97	1.45	1.61	1.57	0.36	0.00	0.00	0.00	6.57
WSW	0.00	0.04	0.40	0.44	1.33	1.29	1.01	0.97	1.05	0.16	0.00	0.00	6.69
W	0.00	0.20	0.69	1.33	3.63	3.91	4.15	2.94	1.41	0.12	0.00	0.00	18.38
WNW	0.00	0.20	0.24	0.52	0.60	0.28	0.16	0.12	0.00	0.00	0.00	0.00	2.14
NW	0.00	0.16	0.48	0.40	1.37	0.69	0.81	0.20	0.00	0.00	0.00	0.00	4.11
NNW	0.00	0.12	0.04	0.85	1.77	1.89	1.37	0.64	0.00	0.00	0.00	0.00	6.69
N	0.00	0.16	0.48	1.17	2.06	2.06	1.13	0.44	0.00	0.00	0.00	0.00	7.50
Total	0.00	2.38	6.33	14.99	25.68	20.56	15.64	10.12	3.87	0.44	0.00	0.00	100.00

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**Table 002.5 - Wind Analysis (Speeds in knots)**

Wind station: Cape Grim, Tasmania / Sampling rate: 3 hourly / Years analysed: 1988 – 1998 / Months analysed: October

	0-1	1-3	3-6	6-10	10-16	16-21	21-27	27-33	33-40	40-47	47-55	>55	Total
NNE	0.00	0.07	0.28	0.42	0.77	0.18	0.18	0.18	0.00	0.00	0.00	0.00	2.07
NE	0.00	0.04	0.35	0.81	1.09	0.42	0.14	0.00	0.00	0.00	0.00	0.00	2.84
ENE	0.00	0.04	0.18	0.63	1.54	1.23	0.84	0.21	0.00	0.00	0.00	0.00	4.67
E	0.00	0.00	0.21	0.35	1.47	1.79	3.16	1.58	0.21	0.00	0.00	0.00	8.77
ESE	0.00	0.28	0.56	0.25	0.49	0.14	0.04	0.04	0.00	0.00	0.00	0.00	1.79
SE	0.00	0.28	0.25	0.18	0.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.88
SSE	0.00	0.14	0.18	0.39	0.25	0.21	0.00	0.00	0.00	0.00	0.00	0.00	1.16
S	0.00	0.21	0.18	0.77	1.23	0.95	0.91	0.39	0.21	0.07	0.00	0.00	4.91
SSW	0.04	0.14	0.18	0.70	1.33	1.44	2.11	2.70	1.23	0.11	0.00	0.00	9.96
SW	0.00	0.18	0.39	0.91	2.07	2.00	2.46	2.04	0.95	0.11	0.11	0.00	11.19
WSW	0.00	0.21	0.21	1.05	1.75	2.53	2.84	1.58	1.09	0.25	0.11	0.00	11.61
W	0.00	0.25	1.44	3.09	4.98	5.75	6.88	5.44	2.07	0.60	0.07	0.00	30.56
WNW	0.00	0.11	0.14	0.63	0.81	0.39	0.32	0.14	0.00	0.00	0.00	0.00	2.53
NW	0.00	0.14	0.28	0.39	0.60	0.28	0.21	0.00	0.00	0.00	0.00	0.00	1.89
NNW	0.00	0.18	0.14	0.32	0.53	0.35	0.25	0.32	0.00	0.00	0.00	0.00	2.07
N	0.00	0.11	0.21	0.56	1.09	0.28	0.63	0.18	0.04	0.00	0.00	0.00	3.09
Total	0.04	2.35	5.16	11.44	20.18	17.93	20.95	14.77	5.79	1.12	0.28	0.00	100.00

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### 003 Vector Diagram

**Figure 11.0: Calculation Of Spill Trajectory Through Vector Analysis**

**Inputs:**

Wind Vector ( $V_w$ )	=	Wind speed (knots) x 0.035
Current Vector ( $V_c$ )	=	Water surface current speed (knots)
Slick Vector ( $V^s$ )	=	Slick speed (knots)
0	=	Point of discharge

**Example:**

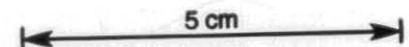
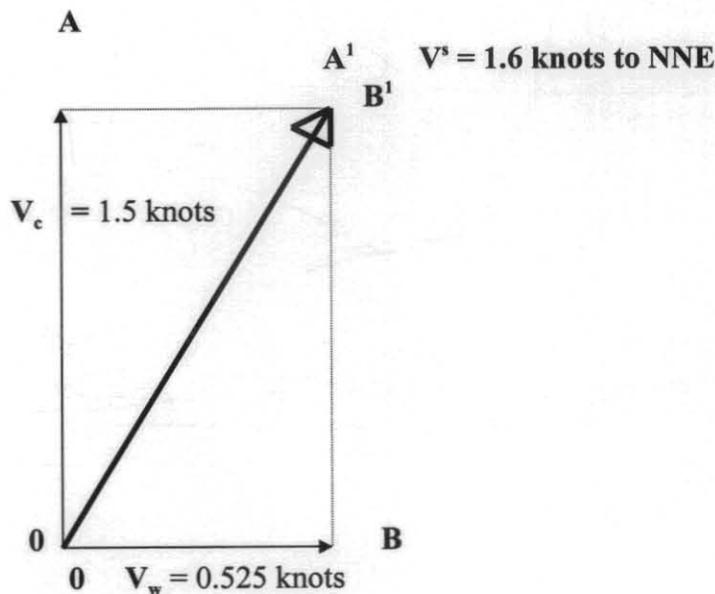
Wind	15 knots west
Current	1.5 knots from south

**Calculate :**

$V_w$	$15 \times 0.035 = 0.525$
$V_c$	1.5

**Method:**

1. Plot location of spill at point 0.
2. Layout  $V_w$  and  $V_c$  from known headings, using the same length scale for both vectors.
3. Draw a line parallel to  $V_w$  at the tip of  $V_c$  ( $A-A'$ ) and a line parallel to  $V_c$  at the tip of  $V_w$  ( $B-B'$ ).
4. Draw a line from 0 to  $A'B'$ . This is the Slick Vector  $V^s$ .
5. The length of  $V^s$  determines slick speed in knots. The direction is evident.



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## 001. Use of Dispersants

Dispersants are a valuable spill management tool, but are viewed with some considerable concern by environmental groups in particular. This is because of the toxicity of the dispersants and chemically dispersed oil. Furthermore chemically dispersed oil will penetrate below the surface of the water to a much greater degree than untreated oil. This may effect subsurface organisms that would otherwise be much less exposed to the oil. These factors are recognised in the development of the guidelines for dispersant use.

The underlying principle behind these guidelines is that dispersants should be used when the likely damage from the chemically treated oil is less than that expected from the untreated oil slick. For example; if oil is being driven towards intertidal seagrasses and mangroves, damage, and perhaps slow recovery, can be expected to occur to these important areas. If, by applying dispersants to the slick, the oil can be prevented from being driven into these areas then approval is likely to be given - provided that more sensitive or important marine resources are not damaged in the process.

Depth restrictions, restriction on the proximity of dispersant use to shoreline or various permitting restrictions are used to ensure that a "net environmental benefit" is obtained and that dispersants are used only when other methods of effective control are impractical.

In any case dispersants should be used in full consideration of the potential benefits and risks associated with their use. These are summarised in Table 1.0: (Section 030). The Decision Tree shown in Figure 10.0: shall also be referred to.

Australia has adopted a testing procedure for dispersants so that products are approved which are both effective and of low toxicity. Current protocols require that products achieve a 75% efficiency with a reference oil (Arabian Light crude oil), and that toxicity testing is undertaken on tropical and temperate species.

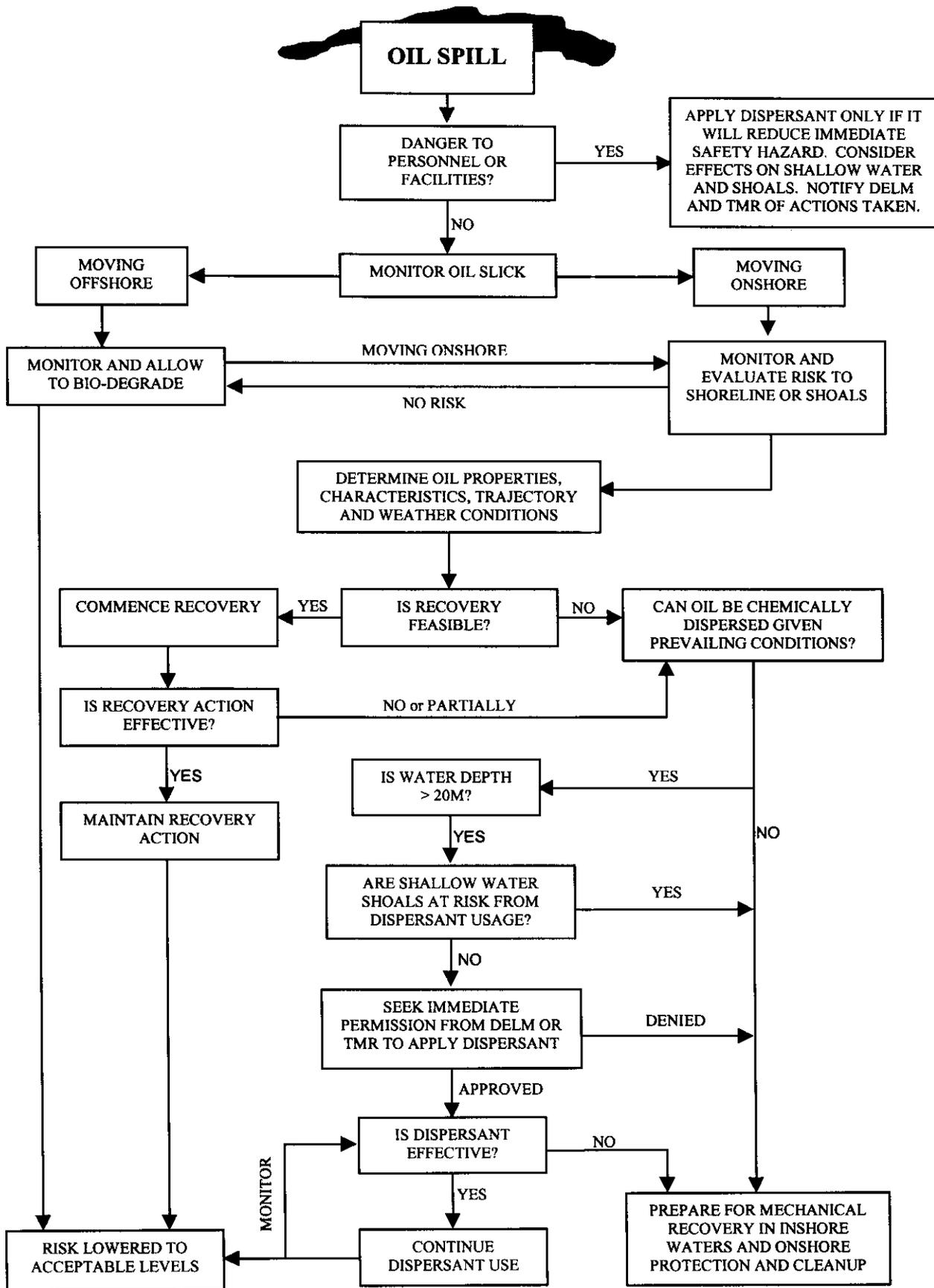
Approved chemical dispersants, together with dispersant application equipment, is stored on board the Support Vessels and the MODU in use. Additional stocks of dispersant are available through the AMOSPlan (administered by AMOSC), AMOSC and National Plan (see Section 070 - Oil Spill Response Equipment).

**Note: Due consideration should be given to safety at all times when handling or dealing with chemical dispersants. Personnel must be familiar with instructions on the safe use of dispersants.**

**Dispersants will not be applied without the relevant prior approvals from the Department of Environment and Land Management (DELM) or the Tasmanian Mineral Resources (TMR), unless there is immediate danger to human life, and this danger can be reduced by spraying dispersants.**

Use of Dispersants

**FIGURE 10.0: DISPERSANT DECISION TREE**



**Advantages and/or Disadvantages**

**002. Advantages and/or Disadvantages**

Table 2.0 below, summarises the advantages and disadvantages, resulting from Dispersant use.

**TABLE 2.0: ADVANTAGES AND/OR DISADVANTAGES OF THE USE OF CHEMICAL DISPERSANTS**

Advantages	Disadvantages
Oil is removed from the water surface and therefore poses a reduced risk to birds.	Dispersed oil penetrates more deeply into the water column and may effect subsurface organisms.
Dispersed oil tends to adhere to surfaces less than undispersed oil.	Dispersants are not effective against heavy or waxy oils, and emulsions.
Biodegradation of dispersed oil appears to be more rapid than undispersed oil.	Dispersion reduces the potential for loss of volatile (light) hydrocarbons through evaporation.
Dispersed oil is less subject to movement due to wind, consequently coastal impacts may be avoided.	Dispersion may inhibit the photo-oxidation of oil. However, this is a relatively minor degradation pathway.
The formation of stable water-in-oil emulsions can be prevented.	Onshore use of chemical dispersant is likely to increase the penetration of oil into porous sediments. However, there is little to suggest that dispersed oil is generally more persistent than undispersed oil.
Fire hazards are reduced through chemical dispersion.	
May be the only method that can be used due to weather or sea state.	Dispersants are toxic to marine and coastal flora and fauna. Their direct impact on unoiled habitats is therefore to be avoided.

(Reference : AMOSC Training Document, March 1995)

Approved Dispersants

**003. Approved Dispersants**

At the present time seven dispersants are approved for use at sea. These, like all dispersants, can be divided into three main 'types':

Type 1: Hydrocarbon based products which are non-dilutable.

Type 2: Water based products, or more correctly those using a water miscible solvent, they are also formulated to be used undiluted.

Type 3: Concentrates which may be used undiluted or diluted. Concentrates may be hydrocarbon based or use water miscible compounds such as ethyl glycol or glycol ether.

Table 3.0: below, summarises the Australian, approved dispersants and as the table indicates, only Type 1 and Type 3 dispersants are used in Australia.

**TABLE 3.0: DISPERSANTS APPROVED FOR USE IN AUSTRALIAN WATERS**

Dispersant	Type	Dilutable	Dose Rate (D:Oil)	Comment
Ardrox 6120	3	Yes	Neat: 1:25	By vessel or aircraft
			Dilute	Vessel only
BP-AB	1 (Hydrocarbon)	No	1:10	BP-AB cannot be used diluted and should not be sprayed using aircraft.
Corexit 9527	3	Yes (up to 1:9)	Neat 1:25	Vessel or aircraft
			Dilute as required	Vessel only
Corexit 9550	3	Yes (up to 1:9)	Neat 1:25	Vessel or aircraft
			Dilute as required	Vessel only
Dasic Slickgone NS	3 (Hydrocarbon)	Yes (1:9)	Neat	Vessel or aircraft
			Dilute	Vessel only. Monitor effectiveness of dilute or educted dispersants closely.
Shell VDC	3	Yes (1:9)	Neat	Vessel or aircraft
			Dilute	Vessel only
Tergo R.40	3	Yes (1:9)	Neat 1:20	Vessel or aircraft
			Dilute 1:2	Vessel only

**004. Constraints and Efficiency**

Dispersant use may be limited not only by environmental considerations but also by operation constraints. These are summarised in Table 4.0: below.

The most significant of these are the considerations of oil character, particularly weathering. Oil may weather to such an extent that it's resultant viscosity is too high for effective dispersant use. This, together with the limited time that may exist between spillage and coastal impact, means that dispersant use may have a short 'window of opportunity'.

Given the need to carefully consider the environmental implications of their use and the possible need to try other options first, a conflict sometimes occurs between the need for rapid dispersant response and need for caution. This is partly overcome by the use of 'decision trees', but it is important that these are agreed to by industry and relevant authorities, well in advance of a spill. Pre-approval for dispersant use, under defined conditions, or delineation of 'use' and 'non use' areas (or 'controlled' and 'non-controlled' areas) may be ways of reducing this conflict.

**TABLE 4.0: CONSTRAINTS TO DISPERSANT USE AND EFFICIENCY**

<b>Oil Considerations</b>	
Viscosity	Oils or emulsions with viscosities above 2000 cSt are not considered to be amenable to dispersants.
Weathering	Oils increase in viscosity as they weather and emulsify. Each oil has a 'window of opportunity' for effective chemical dispersion. This is dependant on sea state, wind and temperature.
<b>Sea and Weather Considerations</b>	
Calm Seas	Calm conditions may not provide enough mixing energy for dispersants to work effectively. 'Concentrates' are less susceptible to this constraint. Mixing energy in calm conditions, can be supplied by vessels.
Rough Seas	If winds exceed about Force 6 (above 25 knots) oil may be covered by breaking waves and the effective 'encounter rate' of the dispersant and oil is reduced.
<b>Operational Constraints</b>	
Encounter Rate	Vessel application rates will be slow, particularly where oil has had time to spread.

## **005. Dispersant Application**

Use of dispersants in the T/27P sector of western Bass Strait requires the approval of the Department of Environment and Land Management (DELM) or the Tasmanian Mineral Resources (TMR). The Dispersant Decision Tree, shown in Figure 10.0 (Section 050-001) shall also be referred to.

Notification is required to DELM, TMR and AMSA for dispersant use for oil spills incurred during exploration, drilling or production operations. Notification criteria includes:

- for spills greater than **80 litres** (0.5 bbl)
- if dispersant has been used for safety purposes
- for approval to use dispersants, if appropriate, to protect environmental resources

Dispersants can be applied by:

- Fixed wing aircraft with crop duster equipment modified for dispersant application.
- Helicopter using a simplex spray system.
- Support vessels using either a bow mounted dispersant spray system or the vessel's fire fighting system if the former is not available.

### **Safety Consideration:**

**Caution should be exercised in the application of dispersants, from vessels, immediately after a spill occurs, due to the potential fire and explosion hazard from vapours of volatile hydrocarbons.**

### **005.1 Aerial Surveillance**

When dealing with significant spills which have spread over a large area of the sea surface a spotter aircraft should be employed to direct the spraying aircraft and/or vessels to the thickest part of the oil slick.

### **005.2 Dispersant Application from Aircraft**

#### **Helicopter**

Two Simplex helicopter spray systems, with approximately 900 litres capacity each, are available at AMOSC in Geelong with backup systems available from AMOSPlan resources or National Plan resources.

Spraying passes should be controlled from a spotter aircraft. If a spotter aircraft is not immediately available, the spray should be directed at the thickest part of the slick. Available aircraft operators are listed in Section 080; Contact Directory.

The spraying helicopter should fly at an altitude between 30 and 50 feet above the sea surface at a fairly low speed (say 50 knots). Support vessels in the area can assist in promotion of dispersion by making high speed passes through the treated oil to provide mixing energy for the oil dispersant mixture.

## Fixed Wing Aerial Dispersant Capability

AMSA manage Australia's 'National Plan to Combat Pollution of the Sea by Oil' (National Plan) in conjunction with the Australian Institute of Petroleum (AIP). AMSA, and AIP through its oil spill centre - Australian Marine Oil Spill Centre (AMOSOC), have put in place a 'Fixed Wing Aerial Dispersant Capability' (FWADC) for the spraying of oil spill dispersant. This capability has been achieved through Australian Maritime Resources (AMR) based in Adelaide.

Based on the concept of utilising large agricultural aircraft, the FWADC is designed to complement existing informal dispersant spraying arrangements using helicopters, which are confined to close inshore work. The aircraft have a dispersant capacity of between 1890 - 3100 litres.

AMR is required to have available on any one day, at least two aircraft. These aircraft are to be located at Tintinara or Adelaide (SA) and either Emerald (Qld) or St George (Qld). Additionally, aircraft will also be available for approximately 275 days per year each at Scone (NSW), Ballarat (Vic) and St George/Emerald. Aircraft activation is on the basis of a four hour response time, ie available to fly within four hours of being requested to respond to an incident.

Activation of the FWADC is through DELM, TMR or through AMSA's duty officer, who can be contacted via the Authority's MRCC. The AMSA duty officer will make an assessment of the requirement and then contact AMR, who within 30 minutes will advise AMSA of the nominated aircraft and its ETA.

**CAUTION: Support vessels must ensure that crews are not exposed to dispersants sprayed from aircraft.**

### 005.3 Dispersant Application from Support Vessels

Vessels can apply dispersants using spray boom systems or using the vessels' fire fighting system.

Bow mounted dispersant spray systems permit the use of either concentrated or diluted "Type 3" dispersants or neat Type 1 or 2 dispersants. Undiluted concentrates can be sprayed by vessels travelling at relatively high speeds (10-12 knots). However, vessel speed may need to be reduced so that dispersants are applied to the oil slick ahead of the bow wave. If this is not done then dispersant will be applied to areas of sea surface where the slick has been pushed away by the bow wave. If correctly applied the bow wave will provide mixing energy for the dispersant.

Use of vessel's fire fighting system is not an efficient method of application but can be used when dedicated equipment is not available. In this case concentrated dispersant is fed into the water stream via an adjustable eductor to provide a mixture between 5 and 10 percent dispersant-in-water. The monitor nozzle is adjustable to provide a coarse spray and is aimed forward at approximately 60° elevation so that the educted dispersant spray hits the slick as a fine 'rain'. Excessive droplet size or too high a nozzle pressure causes the dispersant droplets to pass through the surface oil layer, significantly reducing effectiveness.

## **006. Simplex 6810 Spray Bucket**

The Simplex spray bucket is a helicopter underslung dispersant application unit that has been developed from agricultural purposes for use with oil dispersants. It is suitable for spraying all but one of the seven dispersants approved for use in Australian Waters (see Table 3.0: Section 050-003).

It is a reasonably complicated unit that uses electric and hydraulic systems to control the application of the dispersant load. A single cylinder petrol engine drives a hydraulic pump, which drives a hydraulic motor, which in turn drives a centrifugal water pump. The hydraulic motor and final discharge of product is controlled with 12 volt electric solenoids. The Simplex 6810 Spray bucket, conforms to the following specifications:

Empty Weight	165 kg	Dispersant capacity	908 litres
Height of Assembled Bucket	2.2 metres	Height from Ground to Helicopter	3.5 metres
Width of Bucket	1.2 metres	Overall Assembled Width	10 metres
Length	2 metres		

Fuel capacity is 5 litres giving the unit approximately 1 to 1½ hours duration of operation depending on engine throttle setting and load.

Unless the unit is operating in very close proximity to the refilling base it will need to be refuelled as well as refilled every time it is landed.

- Never refuel the unit with the engine running.
- Petrol vapour is highly flammable. Refuel only in a well ventilated area.
- Do not run engine in an enclosed area.
- Although dispersants are relatively harmless they are chemicals and as such they should be treated as any other chemical and the following protective equipment worn:
  - Waterproof Protective Overalls or Suit
  - Rubber Gloves
  - Protective Footwear
  - Head Covering
  - Face Mask or Goggles
- Always pump dispersant with a piston, screw or diaphragm pump as centrifugal pumps tend to 'foam up' the dispersant.
- After use always flush through the unit and store with approx 30 litres of fresh water in the bucket. This prevents the discharge pump seal drying out.

The Simplex bucket is underslung from the helicopter by a single lifting strap and is controlled by a hand held panel from within the aircraft which is connected to the bucket using a 'breakaway' connection. The control unit is retained in the helicopter during the entire operation and is interchangeable with all other Simplex units.

## **007. Material Safety Data Sheets**

Dispersants themselves are hazardous chemicals which must be handled correctly. Some components of dispersants are harmful to humans and for this reason spray operators should wear protective clothing, gloves and goggles or masks. Dispersants have a degreasing action so all exposed parts of spraying aircraft and the spray booms should be thoroughly washed down after spraying operations.

Material Safety Data Sheets (MSDS's) for the following approved dispersants are attached.

1. **Ardrox 6120**
2. **BP-AB**
3. **Corexit 9527**
4. **Corexit 9550**
5. **Dasic Slickgone NS**
6. **Shell VDC**
7. **Tergo R.40**

## **008. AMOSPlan (Local)**

The area including Tasmania and Bass Strait is covered by the AMOSPlan (Old MOSAP). Normal requests for assistance should be directed at AMOSC in Geelong to coordinate.

A listing of equipment and consumables for the area is included in Section 070 - Oil Spill Response Equipment.

A full listing of all AMOSPlan equipment and consumables is available through the MOSES\*\* database held by AMSA\* and QEST\* (*GLOBEX Far East* contracted safety and environment advisers), or from AMOSC\*, Geelong.

### **008.1 National Plan Dispersant Stocks (Local)**

As part of the National Plan, stockpile dispersant stocks are held at strategic ports along the south east coast of Victoria and the northern coast of Tasmania. For types and quantities, refer to the MOSES\*\* Register, OSR equipment – Section 060, of this plan.

***Note: Equipment and personnel previously listed in MOSAP (Marine Oil Spills Action Plan) and SPEAR (Selected Pollution Equipment Availability Register) lists have now been combined into the MOSES database.***

**\* (See Appendix 080. - Contact Directory)**

**\*\* (See Appendix 070. - Oil Spill Response Equipment)**

**1. Ardrox 6120**

Surechem Industries Pty. Ltd.  
 43 Forge St,  
 BLACKTOWN NSW 2148  
 Tel: (02) 621 5933  
 Emerg: (02) 680 1241

Page 1

PRODUCT: ARDROX 6120	Infosafe No: ESOS3 APPROVED: Feb 94
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UN NO....:None Allocated    D.G.CLASS:None Allocated    CAS NO....:None allocated  
 HAZCHEM...:None allocated    SUB. RISK:None allocated    SUSDP....:None allocated  
 G.T.EPG...:None allocated    SPEC.EPG.:None allocated    PACK. GRP:None allocated

===== PRODUCT IDENTIFICATION =====

## CORRECT SHIPPING NAME:

COMBUSTIBLE LIQUID - CLASS C1  
 Flashpoint 62° - 150°C

## OTHER NAMES:

None allocated

## TRADE NAMES.:

Ardrox 6120

MANUF.: MANCODE:

SURECHEM

## INGREDIENTS:

CHEMICAL ENTITY:	CAS NO:	PROPORTION:
Ethylene glycol monobutyl ether	111-76-2	<20%
Biodegradable surfactants		>60%
Water		to 100%

## OTHER INGREDIENT DATA:

CHEMICAL FAMILY: Water based detergent.  
 PRODUCT TYPE: Oil spill despersant.

## PHYSICAL DESCRIPTION/PROPERTIES

## APPEARANCE:

Clear amber liquid.

## FORMULA:

Blend of materials.

BOILING POINT.....: &gt;100°C (IBP)

VAPOUR PRESSURE....: None allocated

SPECIFIC GRAVITY...: 1.03

FLASH POINT.....: 76°C (Closed Cup)

FLAMMABILITY LIMITS: Not known

pH.....: 8.0 - 8.5

FORM.....: Liquid

## OTHER PROPERTIES:

Soluble in water.

## USE:

Ardrox 6120 may be used after dilution with seawater for the dispersion of oil in harbours by spraying from ships, or for use with land based equipment.

continued on next page...

MATERIAL SAFETY DATA SHEET  
continued from previous page....

Page 2

PRODUCT: ARDROX 6120	Infosafe No: ESOS3 APPROVED: Feb 94
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HEALTH HAZARD INFORMATION

ACUTE EFFECTS

SWALLOWED:

No data supplied.

EYE:

A moderate eye irritant.

SKIN:

Contact with skin will result in mild irritation.

INHALED:

No data supplied.

CHRONIC EFFECTS

Repeated or prolonged skin contact can cause defatting and possible dermatitis.

Prolonged overexposure may cause anaemia and liver and kidney damage.

FIRST AID

SWALLOWED:

If a large amount is swallowed, see a doctor.

EYE:

Flush with water for at least 15 minutes. Seek a doctor if irritant persists.

SKIN:

Remove contaminated clothing and wash before re-use.

Wash skin thoroughly with water.

INHALED:

Remove victim to fresh air.

FIRST AID FACILITIES:

None allocated

ADVICE TO DOCTOR:

No data supplied.

TOXICITY DATA:

Low toxicity. Estimated LD50 is about 3000 mg/kg. Prolonged over exposure may cause anemia and liver and kidney damage.

PRECAUTIONS FOR USE

EXPOSURE STANDARDS:

TLV - TWA 25 ppm (skin) for ethylene glycol monobutyl ether.

ENGINEERING CONTROLS:

Keep upwind from spray mist during use.

PERSONAL PROTECTION:

Wear chemical goggles when pouring or spraying.

Wear rubber or PVC for prolonged handling.

Respirator not required under normal conditions.

Wear industrial overalls and shoes.

continued on next page...

## M A T E R I A L S A F E T Y D A T A S H E E T

continued from previous page....

Page 3

PRODUCT: ARDROX 6120

Infosafe No:ESOS3

APPROVED: Feb 94

**FLAMMABILITY:**

Combustible.

**ENVIRONMENT:**

No data supplied.

**OTHER PRECAUTIONS:**

Eye wash facilities should be available.

## ::::::::::::::: SAFE HANDLING INFORMATION :::::::::::::::

**STORAGE AND TRANSPORT:**

**HANDLING AND STORAGE:** Avoid contact with skin and eyes and avoid breathing vapour or spray mist. Store away from strong oxidising agents and foodstuffs.

**OTHER PRECAUTIONS:** Do not spray or handle in food or beverage containers.

**SPILLS AND DISPOSAL:**

**SPILL OR LEAK PROCEDURES:** Large spills should be contained and recovered. Small spills should be washed away with water.

**WASTE DISPOSAL METHOD:** Contact local Waste Disposal Authority.

**EMPTY CONTAINERS:** Flush with water before disposal.

**FIRE/EXPLOSION HAZARD:**

**EXTINGUISHING MEDIA:** Water spray, alcohol-stable foam, dry chemical.

**FIREFIGHTING PROCEDURES:** Keep containers cool with water spray.

**UNUSUAL FIRE HAZARDS:** Incomplete combustion may produce carbon monoxide.

**Reactivity Data:**

**STABILITY:** Stable.

**CONDITIONS TO AVOID:** High temperatures.

**MATERIALS TO AVOID:** Strong oxidising agents.

**HAZARDOUS POLYMERIZATION:** Will not occur.

**OTHER SAFE HANDLING INFORMATION**

Avoid contact with skin and eyes and avoid breathing vapour or spray mist.

## ::::::::::::::: OTHER INFORMATION :::::::::::::::

**REFERENCE:**

PREPARED BY: J G Joy

TITLE: Chief Chemist

DATE: 9 October 1990

**Contact Point:**

Occupational Hygienist: (03) 9270 3307

Occupational Health Officer: (03) 9270 3306

## ::::::::::::::: APPROVALS :::::::::::::::

APPROVAL.....:005H

Site.....:No defined site.

Use Category...:0001 None specified

continued on next page...

546090

MATERIAL SAFETY DATA SHEET  
continued from previous page....

Page 4

PRODUCT: ARDROX 6120	Infosafe No:ESOS3 APPROVED: Feb 94
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Use.....:  
First Approval:07/02/95 Expires...:31/12/97  
Custodian.....:0001 NONE None Gaundry  
Usage Units...: Max Usage.:0  
Trial.....: Existing...:Y Monitoring:  
Conditions.....:

End: Infosafe printed Material Safety Data Sheet - 17 December 1996

546091

2. **BP-AB**

**BP AUSTRALIA LIMITED**  
**MATERIAL SAFETY DATA SHEET**

**Dispersant A-B**

**1. IDENTIFICATION OF PRODUCT AND COMPANY**

**Identification of substance/preparation**  
**Dispersant A-B**

**Application**

Dispersant used in the management of oil spillages.  
For specific application advice see appropriate Technical Data Sheet or consult your BP representative.

**Company Identification**

BP Australia Limited  
A.C.N. 004 085 616  
Melbourne Central  
360 Elizabeth Street  
Melbourne  
Victoria 3000

**Telephone Number**

61 3 92684111

Not Hazardous according to criteria of Worksafe Australia.

**2. COMPOSITION/INFORMATION ON INGREDIENTS**

**Chemical Composition**

A blend of petroleum hydrocarbon compounds distilling below 300 deg C, and biodegradable surfactants.

<b>Kerosine</b>	<b>CAS No.</b>	<b>8008-20-6</b>	<b>&gt; 60%</b>
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**Hazardous Components**

No component is present at sufficient concentration to require a hazardous classification.

**3. HAZARDS IDENTIFICATION**

This material is not considered hazardous to health, but should be handled in accordance with good industrial hygiene and safety practices..

**4. FIRST-AID MEASURES**

**Eyes**

In case of contact with eyes, hold eyes open and rinse immediately with plenty of water. See a doctor if irritation persists.

**Skin**

After contact with skin, thoroughly soak contaminated clothing with water before removal and then, after removal, wash skin thoroughly.

**Ingestion**

If swallowed, do not induce vomiting, give a glass of water and contact a doctor or the Poisons Information Centre immediately.

**Inhalation**

If inhaled, remove from contaminated area. Apply artificial respiration if not breathing. Get to a doctor or hospital quickly.

**Medical Advice**

Product can be aspirated on swallowing or following regurgitation of stomach contents, and can cause severe and potentially fatal chemical pneumonitis, which will require urgent treatment. Because of the risk of aspiration, induction of vomiting and gastric lavage should be avoided. Gastric lavage should be undertaken only after endotracheal intubation. Monitor for cardiac dysrhythmias.

**5. FIRE-FIGHTING MEASURES**

For major fires, call the Fire Brigade immediately. Ensure an escape path is always available from any fire. There is a risk of flashback if sparks or hot surfaces ignite vapour.

In case of fire use foam, dry chemical, carbon dioxide, vaporising liquid or water delivered as a fine spray.

**FIRES IN CONFINED SPACES SHOULD BE DEALT WITH BY TRAINED PERSONNEL WEARING APPROVED BREATHING APPARATUS.**

Water may be used to cool nearby heat exposed areas/objects/packages. Avoid spraying directly into storage containers because of the danger of boil-over.

**Combustion Products**

Toxic fumes may be evolved on burning or exposure to heat.

See Stability and Reactivity, Section 10 of this Material Safety Data Sheet.

**6. ACCIDENTAL RELEASE MEASURES**

Any spillage should be regarded as a potential fire risk.

Isolate the spillage from all ignition sources including road traffic.

Ensure good ventilation.

Evacuate all non-essential personnel from the immediate area.

Wear protective equipment. (See Exposure Controls/Personal Protection, Section 8 of this Material Safety Data Sheet for details)

Contain and recover liquid using sand or other suitable inert absorbent material.

It is advised that stocks of suitable absorbent material should be held in quantities sufficient to deal with any spillage which may be reasonably anticipated.

Spilled material may make surfaces slippery. Clean up spilled material immediately.

Recovery of large spillages should be effected by specialist personnel.

Protect drains from potential spills to minimise contamination.

**Do not wash product into drainage system.**

Large and uncontained spillages should be smothered in foam to reduce the risk of ignition.

The foam blanket should be maintained until the area is declared safe.

Vapour is heavier than air and may travel to remote sources of ignition (eg. along drainage systems, in basements, etc.).

If spillage has occurred in a confined space, ensure adequate ventilation and check that a safe, breathable atmosphere is present before entry.

Protect environmentally sensitive areas and water supplies.

## 7. HANDLING AND STORAGE

### Handling Precautions

Ensure good ventilation and avoid, as far as reasonably practicable, the inhalation and contact with vapours, mists or fumes which may be generated during use. If such vapour, mists or fumes are generated, their concentration in the workplace air should be controlled to the lowest reasonably practicable level.

Avoid contact with eyes. If splashing is likely to occur wear a full face visor or chemical goggles as appropriate.

Avoid skin contact. Recommend using long sleeved gauntlets for cleaning up operations. Good working practices, high standards of personal hygiene and plant cleanliness must be maintained at all times.

Do not siphon product by mouth.

Whilst using, do not eat, drink or smoke. Wash hands thoroughly after contact.

Use disposable cloths and discard when soiled. Do not put soiled cloths into pockets.

Take all necessary precautions against accidental spillage into soil or water.

### Fire Prevention

Light hydrocarbon vapours can build up in the headspace of tanks. These can cause flammability/explosion hazards, even at temperatures below the normal flash point. Tank headspaces should always be regarded as potentially flammable and care should be taken to avoid static electric discharge and all ignition sources during filling, ullaging and sampling from storage tanks. Ensure equipment used is properly earthed or bonded to the tank structure.

Will present a flammability hazard if heated above the flash point but bulk liquids at normal storage temperatures present a low fire hazard.

If liquid contacts hot surfaces, or leaks from high pressure fuel pipes, the vapour and/or mists generated will create a flammability or explosion hazard.

Product soaked rags, paper or material used to absorb spillages, represent a fire hazard and should not be allowed to accumulate. Dispose of safely after use. Empty containers represent a fire hazard as they may contain remaining flammable product. Do not weld, heat or drill the container. Heating may cause an explosion.

### Storage Conditions.

Store and dispense only in well ventilated areas away from heat and sources of ignition.

Store and use only in equipment/containers designed for use with the product.

Containers must be properly labelled and kept closed when not in use.

Do not remove warning labels from containers. Empty packages may retain residual product; retain hazard warning labels on empty packages as a guide to their safe handling, storage and disposal.

Do not enter storage tanks without breathing apparatus unless the tank has been well ventilated and the tank atmosphere has been shown to contain hydrocarbon vapour concentrations below 1% of the lower flammability limit and an oxygen concentration of at least 20% by volume.

Always have sufficient personnel standing by outside the tank with appropriate breathing apparatus and equipment to effect a quick rescue.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Exposure Limits

Ensure good ventilation.

Avoid, as far as reasonably practicable, inhalation of vapour, mists or fumes generated during use.

If vapour, mists or fumes are generated, their concentration in the workplace air should be controlled to the lowest reasonably practicable level.

### Protective Clothing

Wear face visor or goggles in circumstances where eye contact can accidentally occur. If skin contact is likely, wear impervious protective clothing and/or gloves. Recommend the use of long sleeved gauntlets for clean up operations. Change heavily contaminated clothing as soon as reasonably practicable and launder before re-use. Wash any contaminated underlying skin with soap and water.

### Respiratory Protection

Respiratory protection is normally unnecessary, provided the concentration of vapour, mists or fumes is adequately controlled. If operations are such that the excessive generation and inhalation of vapour mist or fume may be anticipated, then suitable approved respiratory equipment should be worn. The use of respiratory equipment must be strictly in accordance with the manufacturers' instructions and any statutory requirements governing its selection and use.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### Typical Values

Grades: Dispersant A-B

	Test Method	Units	
Physical State			Mobile Liquid
Colour			Colourless
Odour			Mild
Density @15°C	ASTM D 1298	kg/L	0.853
Boiling Point/Range	ASTM D 86	°C	180 - 245
Vapour Pressure @20°C	ASTM D 323	kPa	68
Flash Point (PMC)	ASTM D 93	°C	< 0.1

## 10. STABILITY AND REACTIVITY

### Conditions to Avoid

Products of this type are stable and unlikely to react in a hazardous manner under normal conditions of use.

Hazardous polymerisation reactions will not occur. This material is combustible.

### Materials to Avoid

Avoid contact with strong oxidizing agents.

### Hazardous Decomposition Products

Thermal decomposition can produce a variety of compounds, the precise nature of which will depend on the decomposition conditions.

Incomplete combustion/ thermal decomposition will generate smoke, carbon dioxide and hazardous gases, which will include carbon monoxide.

## 11. TOXICOLOGICAL INFORMATION

### Eyes

Unlikely to cause more than transient stinging or redness if accidental eye contact occurs.

### Skin

Unlikely to cause harm to the skin on brief or occasional contact but prolonged or repeated exposure may lead to dermatitis.

**Ingestion**

Unlikely to cause harm if accidentally swallowed in small doses, though larger quantities may cause nausea and diarrhoea.

**Inhalation**

May cause irritation to eyes, nose and throat due to exposure to high concentrations of vapour, mists or fumes.

**12. ECOLOGICAL INFORMATION****Mobility**

Spillages may penetrate the soil causing ground water contamination.

**Persistence and degradability**

This product is inherently biodegradable.

**Bioaccumulative potential**

There is no evidence to suggest bioaccumulation will occur.

**Aquatic toxicity**

May be harmful to aquatic organisms.

**13. DISPOSAL CONSIDERATIONS**

Dispose of via an authorised person/ licensed waste disposal contractor in accordance with local regulations.

Incineration may be carried out under controlled conditions provided that local regulations for emissions are met.

Where possible, arrange for product to be recycled.

Dispose of product and container carefully and responsibly. Do not dispose of near ponds, ditches, down drains or onto soil.

Empty packages may contain some remaining product. Hazard warning labels are a guide to the safe handling of empty packages and should not be removed.

**14. TRANSPORT INFORMATION**

Not classified as hazardous for transport (ADG, UN, IATA/ICAO).

Classified as a Combustible Liquid C1, AS 1940-1993

**15. REGULATORY INFORMATION****SUSDP****S5**

If swallowed, do not induce vomiting, give a glass of water and contact a doctor or Poisons Information Centre immediately.

Not classified as a hazardous substance using the Worksafe Australia criteria.

Classified as a Scheduled 5 (S5) Poison using the criteria in the Standard Uniform Schedule for Drugs and Poisons.

**16. OTHER INFORMATION**

**Compiled by:**

Health, Safety, Environment and Security Division,  
BP Australia Limited,  
A.C.N. 004 085 616  
Melbourne Central  
360 Elizabeth Street,  
Melbourne, 3000  
Victoria

This data sheet and the health, safety and environmental information it contains is considered to be accurate as of the date specified below. We have reviewed any information contained herein which we received from sources outside the BP Group of Companies. However, no warranty or representation, express or implied is made as to the accuracy or completeness of the data and information contained in this data sheet.

Health and safety precautions and environmental advice noted in this data sheet may not be accurate for all individuals and/or situations. It is the user's obligation to evaluate and use this product safely and to comply with all applicable laws and regulations. No statement made in this data sheet shall be construed as a permission, recommendation or authorization given or implied to practise any patented invention without a valid licence. The BP Group shall not be responsible for any damage or injury resulting from abnormal use of the material, from any failure to adhere to recommendations, or from any hazards inherent in the nature of the material.

**3. Corexit 9527**

NALCO EXXON ENERGY CHEMICALS AUSTRALIA PTY LTD  
 226 YORK STREET  
 SALE, VICTORIA 3850  
 PHONE (051) 431981  
 FAX (051) 442912  
 EMERGENCY RESPONSE: 1 800 024 973

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|| MATERIAL SAFETY DATA SHEET ||

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PRODUCT: COREXIT 9527

Infosafe No:AC000  
 ISSUED: Aug 96

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| Hazardous according to criteria of Worksafe Australia |

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UN NO....:None Allocated      D.G.CLASS:None Allocated      CAS NO....:

HAZCHEM...:                      SUB. RISK:                      SUSDP.....:S6(N)

G.T.EPG...:                      SPEC.EPG.:                      PACK. GRP:

===== PRODUCT IDENTIFICATION =====

CORRECT SHIPPING NAME:  
 COMBUSTIBLE LIQUID - CLASS C1  
 Flashpoint >61°-150°C  
 OTHER NAMES:

TRADENAMES.:  
 COREXIT 9527

MANUF.: MANCODE:  
 NALCOEXX 9527-D199

INGREDIENTS:

CHEMICAL ENTITY:	CAS NO:	PROPORTION:
Oxyalkylated aliphatic esters		30 - 60%
2-butoxy ethanol (EGMBE)	111-76-2	30 - 60%
Salt of aliphatic ester		10% - <30%

PHYSICAL DESCRIPTION/PROPERTIES

APPEARANCE:  
 Amber liquid

BOILING POINT.....: 171°C IBP

VAPOUR PRESSURE.....: < 5 mm Hg at 40°C

SPECIFIC GRAVITY...: 0.996

FLASH POINT.....: 73°C (SETA CC)

FLAMMABILITY LIMITS: LEL: 1.1%      UEL 10.6%

REL. VAPOUR DENSITY: > 1 (air=1)

FORM.....: Liquid

OTHER PROPERTIES:  
 Solubility in water: Soluble

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**PRODUCT: COREXIT 9527****Infosafe No: AC000**  
**ISSUED: Aug 96**

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**USE:**

Oil Spill Dispersant

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**HEALTH HAZARD INFORMATION**

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**ACUTE EFFECTS****SWALLOWED:**

Low order of acute oral toxicity.

**EYE:**

Will cause eye discomfort; May injure eye tissue unless promptly removed.

**SKIN:**

Irritating. Low order of toxicity.

may be absorbed through the skin to produce haemolytic anaemia and kidney damage evidenced by paleness and possibly red colouration of the urine.

**INHALED:**

High vapour concentrations are irritating to the eyes and respiratory tract. Vapours and/or aerosols which may be formed at elevated temperatures may cause systemic effects.

**CHRONIC EFFECTS**

Prolonged or repeated exposures by inhalation and/or dermal contact may damage blood and kidneys.

**FIRST AID****SWALLOWED:**

If swallowed, induce vomiting only if patient is alert. Get prompt medical attention. DO NOT attempt to give anything by mouth to an unconscious or drowsy patient.

**EYE:**

Immediately flush eyes with large amounts of water for at least 15 minutes. Seek medical attention.

**SKIN:**

Immediately flush with large amounts of water; use soap if available. Remove contaminated clothing, including footwear. Seek medical attention.

**INHALED:**

Using proper respiratory protection, immediately remove patient from exposure.

Administer artificial respiration if breathing has stopped.

Keep at rest. Seek medical attention.

**FIRST AID FACILITIES:**

Availability of an eye wash fountain and safety shower recommended.

**ADVICE TO DOCTOR:**

Treat symptomatically.

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**PRODUCT: COREXIT 9527****Infosafe No:AC000**  
**ISSUED: Aug 96**

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**PRECAUTIONS FOR USE**

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**EXPOSURE STANDARDS:**

Worksafe Australia has published the following exposure standards:  
2-butoxy ethanol: TWA 25 ppm (121 mg/cu m). Absorption through the skin may be a significant source of exposure.

**ENGINEERING CONTROLS:**

Use in a well ventilated area only.  
The use of local exhaust ventilation is recommended to control process emissions near the source. Laboratory samples should be stored in fume hood. Provide mechanical ventilation of confined spaces. Avoid generation of mists and aerosols.

**PERSONAL PROTECTION:**

For open systems where contact is likely, wear gloves (e.g. PVC), a chemical suit, rubber boots, chemical safety goggles and face shield.  
Where contact may occur, wear long sleeves, gloves, and a face shield.  
Where concentrations in air may exceed exposure standards and engineering, work practice or other means of exposure control are not adequate, respirators conforming to AS/NZS 1715 and AS/NZS 1716 may be required.

**FLAMMABILITY:**

Combustible liquid.  
Earth containers to reduce possibility of sparks from static electricity.  
Use in well ventilated areas. Do not use in confined spaces.  
Do not use close to ignition sources.  
Empty containers retain product residue (liquid and/or vapour) that may be dangerous. Do not pressurise, cut, weld, braze, solder, drill, grind or expose containers to heat, flame, sparks, static electricity or other sources of ignition.  
Empty drums should be completely drained, properly bunged and returned to a drum reconditioner or disposed of in accordance with local regulations.

**ENVIRONMENT:**

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**SAFE HANDLING INFORMATION**

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**STORAGE AND TRANSPORT:**

Product is not classified as Dangerous Goods under the Australian Code for the Transport of Dangerous Goods by Road and Rail.  
This product is classified as a Class C1 Combustible Liquid under AS 1940 (Storage and Handling of Flammable and Combustible Liquids).  
Store under ambient conditions.  
Do not store with oxidising agents and strong acids.

**SPILLS AND DISPOSAL:**

Land spill: Stop leak if possible. Contain spilled liquid with sand or earth. Dilute contained spill with water.  
Recover spilled liquid using an explosion proof or hand pump or with a suitable absorbent. If liquid is too viscous for pumping, scrape up with shovels or other tools.

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4. **Corexit 9550**



NALCO/EXXON ENERGY CHEMICALS AUSTRALIA PTY. LTD.  
A.C.N. 066 174 927

226 York Street,  
Sale, Victoria 3850  
Tel: (051) 43 1991 Fax: (051) 44 1912

Page 1 of 5

**PRODUCT: COREKIT 9500**

### PRODUCT IDENTIFICATION

Trade Names:	Manufacturer	Mancode	Other Names
COREKIT 9500	Exxon		None
UN No:	Not regulated	Hazchem Code:	3Y
DG Class:	Not regulated	Poisons Schedule:	S5
Packaging Group:	Not regulated	EPG:	Not regulated
Subsidiary Risk:	Not regulated		

Use: Oil Spill Dispersant

### PHYSICAL DESCRIPTION/PROPERTIES

Appearance:	Amber liquid
Boiling Pt (°C):	178 (IBP, calc)
Vapour Pressure:	Not available
Specific gravity:	0.95 (15.5°C)
Flash Point:	>110°C (Tag CC)
Flammability Limits (%):	LEL: 1.0 UEL: 7.0
Solubility in Water:	Soluble
Autoignition temperature:	Not available
Specific Gravity of vapour	3.04 (calc) at 1 atm (air=1)
pH:	6.4
Viscosity (cSt)	27 (38°C) 11 (66°C)
Evaporation rate	1.1 (calc, n-Bu Acetate = 1)

### INGREDIENTS

Chemical Entity	CAS No	Proportion
Hydrocarbons	90622-58-5	10-30%
Alkylated dipropylene glycol	29911-28-2	10-30%
Ethoxylated alkyl surfactants		10-30%
Carboxylic acid salt		10-30%

Continued ... 2

**PRODUCT: COREXIT 9550**

**HEALTH HAZARD INFORMATION  
ACUTE EFFECTS**

- Swallowed:** Minimal toxicity.
- Eyes:** Irritating; will injure eye tissue if not promptly removed.
- Skin:** Frequent or prolonged contact may irritate and cause dermatitis.
- Inhaled:** Vapours and/or aerosols which may be formed at elevated temperatures may cause systemic effects.
- Chronic:** Overexposure by inhalation and/or skin contact may result in damage to the blood and kidneys.

**FIRST AID**

- Swallowed:** DO NOT induce vomiting. If patient is conscious, give milk or water to dilute stomach contents. Keep warm and quiet.  
Get prompt medical attention.  
DO NOT attempt to give anything by mouth to an unconscious patient.
- Eye:** Immediately flush eyes with large amounts of water for at least 15 minutes. Get prompt medical attention.
- Skin:** Immediately flush with large amounts of water; use soap if available. Remove contaminated clothing, including footwear after flushing has begun.  
If irritation persists, seek medical attention.
- Inhaled:** Using proper respiratory protection, immediately remove the affected victim from exposure.  
Administer artificial respiration if breathing has stopped. Keep at rest.  
Call for prompt medical attention.

**Advice to Doctor:** Treat Symptomatically

Continued .../3

**PRODUCT:** COREXIT 9550

### **PRECAUTIONS FOR USE EXPOSURE STANDARDS**

The National Occupational Health and Safety Commission (Worksafe Australia) has not published any exposure standards for this product.

### **PERSONAL PROTECTION**

For open systems where contact is likely, wear chemical resistant gloves, long sleeves and chemical goggles.

Where contact may occur, wear safety glasses with side shields.

Where overexposure by inhalation may occur and engineering, work practice or other means of exposure reduction are not adequate, AS 1715 and AS 1716 approved respirators may be necessary to prevent overexposure by inhalation.

### **ENGINEERING CONTROLS**

Ventilation should be provided to control worker exposures and prevent health risk.

### **FLAMMABILITY**

Combustible liquid, can release vapours that form flammable mixtures at temperatures at or above the flash point.

Toxic gases will form upon combustion.

Earth all containers to reduce the possibility of sparks from static electricity.

Use in well ventilated areas.

Do not use in confined spaces.

Do not use close to ignition sources.

Empty containers retain product residue (liquid and / or vapour) that may be dangerous. Do not pressurise, cut, weld, braze solder, drill, grind or expose containers to heat, flame, sparks, static electricity or other sources of ignition.

Empty drums should be completely drained, properly bunged and returned to a drum reconditioner or disposed of in accordance with local regulations.

### **SAFE HANDLING INFORMATION STORAGE AND TRANSPORT**

This product is not classified as Dangerous Goods under the Australian Code for the Transport of Dangerous Goods by Road and Rail. Refer to the relevant regulations for transport requirements.

This product is classified as a C1 (Combustible Liquid) under AS 1940 (Storage and Handling of Flammable and Combustible Liquids) for the purpose of storage and handling.

Do not store with strong oxidising agents.

This product is not a Scheduled poison.

Continued .../4

<b>PRODUCT:</b>	<b>COREKIT 9550</b>
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### **SPILLS AND DISPOSAL**

#### **LAND SPILL**

Eliminate sources of ignition. Prevent further discharge of material if possible to do so without hazard. For small spills, implement clean up procedures; for large spills, implement cleanup procedures and, if in public area, keep public away and advise authorities.

Prevent liquid entering sewers, watercourses or low areas. Contain spilled liquid with sand or earth. Do not use combustible materials such as sawdust.

Recover spilled liquid using an explosion proof or hand pump or with a suitable absorbent.

Consult an expert on disposal of recovered material and ensure conformity to local disposal regulations.

#### **WATER SPILL**

Eliminate sources of ignition.

Warn occupants and shipping in surrounding and downwind areas of fire and explosion hazard and request all to stay clear.

Consult an expert on disposal of recovered material and ensure conformity to local disposal regulations.

#### **FIRE/EXPLOSION HAZARD**

Use water spray to cool fire exposed surfaces and to protect personnel.

Isolate fuel supply from fire.

Use alcohol type foam, dry chemical or water spray to extinguish fire.

#### **SPECIAL PRECAUTIONS**

Fire fighting personnel require respiratory and eye protection.

#### **HAZARD COMBUSTION PRODUCTS**

Carbon monoxide, Carbon dioxide, smoke, fumes.

Date of Issue: December 13, 1994

Revision No.: 0

Continued .../5

<b>PRODUCT:</b>	<b>COREXIT 9550</b>
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**Contact Points:**

Environmental Health Advisor	03 368 3233
Medical Officer	03 368 3233
Afterhours Emergency	03 625 1574
Energy Chemicals Offices	
Sale	051 43 1983
Adelaide	08 352 7222

This information relates to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is to the best of our knowledge and belief accurate and reliable as of the date compiled. However, no representation, warranty or guarantee is made as to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability and completeness of such information for his own particular use. We do not accept liability for any loss or damage that may occur from the use of this information nor do we offer warranty against patent infringement.

5. **Dasic Slickgone NS**

**SAFETY DATA SHEET****SLICKGONE NS****1. IDENTIFICATION OF SUBSTANCE OR PREPARATION**

Product	Slickgone NS
Application	MAFF approved Type 2/Type 3 oil dispersant concentrate for treating marine oil spills
Company/Undertaking Identification	Dasic International Limited Winchester Hill Romsey, Hants SO51 7YD U.K.
Facsimile	(01794) 522346
Emergency Telephone Day	(01794) 512419
Night	(01794) 512419

**2. COMPOSITION/INFORMATION ON INGREDIENTS**

Chemical Description	Solution of surfactants in low aromatic petroleum distillate.
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**HAZARDOUS COMPONENTS**

Name	%	CAS	EINECS	Supply Class
Sodium dioctylsulphosuccinate (surfactant)	1-10 W/W	577-11-7		Xi.R36/38

**3. HAZARDS IDENTIFICATION**

Low order of toxicity and flammability. Not classifiable as hazardous under CHIP regulations. Will support combustion and burn readily once ignited. Possible eye irritant. Possible skin irritant on prolonged contact.

**HOLAUST Pty Ltd**

UNIT 9/4 PROSPERITY PARADE  
WARRIEWOOD, N.S.W. 2103  
AUSTRALIA

TELEPHONE: + 61 (0) 2 9999 1911  
FAX: + 61 (0) 2 9999 1411



**4. FIRST AID MEASURES**

Eyes	Irrigate copiously with clean fresh water for at least 10 minutes, holding the eyelids apart and seek medical advice.
Skin	Wash skin thoroughly with soap and water or use a proprietary skin cleaner. Remove contaminated clothing including shoes and thoroughly clean and dry before re-use.
Ingestion	DO NOT induce vomiting. If patient vomits, turn to recovery position. Rinse mouth out with water. Give water to drink. SEEK MEDICAL AID.
Inhalation	Remove to fresh air, keep the patient warm and at rest. If unconscious, place in recovery position. Seek immediate medical attention.
Other	In all cases of doubt, or when symptoms persist, seek medical attention. Never give anything by mouth to an unconscious person. Note for medical personnel: The major hazard is lung damage from aspiration. Medical supervision for 24-48 hours is strongly recommended if aspiration could have occurred.

---

**5. FIRE FIGHTING MEASURES**

Extinguishing Media	Use foam, dry chemical, CO2 or water fog. For small fires, sand or earth may also be used. DO NOT use water jet. Cool closed containers exposed to fire with water spray.
Fire and Explosion Hazards	Combustible. Stable under normal conditions.
Protective Measures	Firefighters should wear self-contained breathing apparatus. Consider evacuation under severe circumstances.

---

**6. ACCIDENTAL RELEASE MEASURES (SPILLAGE)****Personal Precautions**

Keep sources of ignition away from area. Operators should observe the protective measures detailed in Sections 7 and 8.

**Environmental Precautions**

DO NOT allow to enter drains or watercourses. If the material has entered drains, sewers or watercourses, the relevant water authority and/or the Nations River Authority should be notified as appropriate.

**Recovery**

Small or large spills - contain with sand or earth and transfer to suitable containers. Dispose of as hazardous waste - see Section 13 for disposal considerations.

---

**7. STORAGE AND HANDLING (IN NORMAL USE)****Storage**

Store in sealed original containers. Keep away from sources of ignition. Store away from oxidising agents.

**General**

Under typical use conditions (see Application in Section 1 and Dasic use instructions) adequate ventilation will usually be present. However, refer to Section 8 under the Engineering Measures heading.

**Handling**

Wear suitable protective clothing - see Section 8 (Exposure Controls/Personal Protection). Keep away from sources of ignition - No smoking.

---

8. **EXPOSURE CONTROLS/PERSONAL PROTECTION (NORMAL USE)**

## Occupational Exposure Limits

Name	8 Hr TWA	15 Min	Type	Ref
------	----------	--------	------	-----

## Engineering Measures

No occupational exposure limit has been assigned by UK HSE or ACGIH to the solvent component of this product. However, the mineral oil mist figures of 5mg/m<sup>3</sup> 8hr LTEL TWA and 10mg/m<sup>3</sup> 15 min STEL, given in EH40 as OES values, are recommended. For the vapour, an occupational exposure limit of 200 ppm (1500mg/m<sup>3</sup>) 8 hr TWA is recommended. In areas of good ventilation and under normal conditions of use, it is unlikely that these values will be exceeded. If adequate ventilation cannot be supplied, a suitable organic cartridge respiratory or self-contained breathing apparatus should be used.

## Personal Protective Equipment

## Respiratory

Not normally required but see Engineering Measures above.

## Hand

Wear impervious gloves.

## Eye

Eye protection designed to protect against liquid splashes should be worn. Eye wash facilities should be available in areas where accidental exposure may be possible.

## Other

Cotton or cotton/synthetic overalls or coveralls are normally suitable. Grossly contaminated clothing should be removed and the skin washed with soap and water or a proprietary skin cleaner.

9. **PHYSICAL/CHEMICAL PROPERTIES**

Appearance	Clear, brown, slightly viscous liquid.
Colour	Mild and characteristic.
pH (as delivered)	Neutral
Viscosity	30 - 60 cP at 0 degree Celsius
Freezing Point	< -10 degrees Celsius
Boiling Point (or Range)	Comm at 192 degrees Celsius
Flash Point	72 degrees Celsius PMCC
Autoflammability	230 degrees Celsius
Explosive Limits	
Upper Limit	7.0
Lower Limit	0.6
Vapour Pressure	= 0.04 kPa at 20 degrees Celsius
Vapour Density	7.6 g/l at 20 degrees Celsius
Relative Density (SG)	0.86 at 20 degrees Celsius
Solubility	Disperses in water to form unstable emulsion.

10. **STABILITY AND REACTIVITY**

Stability	Stable at normal temperatures and pressures.
Conditions to Avoid	Avoid ignition sources. Do not heat material.
Materials to Avoid	Reacts violently with oxidising agents and concentrated nitric acid.
Hazardous Decomposition Products	None unusual. Burning will produce smoke, carbon monoxide, carbon dioxide and traces of sulphur dioxide/trioxide.

**11. TOXICOLOGICAL INFORMATION**

## Acute Effects

## Eyes

Liquid splashes in the eye may cause irritation. High concentrations of vapour may also cause irritation.

## Skin

Will cause defatting of skin which may lead to irritation and dermatitis on prolonged contact.

## Ingestion

May cause vomiting, nausea, central nervous system depression and diarrhoea. Aspiration during swallowing or vomiting will severely damage lungs.

## Inhalation

Vapour is irritant in high concentrations and may cause drowsiness, nausea, dizziness and possibly unconsciousness. This is unlikely to occur when the product is used to treat oil spills in the open sea.

## Chronic Effects

---

**12. ECOLOGICAL INFORMATION**

## Mobility

## Persistence &amp; Degradability

The surfactant component of this product is 95% biodegradable when tested to EEC Directive 73/405/EEC as amended by 82/243/EEC. The whole product has been tested for ultimate biodegradability in the marine environment and the results have been accepted by the French Government, as part of their approval procedure for dispersants.

## Bio-Accumulation

Not expected to bio-accumulate.

---

12. **ECOLOGICAL INFORMATION (cont)**

## Aquatic Toxicity

This product has been tested for marine toxicity by the UK Ministry of Agriculture Fisheries and Foods and is approved as a Type 3 oil dispersant concentrate. It has also been tested and approved as a marine oil spill dispersant by the French Government laboratory "CEDRE".

## Other

13. **DISPOSAL CONSIDERATIONS**

This material is classed as hazardous waste and must be disposed of via a licensed hazardous waste contractor, in accordance with the regulations prevailing in the locality/country concerned. Empty containers should be treated as hazardous waste. Do not dump indiscriminately.

14. **TRANSPORT INFORMATION (REGULATIONS)**

## Packaging (Size &amp; Description)

200 or 25 litres steel containers. 1000 litre intermediate bulk containers with fluorinated polythene liners

Transport Classification -  
 Substance Identification Number -  
 Proper Shipping Number -  
 ICAO/IATA/IMDG Class -  
 Subsidiary Risk -  
 Packing Group -  
 ADR Class -  
 Transport Hazard Symbol -  
 Hazard Ident Number -  
 Emergency Hazard Code -  
 Other

**Not classified as hazardous under IMO, IATA or UK transport regulations.**

15. **REGULATORY INFORMATION (Supply & Labelling)**

Supply Classification Not regulated.

Hazard Pictogram

Risk Phrases

Safety Phrases

Other Applicable Regulations

---

16. **OTHER INFORMATION**

Use only in accordance with Dasic's use instructions. Do not use for other applications without first consulting the Dasic Technical Department for advice. The information contained in this safety data sheet is provided in accordance with the requirements of the Chemicals (Hazard Information and Packaging) Regulations.

---

The information provided in this Safety Data Sheet is correct to the best of our knowledge at the date of issue. It is intended as a guide for safe handling, storage and use in known applications. References to regulatory matters are not intended to be exhaustive and the user must satisfy himself that all relevant legislation is complied with. This Safety Data Sheet should not be construed as a specification or guarantee of specific properties and no liability can be accepted for any loss, injury or damage resulting from its use.

6. **Shell VDC**

Shell Company of Australia Ltd. A.C.N. 004 610 459  
 1 Spring Street  
 MELBOURNE VIC 3001  
 Tel:(03) 666 5349 Fax:(03) 666 8781

Page 1

PRODUCT: SHELL DISPERSANT VDC	Infosafe No:ESOT5 APPROVED: Jun 90
-------------------------------	---------------------------------------

UN NO....:None allocated D.G.CLASS:None allocated CAS NO...:None allocated  
 HAZCHEM...:None allocated SUB. RISK:None allocated SUSDP....:N/AP (VIC)  
 G.T.EPG...:None allocated SPEC.EPG.:None allocated PACK. GRP:None allocated

PRODUCT IDENTIFICATION

## OTHER NAMES:

None allocated

## TRADE NAMES.:

SHELL DISPERSANT VDC

## MANUF.: MANCODE:

SHELLAUS D666

## INGREDIENTS:

## CHEMICAL ENTITY:

Biodegradable anionic and nonanionic surfactants  
 Ethylene glycol monobutyl ether

## CAS NO:

-  
 111-76-2

## PROPORTION:

Med 10-60%

## PHYSICAL DESCRIPTION/PROPERTIES

## APPEARANCE:

Clear amber liquid. Mild odour.

BOILING POINT.....: 100°C (IBP)

MELTING POINT.....: Not applicable

VAPOUR PRESSURE....: Not available

VOLATILE COMPONENT.: Not applicable

SPECIFIC GRAVITY...: 0.99 @ 15°C

FLASH POINT.....: None

FLAMMABILITY LIMITS: Not applicable

EXPLOSIVE LIMITS...: Not applicable

AUTOIGNITION TEMP...: Not applicable

REL. VAPOUR DENSITY: Not available

FORM.....: Liquid

## OTHER PROPERTIES:

Completely soluble in water.

## USE:

High efficiency dispersant for dispersal of oil at sea.

## HEALTH HAZARD INFORMATION

## ACUTE EFFECTS

## SWALLOWED:

May cause local irritation to the gastro-intestinal tract causing vomiting  
 and abdominal pain to occur.

continued on next page...

MATERIAL SAFETY DATA SHEET  
continued from previous page....

Page 2

PRODUCT: SHELL DISPERSANT VDC	Infosafe No:ESOTS APPROVED: Jun 90
-------------------------------	---------------------------------------

**EYE:**

Moderately irritating to the eyes.

**SKIN:**

Contains ethylene glycol monobutyl ether which has an irritant and degreasing effect upon the skin.

Absorption could occur with prolonged or repeated exposure and could result in renal injury.

**INHALED:**

Inhalation of aerosols (spray mists) of Shell Dispersant VDC may cause irritation to the upper respiratory tract.

**CHRONIC EFFECTS**

No data supplied.

**FIRST AID****SWALLOWED:**

If swallowed, do NOT induce vomiting. Give a glass of water. Seek immediate medical advice.

**EYE:**

Hold eyes open, flood with water for at least 15 minutes. If irritation persists, obtain medical attention.

**SKIN:**

Wash with water and use moisturising cream. If skin irritation persists, seek medical attention.

**INHALED:**

Remove affected person from contaminated area. If rapid recovery does not occur, seek medical advice.

**FIRST AID FACILITIES:**

None allocated

**ADVICE TO DOCTOR:**

No data supplied.

**TOXICITY DATA:**

No data supplied.

..... PRECAUTIONS FOR USE .....

**EXPOSURE STANDARDS:**

None established

**ENGINEERING CONTROLS:**

Do not breathe sprays or mists. Use in a well ventilated area only. Where necessary use cartridge or canister respirator of correct type.

**PERSONAL PROTECTION:**

Avoid contact with skin and eyes and avoid breathing vapours, fumes or spray mists.

If air contamination is high, respiratory equipment is required complying

continued on next page...

## MATERIAL SAFETY DATA SHEET

continued from previous page....

Page 3

PRODUCT: SHELL DISPERSANT VDC

Infosafe No:ESOT5

APPROVED: Jun 90

**PERSONAL PROTECTION:** - (continued)

with AS 1716-1984 "Respiratory Protective Devices".

Observe good personal hygiene-wash hands thoroughly with soap or hand cleaner before eating, drinking or smoking and before using the toilet.

**FLAMMABILITY:**

Will not burn.

**ENVIRONMENT:**

None allocated

===== SAFE HANDLING INFORMATION =====

**STORAGE AND TRANSPORT:**

Recommended maximum storage temperature:-50°C.

Recommended minimum storage temperature:-15°C.

**SPILLS AND DISPOSAL:**

Spills are slippery.

Minor: Absorb the liquid with sand, earth or other absorbent. Wash down with large quantities of water. Dispose of following requirements of state environmental authority.

Major: Dike and contain spill with sand or earth.

Transfer the spilt material to a salvage tank if possible, otherwise treat as for a minor spill.

**FIRE/EXPLOSION HAZARD:**

Not combustible.

If involved in a large fire, use alcohol resistant foam or water.

**Reactivity Data:**

Product is stable.

**OTHER SAFE HANDLING INFORMATION**

Shell Dispersant VDC has been approved for use by the UK Ministry of Agriculture, Fisheries and Food, Under the dumping at sea Act 1974.

===== OTHER INFORMATION =====

**REFERENCE:**

Manufacturers MSDS Dated: 07/06/1990.

**Contact Point:**

Occupational Hygienist: (03) 9270 3307

Occupational Health Officer: (03) 9270 3306

===== APPROVALS =====

APPROVAL.....:014V

Site.....:No defined site.

Use Category...:0001 None specified

continued on next page...

546122

MATERIAL SAFETY DATA SHEET

continued from previous page....

Page 4

PRODUCT: SHELL DISPERSANT VDC	Infosafe No:ESOT5 APPROVED: Jun 90
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Use.....:  
First Approval:07/02/95      Expires...:31/12/97  
Custodian.....:0001 NONE      None Gaundry  
Usage Units...:      Max Usage.:0  
Trial.....:      Existing...:Y      Monitoring:  
Conditions.....:

End: Infosafe printed Material Safety Data Sheet - 17 December 1996

**7. Tergo R.40**



546124

# TERGO INDUSTRIES LIMITED

HEAD OFFICE: BEAUMONT STREET, P.O. BOX 47-111, PONSONBY, AUCKLAND, NEW ZEALAND  
TELEFAX 0-9-307 9115, FREEPHONE 0-9-307 9114, TELEPHONE 0-9-303 1409

BRANCHES IN: HASTINGS WELLINGTON NELSON CHRISTCHURCH DUNEDIN.

Page 1 of 2

## R40 CONCENTRATE TYPE III

### OIL SPILL DISPERSANT

#### DESCRIPTION

R40 Concentrate is a concentrated blend of naturally derived surfactants of low toxicity and rapid biodegradability. It is completely hydrocarbon solvent free.

It has been designed to disperse a wide range of crude and fuel oils when or if the need arises.

#### METHOD OF USE

R40 Concentrate as a Type III Dispersant is specifically designed to be applied neat from aircraft or ship mounted spray booms at a nominal ratio of 1 part R40 to 20 parts oil.

It is equally effective when applied via hand-held or back-pack mounted sprayers for use on small spills or around areas such as wharf piles, etc.

#### USEFUL EQUATION FOR USAGE

Assume an oil slick thickness of 0.1 of a millimetre; then applying R40 Concentrate at 1 part to 20 parts oil then dispersant usage becomes 50 litres per hectare.

Vis a Vis = 0.1 millimetre over 1 hectare = 1,000 litres of oil.

#### DILUTION WITH WATER

Should circumstances dictate then R40 Concentrate may be mixed ten times its volume with sea or fresh water then applied at a ratio of 1 part mixed dispersant to 2 parts oil.

Note: Whether pre-diluted or via venturi it should be applied as soon as possible after dilution.

#### PROPERTIES

<i>Appearance</i> . . . . .	Thin, clear, amber liquid
<i>Specific Gravity @ 20°C</i> . . . . .	0.97 ± 0.01
<i>Viscosity @ 0°C</i> . . . . .	200 centistokes
<i>Cloud Point</i> . . . . .	Less than -10°C
<i>Pour Point</i> . . . . .	Less than -20°C
<i>pH</i> . . . . .	7
<i>Flash Point PMC</i> . . . . .	Greater than 80°C
<i>Toxicity, LC50</i> . . . . .	Independent test results available on request
<i>Biodegradability</i> . . . . .	Shake flask C.T.A.S. method > 90% in 48 hours
<i>Efficiency Index</i> . . . . .	In-house and independent test results available on request. Note: Reference oil Light Arabian Crude topped at 240°C.
<i>Health and Safety</i> . . . . .	Refer to Material Safety Data Sheet
<i>Shelf Life</i> . . . . .	Indefinite

ISSUE DATE: August 1994

This information is, to the best of our knowledge, true and accurate, but any recommendations or suggestions which may be made are without guarantee, since the conditions of use are beyond our control. Furthermore, nothing contained herein shall be construed as a recommendation to use any product in conflict with existing patents covering any material or its use.

TESTING AND APPROVALSNew Zealand

R40 Concentrate OSD is approved pursuant to Regulation 4 of the Marine Pollution (Dispersants and Exceptions) Regulations 1975. Gazetted - April 1992.

Australia

R40 Concentrate OSD was tested in accordance with the Australian Maritime Safety Authority publication "Oil Spill Dispersants - Guidelines for Acceptance." R40 Concentrate complies with these guidelines and is accepted for use in Australian waters by AMSA.

TEST DATA

Species used in toxicity testing:-

- Allorchestes compressa - an amphipod
- Macrobranchium intermedium - an estuarine shrimp
- Penaeus monodon - a marine prawn
- Lates calcariter - a juvenile barramundi

Efficiency - Apparatus used McKay Tester

Percent oil removed after 10 minute agitation > 99

Percent oil removed after 5 minute settling > 75

Note: Full test data available on request.

REFERENCES

Efficiency Report Department of Conservation, Marine Science Laboratories  
Victoria, Australia, 1993

Toxicity Reports Department of Conservation, Marine Science Laboratories  
Victoria, Australia, 1993

Ecotoxicology Unit, University of Technology  
Sydney, Australia, 1993

Australian Nuclear Science and Technology Organisation  
Environmental Science Programme, 1994

**TERGO INDUSTRIES LIMITED**HEAD OFFICE: BEAUMONT STREET, P.O. BOX 47-111, PONSONBY,  
AUCKLAND, NEW ZEALAND

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BRANCHES: HASTINGS, WELLINGTON, NELSON, CHRISTCHURCH,  
DUNEDIN

546126

KPMG  
ISO 9001  
Registered  
Firm**MATERIAL SAFETY DATA SHEET**

Page 1 of 2

**IDENTIFICATION**

<b>Product Name:</b>	Tergo R-40	<b>U.N. Number:</b>	N/A
<b>Trade Name:</b>		<b>Dangerous Goods Class/ &amp; Subsidiary Risk:</b>	N/A
<b>Other Names:</b>		<b>Hazchem Code:</b>	N/A
<b>Manufacturers Code:</b>		<b>Poison Schedule:</b>	N/A

**Use:** Oil Spill Dispersant

**Physical Description/Properties:**

<b>Appearance:</b>	Clear, amber liquid
<b>Boiling Point/Melting Point (°C):</b>	240°C/-25°C
<b>Vapour Pressure (mm of Hg at 25°C):</b>	< 2.5mm
<b>Per cent Volatiles:</b>	10%
<b>Specific Gravity:</b>	0.96
<b>Flash Point (°C):</b>	> 80°C
<b>Flammability Limits (%):</b>	Unknown
<b>Autoignition Temperature (°C):</b>	> 250°C
<b>Plus other properties if applicable:</b>	N/A

**Ingredients:**

<b>Chemical Entity:</b> (include all hazardous chemicals)	<b>Proportion</b> (High 60%) (Medium 10% - 60%) (Low 10%)
Polyethylene Glycol Esters of Oleic and Coconut Fatty Acids	Major

**HEALTH HAZARD INFORMATION****Health Effects:**

<b>Swallowed:</b>	Mild discomfort may occur.
<b>Eyes:</b>	Redness and discomfort.
<b>Skin:</b>	Prolonged exposure may cause irritation or dermatitis.
<b>Inhaled:</b>	High concentrations may cause irritation to eyes and throat.

**First Aid:**

<b>Swallowed:</b>	Dilute by drinking 2 glasses of water or milk. Obtain medical attention.
<b>Eyes:</b>	Flush thoroughly with water for 10-15 minutes.
<b>Skin:</b>	Rinse off with water. Remove contaminated clothing.
<b>Inhaled:</b>	Move to fresh air source.

Issue Date: 01.04.93

---

**PRECAUTIONS FOR USE**

---

- Advice to Doctor:** Full details available from National Poisons (03) 474-0999.  
Aspiration into lungs may cause chemical pneumonitis.
- Exposure Limits:** TLV : >300ppm  
Acute Oral LD (rat): >5g/kg
- Ventilation:** Not normally required except in enclosed spaces (e.g., bunkers, ballast tanks, etc.) in which case positive pressure respirator is recommended.
- Personal Protection:** Rubber or PVC gloves  
Splash goggles
- Flammability:** Not considered flammable, but will support combustion under extreme conditions of a fire.

---

**SAFE HANDLING INFORMATION**

---

- Storage and Transport:** Store in dry conditions. Avoid heat sources and ignition sources.
- Spills and Disposal:** Flush small spills with water. Larger spills should be contained and absorbed with inert material then placed in drums for disposal.
- Fire/Explosion and Hazard:** Extinguish using CO<sub>2</sub>, dry chemical, foam or water fog.
- Other Information:** May pose a slip hazard on walking surfaces.

---

**Contact Point:** (09) 303-1409      **Date:** 23 September 1994

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## 001. Offshore Oil Spill Response Methods

### ESTIMATING SLICK VOLUME

Oil Type	Colour	Approximate Thickness (mm)	Approximate Volume (m <sup>3</sup> /km <sup>2</sup> )
Oil Sheen	Silvery	>0.0001	0.1
Diesel	Iridescent	>0.0003	0.3
Crude and Fuel Oil	Black / Dark Brown	>0.1	100
Water in Oil Emulsion	Brown / Orange	>1.0	1000

### GENERAL RULE

Slick size can be estimated from knowledge of the slick area (eg: obtained visually or estimated by a standby / supply vessel steaming the length and width of the slick within a known time and at a known speed) and the slick colour (ie: related to oil thickness) using the above table.

#### 001.1 Evaluation of Options

All oil spills are different and response options must be evaluated with reference to oil type and quantity, sea state and weather conditions, projected trajectory and environmental resources at risk. A number of response options are available in the event of an oil spill at sea.

In Bass Strait, the general priorities are:

- Monitoring - Natural Weathering and Dispersal
- Physical Breaking of Slicks
- Chemical Dispersants
- Containment and Recovery
- In Situ Burning
- Onshore (Shoreline) Oil Spill Response Methods (see Section 060-002.)

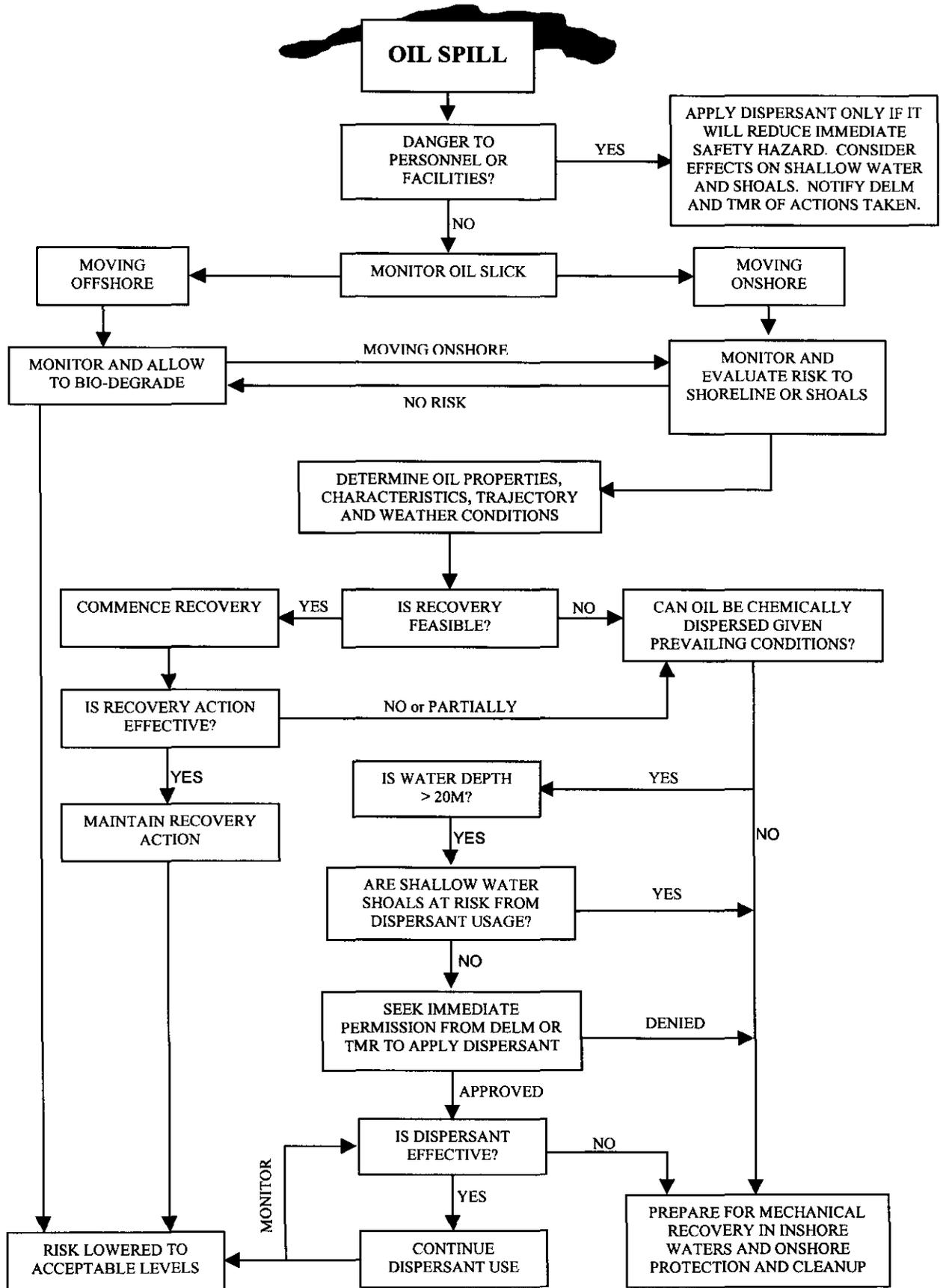
All options have limitations and advantages. These are discussed in the following pages and are summarised in Figure 11.0: they are also illustrated in Figure 12.0:

General guidelines for methods which may be used under a variety of circumstances are provided in a matrix format in Figure 13.0:

**FIGURE 11.0: SPILL RESPONSE IN BASS STRAIT**

	<b>Operational Constraints</b>	<b>Other Considerations</b>
Monitoring - Natural Weathering/Dispersion	<ul style="list-style-type: none"> <li>Monitoring should be done by aerial surveillance assisted by computer modelling. Aircraft can only operate in favourable flying conditions.</li> </ul>	<ul style="list-style-type: none"> <li>Public may perceive this as inactivity or unwillingness to tackle spill.</li> <li>Respondents must be confident that oil is not likely to reach the shoreline ie. trajectory and oil persistence need to be considered and monitored.</li> </ul>
Physical Breakup of Slick Using Vessels	<ul style="list-style-type: none"> <li>Suitable for use on small spills at sea.</li> </ul>	<ul style="list-style-type: none"> <li>Success may be limited by availability of vessels</li> </ul>
Chemical Dispersants (Refer also Appendix Module 040)	<ul style="list-style-type: none"> <li>Unsuitable on oils with viscosities above 1000 cSt at sea temperatures.</li> </ul>	<ul style="list-style-type: none"> <li>Environmental concerns need to be considered.</li> </ul>
Containment and Recovery	<ul style="list-style-type: none"> <li>Relatively calm seas and weather required ie:               <ul style="list-style-type: none"> <li>- Sea state less than 3-4 (Beaufort Scale)</li> <li>- Currents less than 0.8 knot (0.4 m / sec)</li> <li>- Winds less than 15 knots.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Success may be limited by availability of vessels or storage capacity.</li> <li>Environmentally, the favoured approach.</li> </ul>
In Situ Burning	<ul style="list-style-type: none"> <li>Oil must be effectively boomed and concentrated (see Containment and Recovery above).</li> <li>Oil must contain volatiles (ie. unweathered) or have burn-assistance.</li> </ul>	<ul style="list-style-type: none"> <li>This option is unlikely to be feasible or environmentally acceptable in Bass Strait or in associated coastal waters.</li> </ul>

**FIGURE 12.0: OIL SPILL ACTION PLAN**



**FIGURE 13.0: OFFSHORE CLEANUP MATRIX**

TREATMENT OPTION	HARBOURS				NEARSHORE				OPEN SEA			
	1	2	3	4	1	2	3	4	1	2	3	4
<b>DAY ONE</b>												
1. Natural Processes	R	R			R	R	F		R	R	F	
2. Dispersant Application						C	C	C		C	C	C
3. In-Situ Burning					C	C	C	C	C	C	C	C
4. Booming	C	R	R	R	F	R	R	R				
5 Skimmers												
(a) Weir	F	R	R	R		R	R	R				
(b) Oleophilic		R	R	R		R	R	R				
(c) Vacuum	F	R	R	R		R	R	R				
6. Sorbent Recovery	F	R	R	R		R	R	R				
<b>DAYS TWO AND THREE</b>												
1. Natural Processes	R	R			R	R	F		R	R	F	
2. Dispersant Application						C	C	C		C	C	C
3. In-Situ Burning					C	C	C	C	C	C	C	C
4. Booming	C	R	R	R	F	R	R	R				
5 Skimmers												
(a) Weir	F	R	R	R		R	R	R				
(b) Oleophilic		R	R	R		R	R	R				
(c) Vacuum	F	R	R	R		R	R	R				
6. Sorbent Recovery	F	R	R	R		R	R	F				
<b>DAY FOUR</b>												
1. Natural Processes	R	R			R	R	F		R	R	F	
2. Dispersant Application												
3. In-Situ Burning												
4. Booming	C	R	R	R	F	R	R	R	F			
5 Skimmers												
(a) Weir	F	R	R	R		R	R	R				
(b) Oleophilic		R	R	R		R	R	R				
(c) Vacuum	F	R	R	R		R	R	R				
6. Sorbent Recovery	F	R	R	R		R	F	F				

OPTIONS	
R	RECOMMENDED - preferred option
F	FEASIBLE - logically possible but not preferred option
C	CONDITIONAL - possibly useful but may have adverse effects or logistical problems
	NOT RECOMMENDED - either not feasible or has significant adverse effects

OIL TYPE CODE	
1	Very Light Oils, Gasoline
2	Light Oils, Diesel, No.2 Fuel Oils, Light Crude
3	Medium oils, Most Crude Oils
4	Heavy Oils, Heavy Crudes, No.6 Fuel Oil, Bunker

## **001.2 Monitoring - Natural Weathering and Dispersion**

Under some conditions such as strong winds and high wave energy, oil slicks may dissipate (or break up) naturally. The probability and rate of this depends on the characteristics of the oil, but if it is likely to occur it may be advisable to allow spills to weather naturally. This is the preferred option for spills at sea which are not a threat to sensitive, shallow water or nearshore environments.

Light crude oils such as Group II ( 55° API) oils may lose 40% to 60% by volume through evaporation by the end of the first day after a spill in a tropical environment. Emulsification potential will affect the rate of natural losses. The heavier the oil the less rapid the evaporation rate eg. 40° API will lose 40% to 50% by volume through evaporation after one day, 17° API will lose only 15% to 25% by volume after one day. Oils with a pour point close to or higher than sea temperature will not lose much volume due to evaporation. They will still, however, eventually physically disperse and ultimately break down.

Allowing an oil spill to weather and to break up (naturally disperse) can be done when oil type, sea state and trajectory calculations indicate that the slick will not impact the coastline.

Such slicks should nevertheless be monitored so that trajectory and weathering calculations can be verified. The data should be continuously assessed in order to determine the most appropriate response actions. The monitoring should include:

- Aerial surveillance of the slick (see below)
- Calculation of slick behaviour using weathering predictions and spill trajectory modelling, either using manual methods or modelling by AMOG (see Section 040 - Trajectory Information)
- Sampling of the oil slick for analysis (see below).

### **Aerial Surveillance**

It is important that oil slicks are tracked in the field so that information can be obtained to facilitate modelling or manual calculation of spill trajectory and behaviour, and so that the accuracy of these calculations can be verified.

Ideally slick area, thickness and volume, and trajectory are tracked by aerial surveillance. Sampling of the oil slick is also desirable so that the weathering of the oil can be measured, or so that the source of the oil can be verified. The latter is dealt with in the following pages.

Either fixed wing aircraft or helicopters can be used for this task. If fixed wing aircraft are used, those with good downward visibility should be chosen. Generally, oil industry helicopters should be used but only if they are not needed for either the spraying of dispersants or associated "spotting" duties. (To source appropriate aircraft see Section 080. - Contact Directory.)

Aerial surveillance aircraft hold a "ladder search" across the wind to increase the chances of oil detection.

Altitude should be between 300m - 1000m (1000-3000 feet) for wide search, but should be dropped to 80-100m (~250 feet) to confirm sightings and to obtain details of the slick's appearance.

Pilots should notify the Materials and Logistics Coordinator or the Environment Adviser of spill location, time, and appearance. Methods for calculating spill volumes are provided in Sub-Section 001 of this Section, methods for calculating trajectories are given in Section 040 - Trajectory Information.

**Note:** It is important the pilot, or a passenger of the aircraft is trained in the description and interpretation of oil on the sea. For surveillance operation associated with dispersant spraying (ie. "spotting") it is important that a person trained in dispersant use be used.

The pilot, or other observer if present, should maintain a log of observations. The Oil Spill Tracking Log can be used for this (OSCP Form 004 in Section 010. of the Emergency Structure).

## **Oil Sampling and Handling Procedures**

It is important that samples are taken from oil slicks so that the source can be identified or weathering characteristics determined. It is important too that samples are taken so that possible contamination is minimised and that samples are clearly labelled. The following guidelines should be followed wherever practical.

- Oil samples from the sea surface should be taken using clean glass or stainless steel instruments. Spoons, spatulas or clean jars are suitable and funnels may be used for viscous oils. Clean wooden spatulas or spoons may be used; but should only be used once. Plastic instruments should be avoided.
- Oil samples should be placed in glass jars, or bottles if jars are not available. Tops should be screw-type and not soft plastic. If teflon or metal lids are not available lids should be isolated using tin or aluminium foil. Unless containers are supplied by a laboratory, it may be safer to seal lids with foil as a matter of routine.
- Sample sizes should be at least 100ml but preferably 1 litre of oil should be taken.
- Jars should be labelled with;
  - time and date
  - location
  - name of sample tanker (and witness)
  - brief description of sample (eg. 'brown emulsion from sea surface', or black tar from beach)
- A "Chain of Custody" label or "Continuity Tag" should be attached to the jar or bottle neck and signed by the sampler and countersigned by one other person (preferably the "witness" above)
- Lids should be sealed with two security labels; if available
- Samples should be chilled, or refrigerated, as soon as possible (4°C) for later transportation to a recognised laboratory
- The ERG Leader will nominate a laboratory should an analysis of samples be required.

Note: Samples may also be taken by Tasmanian or Victorian authorities or AMSA. These are likely to be analysed by the Australian Government Analytical Laboratories (AGAL), Perth.

### **001.3 Physical Breakup of Slicks**

Weathering and physical dispersion of crude oil may be facilitated by agitating the sea surface using support vessels' propeller wash. Use of this treatment method is dependent on personnel and vessel safety, and the potential for the oil to emulsify. This method should not be used on heavy crudes, bunker oils or waxy crudes.

### **001.4 Chemical Dispersants**

Any spills that cannot be contained and are moving toward sensitive areas may have to be treated with dispersant. For further information on the use of chemical dispersants, procedures, and characteristics, refer to Section 050 – Dispersant Information.

**Dispersants will not be applied without the relevant prior approvals from the DELM or TMR, unless there is immediate danger to human life, and this danger can be reduced by spraying dispersants.**

**Note : Due consideration should be given to safety at all times when handling or dealing with chemical dispersants. Personnel must be familiar with instructions on the safe use of dispersants.**

Chemical dispersants can be applied by either vessels or aircraft. In the latter case either fixed wing aircraft or helicopters can be used. Dispersants constitute one of the most effective ways of treating large oil slicks and can be applied quickly after a spill has occurred. They have the added advantage that, if effective, they can restrict the movement of oil towards shorelines.

### **001.5 Containment and Recovery**

Mechanical containment and recovery operations are only effective in good weather conditions with winds of less than 15 knots, seas under 1.5 metres and in currents of less than 0.8 knots.

Rapid deployment is also essential so that containment can occur before the slick spreads. Ready availability of storage vessels or floating storage containers, with transport vessels is also important, so that 'downtime' due to lack of storage can be minimised. Nearby or shore based offloading facilities must also be rapidly commissioned. Inventories of containment equipment available through the AMOSPlan, AMOSC, and National Plan are included in Section 070. - Oil Spill Response Equipment, of this plan.

### 001.6 In Situ Burning

In Situ burning is a spill treatment method which is sometimes considered in open seas, depending on weather and ocean conditions. Particular attention to the safety of personnel, facilities, shipping and aircraft is required through specific well-defined operational procedures.

However, oil must be effectively contained and concentrated in booms before an effective burn can be established. This procedure is therefore subject to the same environmental constraints as containment and recovery on the previous page.

Concerns about air pollution and burn residues, the sea states in Bass Strait and the general unavailability of appropriate equipment make this an unlikely option.

### 001.7 Boom Selection Matrix

The matrix in Figure 14.0: will help determine the most suitable Boom for the given spill conditions.

To use the matrix correctly, follow these steps:

1. Identify the most probable environmental conditions in which the boom will be used. Note those types of boom with an acceptance rating of 1 or 2.
2. Identify the most needed performance characteristics for the intended application. From the booms chosen above, select the ones that have an acceptable rating (1 or 2) in the most important characteristics. Identify the most desirable convenience features.
3. With booms from step 1 and 2 above, select the boom with the best rating in the convenience features of interest.

**FIGURE 14.0: BOOM SELECTION MATRIX**

Legend 1 - Good 2 - Fair 3 - Poor		Type of Boom				
		Internal Foam Flotation	Self Inflatable	Pressure Inflatable	External Tension Member	Fence
Environmental Considerations	Offshore Hs>1m: V<1kt	2	2	1	1	3
	Harbour Hs<1m: V<.5kt	1	1	1	2	2
	Calm Water Hs<.3m V<.5kt	1	1	1	2	1
	High Currents V>1kt	2*	3	2	1	3
	Shallow Water Depth<.3m	1	2	2	3	3
Performance Characteristics	Operation in Debris	1	3	2	3	2
	Excess Buoyancy	2	1	1	2	3
	Wave Response	2	2	1	1	3
	Strength	2	3	1	1	1
Convenience Characteristics	Ease of Handling	2	1	2	3	2
	Ease of Cleaning	1	1	1	3	1
	Compactability	3	1	1	2	3
	Cost/metre 1 - Low 2 - Medium 3 - High	1	3	2	3	2

Notes:

- Hs = Significant Wave Height
- V = Velocity of Surface Current

Not *all* the booms of a particular generic type have the rating shown in the matrix, but at least one or more commercially available booms of the generic type in question have the rating shown.

\* Specially designed high-current models may be available (river boom).

## **001.8 Skimmer Selection Matrix**

To select a suitable Skimmer use the Skimmer Selection Matrix in Figure 15.0: and follow these steps:

1. Identify the environment which the skimmer will have to operate in. Usually (but not always) these environments are mutually exclusive. That is, only one environment will apply. Select those skimmers that will perform well in the given environment (rating of 1).
2. Identify the type of oil that the skimmer will have to recover. (In this case the oil viscosity designations are mutually exclusive.) From the skimmers chosen earlier, select the ones that have a rating of 1 for the designated viscosity.
3. From the skimmer characteristics listed, prioritise the ones that are most important. From the skimmers which have "survived" steps 1 and 2, choose those that have the highest ranking's in the skimmer characteristics identified as most important.

Having identified one or more suitable skimmers, check with the skimmer manufacturer to obtain specifications on the candidate skimmers. Alternatively, check publications such as the *World Catalogue of Oil Spill Response Products*. Examining the pertinent specifications should indicate the most suitable skimmer.

**FIGURE 15.0: SKIMMER SELECTION MATRIX**

			Generic Type of Skimmer																	
			Oleophilic Surfaces			Weir				Vacuum Units	Hydrodynamic Devices			Other Methods						
			Brush	Disc	Rope	Rope/Belt (Catamaran Mounted)	Sorbent Belt (Downward Moving)	Sorbent Belt (Upward Moving)	Advancing	Combination Weir / Boom	Saucer	Screw / Auger	Self Leveling	Vortex	Vacuum System with Weir Skimmer Head	Hydrocyclone	Submersion Plane	Water Jet	Combination Trawl / Boom	Paddle Belt
<b>LEGEND</b>																				
			1=Good 2=Fair 3=Poor																	
<b>Evaluation Criteria</b>	<b>Operating Environment</b>	Open Seas Hs > 1 mV < 1 kt	2	2	1	1	1	1	2	2	3	3	3	2	3	3	3	3	1	3
		Harbours and Bays Hs < 1 mV < 0.7 kt	1	1	1	1	1	1	1	1	2	3	3	1	2	3	2	2	1	3
		Protected Inshore Hs < 0.3 mV < 0.5 kt	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		High Currents < 2 kt	2	3	2	1	1	2	1	2	3	2	3	2	3	2	2	2	2	2
		Shallow Water (< 0.3 m)	2	2	1	3	3	3	3	3	1	3	2	2	1	3	2	3	2	1
		Debris (including ice)	1	3	1	1	2	1	2	3	3	2	3	3	3	3	3	2	3	2
	<b>Oil Viscosity</b>	High Viscosity (> 1000 cSt)	1	2	2	2	2	1	2	2	2	1	3	2	2	3	2	1	1	1
		Medium Viscosity (100-1000 cSt)	1	1	1	1	1	1	1	1	1	1	1	1	1	3	1	1	2	1
		Low Viscosity (< 100 cSt)	1	2	2	2	1	3	1	1	1	2	1	1	1	3	1	1	2	2
	<b>Skimmer Characteristics</b>	O/W Pickup Ratio*	1	2	1	1	2	2	2	2	3	2	3	2	3	3	2	2	1	2
		Pickup Rate	2	2	3	2	2	2	2	1	2	3	3	2	3	2	2	3	2	2
		Ease of Deployment	1	1	2	1	1	1	2	3	1	2	1	2	1	2	3	2	3	2
	Available as Vessel of Opportunity Skimming System (VOSS)			X	X	X		X	X	X	X	X	X	X					X	X
	Available as an Advancing Skimmer			X			X	X	X	X	X					X	X		X	X
	Available with Storage			X	X		X	X	X	X						X	X	X		X

\* O/W Pickup Ratio = % Oil in Skimmed Products

## **002. Onshore Oil Spill Response Methods**

On shore clean up measures include:

- raking of beaches to promote weathering and evaporation of oil;
- recovery using mechanical means;
- recovery using absorbents;
- application of National Plan approved dispersants.

Most of the islands in the immediate vicinity of the Permit Areas in Bass Strait have shorelines consisting of sandy beaches and rocky outcrops. Experience with light crudes in these environments indicates that beaches are stained a light brown colour for only a short time as oil deposits are weathered rapidly by tidal and wave action.

Manual clean-up (eg. raking, mechanical recovery of contaminated sand and application of absorbents) will be the appropriate procedure to implement for most environmentally fragile beaches. Dispersant use onshore is an undesirable option and requires prior approval from the Environment Protection Authority (EPA) and the Tasmanian Department of Environment and Land Management, prior to implementation.

**Clean up crews that are sent to the islands should be aware of the large numbers of seabirds that nest on the ground (eg. wedge-tailed shearwaters) and the turtle nesting sites in soft sands behind the high tide line of the beaches.**

It is important that cleanup logs, Contractor reports and shoreline assessment forms are completed in a shoreline response. These forms are included in the Emergency Structure, Section 020.

### **002.1 Shoreline Types**

Figure 16.0: presents a summary of the fate of oil on regional shoreline types and appropriate clean up strategies which may be applicable. Figure 17.0: provides a summary of general shoreline oil spill cleanup options for light to medium crude oils.. The three main shoreline types in the region of the permit areas are discussed further in the following pages.

## **Sandy Beaches**

Oil that makes landfall on sandy beaches may be left to weather naturally if it is not a sea turtle or seabird nesting area. For these shorelines, care must be taken not to disturb the nest sites if mechanical clean up is initiated. If the oil must be removed and it has not permeated through the sand, it can be removed manually by scraping off the top layer of sand which can be carried away for disposal. Care should be taken not to remove excessive amounts of sand.

Light crudes may, however, sink rapidly into sandy beaches and will therefore be irretrievable. The oil held within the beach sand may, on an ebb tide, be released from the falling water table onto the surface of the beach face. The oil should be visible as a sheen on the wet sand and have a detectable odour. It should be possible to increase the weathering rate of the oil by raking the sands to enhance evaporative processes.

## **Rocky Shores / Platforms**

Oil coating rocky shores should not normally require treatment since it will eventually be removed by wave action and natural weathering. Residual oil will collect in rocky pools and can be removed by pumping or application of absorbents, but should preferably be allowed to weather naturally.

## **Mangrove Habitats**

The shoreline type having the highest sensitivity to oil consists of muddy sediments typically associated with mangrove-lined shorelines. Mangroves grow in low energy anaerobic substrates and oil tends to be very persistent in these sediments. Reworking of the sediments during storms or via bioturbation can spread oil down through the substratum, substantially retarding the weathering processes.

Oil cannot be removed from mangrove sediments manually since this usually results in greater damage to the mangroves than allowing the oil to weather naturally. Therefore, all attempts should be made to prevent oil from entering mangrove environments. The application of dispersants to the spill some time before it reaches the mangroves is recommended.

If an oil spill cannot be prevented from impacting a mangrove stand, the oil should be left to weather naturally. Under no circumstances should dispersants be applied to oil stranded in the mangroves.

**FIGURE 16.0: FATE OF OIL ON REGIONAL SHORELINE TYPES  
AND APPROPRIATE CLEAN UP STRATEGIES**

SHORELINE TYPE	COMMENTS	METHODS OF, AND SUSCEPTIBILITY TO, CLEAN UP
<b>INTERTIDAL LIMESTONE PAVEMENT WITH OR WITHOUT SAND VENEER</b>	Landed oil should weather rapidly, may collect in pools and be redistributed on rising tide.	Natural weathering will remove oil with time. Dispersants are not recommended as they will cause mortality of shoreline plants and animals.
<b>FINE-GRAINED SAND BEACHES</b>	Light grade oils penetrate deeply. Asphalt-like pavement may develop, and persist for many years on a low energy beach. On a high energy beach oil may be weathered and removed rapidly, or buried and removed more slowly.	Depending on priority rating, beached oil may be left to weather naturally, or hand or mechanical removal of oily sand may be necessary.
<b>COARSE-GRAINED SAND BEACHES</b>	Light grade oils can sink in rapidly and deeply. Under moderate to high wave energy, oil can be removed rapidly. Buried oil may persist in low energy beaches.	Depending on priority rating, beached oil may be left to weather naturally, or hand or mechanical removal of oily sand may be necessary.
<b>MIXED SAND AND GRAVEL</b>	Oil may undergo rapid penetration and burial. Under moderate to low energy conditions buried oil may persist for years. Under high energy conditions, oil can be removed rapidly.	Depending on priority rating, beached oil may be left to weather naturally, or hand or mechanical removal of oily sand may be necessary.
<b>EXPOSED ROCKY HEADLANDS AND ERODING WAVE-CUT PLATFORMS</b>	Wave reflection will keep some oil offshore. Landed oil weathers rapidly.	No clean up necessary.
<b>SHELTERED ROCKY COASTS AND SAND BEACHES</b>	Areas of low wave energy. Oil may persist.	Allow to weather naturally. May be protected by dykes if mangroves are present. Booms should be used to keep oil offshore.
<b>MANGROVES</b>	Extremely low energy environment. In muddy sediments little penetration of the substrate occurs. Oil is not rapidly removed and is very persistent. In sediment with a large sand component, oil may penetrate the sediments and persist for years.	Diversion of oil offshore with booms, etc. a high priority. Extremely sensitive areas. Preferable to disperse oil in deep water prior to landfall. Mechanical removal not to be attempted.

**FIGURE 17.0: SHORELINE OIL SPILL CLEANUP MATRIX  
LIGHT TO MEDIUM CRUDE OILS**

- About 1/3 will evaporate within 24 hours
- Maximum water-soluble fraction is 10 - 100 ppm
- Oil contamination of intertidal areas can be severe /longterm
- Impact to birds can be severe
- Chemical dispersion is an option within 1 - 2 days
- Cleanup most effective if conducted quickly

COUNTERMEASURE	SHORELINE TYPE CODES									
	A	B	C	D	E	F	G	H	I	J
1. Natural Processes										
2. Manual Removal	F	F	R	R	R	R	R	R	R	C
3. Passive Collection (Sorbents)	F	F	R	R	R	R	R	R	R	R
4. Debris Removal	F	F	R	R	R	R	R	R	R	C
5. Trenching			F	F	F					
6. Sediment Removal			F	F	F			F		
7. Sediment Reworking										
8. Sand Buring/defence measures			C							
9. Ambient Water Washing (Deluge)		F	F	F	F	R				
10. (a) Ambient Water Washing (low pressure)		F			F	F		F		
(b) Ambient Water Washing (high pressure)		F			F	F		F		
11. (a) Heated Water Washing (low pressure)		F			F	F		F		
(b) Heated Water Washing (high pressure)		F			F	F		F		
12. Slurry Sand Blasting								C		
13. Vacuum Recovery		F	R	R	R	R	R	R	R	C
14. Excavation, Cleaning & Replacement		F	F	F	F	F		F		
15. Cutting Vegetation *			C	C	C	C	C	R	C	C
16. Chemical Treatment										
(a) Oil Stabilisation with Elastomers										
(b) Protection of Beaches										
(c) Cleaning of Beaches										
17. Nutrient Enhancement *			C	C	C				C	C
18. Microbial Addition *										

SHORELINE TYPE CODES	
A.	Exposed rocky shores and seacliffs
B.	Exposed wave-cut platforms
C.	Fine-grained sand beaches
D.	Coarse-grained sand beaches (including gravel).
E.	Gravel and mixed sand/coral beaches.
F.	Boulder beaches and riprap structures.
G.	Exposed tidal/reef flats
H.	Sheltered rocky shores/harbour structures
I.	Sheltered tidal flats
J.	Wetlands, marshes, mangroves

KEY	ACTION
*	Will require State approval
R	Recommended - preferred options
F	Feasible-logistically possible; not preferred option
C	Conditional-possibly useful but may have adverse effects or logistical problems
	Not recommended-either not feasible or has significant adverse effects

### 003. Behaviour of Known Crudes

#### 003.1 Overview

Oil spilled at sea undergoes a number of physical and chemical changes, some of which lead to its disappearance from the sea surface, whilst others cause it to persist. Although spilt oil is eventually assimilated by the marine environment, the time involved depends upon such factors as the amount of oil spilled, its initial physical and chemical characteristics, the prevailing climatic and sea conditions and whether the oil remains at sea or is washed ashore.

When crude oils are spilt at sea, evaporation and emulsification processes change the physical properties of the oil. These changes are important as the physical properties determine the persistence of the oil. Some oils, particularly those which do not form stable water-in-oil emulsions, are relatively non-persistent and in the event of a spillage of such an oil it is realistic to expect the natural processes of wind and wave action to disperse the oil within a short period of time. Other oils form viscous emulsions which can be extremely persistent.

Typical properties of general oil product groups are shown in Figure 198.0. Predicted oil weathering rates for a range of oil product groups in these environments are shown in Figure 19.0.

#### 003.2 Behaviour of Oil Likely to be Encountered

The properties of any oil that could be found at Barramundi 1 are not presently known. However, it is possible that the properties of any oil may be similar to those, which produced a waxy crude with an API gravity of 25 - 30 ° and a pour point of 33 °C. An initial pour point of nearer 15 °C would increase rapidly as the volatile components evaporate.

#### 03.3 Information on Comparative Properties of Likely Oil

##### Evaporation

Gippsland Mix contains relatively high levels of volatiles, which are expected to evaporate quickly leaving a weathered viscous waxy crude. Approximately 40% of the volume of any oils spilled would evaporate within the first 24 hours.

##### Emulsification

Gippsland Mix can be expected to form viscous water-in-oil emulsions (mousse) with between 50% and 100% water content. In typical Bass Strait weather conditions, emulsions are likely to form within 6 hours of release of any crude oil.

##### Dispersion

Dispersion of any spilled oil occurs as a result of wind and wave action working on the oil to produce particles small enough to be come suspended in the water column. Oils that form stable water in oil emulsions tend to disperse very slowly.

Based on the assumed characteristics of the oil, the overall effect is likely to be;

- emulsification within the first few hours;
- loss of the lighter fractions being offset in volume by the emulsification process;
- gradual dispersion depending on wind and wave energy; and
- effectiveness of dispersant application will be highest during the first six hours of a spill.

**FIGURE 18.0: TYPICAL PROPERTIES OF GIPPSLAND MIX OIL AS TAKEN FROM THE MACKERAL PLATFORM**

Property	Gippsland Mix
API Gravity (%)	46.7%
Bubble Point (PSI A)	PSI A 320
Pour Point (° F)	69° F
Wax Content (wgt %)	23%
Oil Viscosity (CP)	CP 0.37
<b>Mackeral oil type is Paraffinic</b>	
Water Salinity (kppm)	31 to 35 kppm
Drive Mechanism	Water drive
Gas Cap	No
Oil Formation Volume Factor	RV/STB 1.23
Oil Gas Ratio	SCF/STV 190

**FIGURE 19.0: PREDICTED OIL WEATHERING RATES**

Type of Oil	Percent Lost by Weathering at End of Day				
	1	2	3	4	5
<b>Summer</b>					
Very Light Crude >45° API	60	65	65	70	70
Light Crude 35-45° API	50	60	60	65	65
Medium Crude 17.5-35° API	45	55	60	60	65
Heavy Crude <17.5° API	25	35	40	45	45
<b>Tropical Winter</b>					
Very Light Crude >45° API	45	55	60	60	65
Light Crude 35-45° API	40	50	55	60	60
Medium Crude 17.5-35° API	40	50	50	55	55
Heavy Crude <17.5° API	15	25	35	35	40

Source: B. Whitfield, BHPP, September 1993

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General Description

## 001. General Description

Oil spill response equipment and support personnel is available to *GLOBEX Far East* through the following sources.

- AMOSPlan
- National Plan
- AMOSC (Australia)
- EARL (Singapore)
- OSRL (Southampton, UK)

The time required to retrieve the equipment from its storage location needs to be considered. Estimates are provided in the Table below:

### 001.1 Equipment Transport Times

EQUIPMENT LOCATION	ESTIMATE TRANSPORT TIME TO PERMIT AREA	
	SEA (hrs)	AIR (hrs)
<i>DEVONPORT</i>	<i>16?</i>	<i>1?</i>
<i>BURNIE</i>	<i>20?</i>	<i>2?</i>
<i>GEELONG</i>	<i>12?</i>	<i>1?</i>
<i>MELBOURNE</i>	<i>15?</i>	<i>1?</i>

The equipment available includes booms, skimmers, vacuum units, storage systems, aerial spray systems for both fixed-wing aircraft and helicopters, large quantities of dispersant, and clean-up equipment. A brief description follows:

## 001.2 Booms

- **Ro-Boom** - a multi-purpose, heavy duty neoprene fabric, weather resistant and segmented boom. Once deployed it can be moored and left unattended. It is widely used because of its simplicity and low maintenance. Very heavy, requires skill to deploy.
- **Ro-Skim Weir Boom** - heavy duty offshore weir skimmer system used with the Ro-Boom.
- **Zoom Boom** - sections of vinyl coated nylon fabric. A medium duty rapid deployment, self inflating boom for inshore (harbour) waters.
- **Austpol D2** - inshore / harbour solid buoyancy boom.
- **Gamlen Trojan Boom** - a solid buoyancy boom for use in harbours.
- **Hi Sprint Boom** - a smooth profile sectional neoprene boom, easily handled, and quickly deployed. Suitable for near and offshore waters.
- **Jackson Net** - a netting type boom for extremely viscous / solid type oils.
- **Troil Boom** - a solid buoyancy boom of various sizes that is robust, but difficult to handle due to its weight and rope bridle tension member.
- **Seasentinel Boom** - robust, sectional, air-inflated, polyurethane booms, for use in inshore waters.
- **Shore Guardian Boom** - sectional, polyurethane boom with water ballast chambers. Designed to seal the shore/beach end of a containment system, or to be used in shallow waters/salt marshes, etc.

## 001.3 Skimmers

- **GT185 Skimmer** - weir skimmer applicable for light to heavy oils. Pump capacity of 43m<sup>3</sup>/hr. Suitable in calm waters.
- **Desmi Skimmer** - a light to heavy oil weir skimmer which recovers oil at 40 to 70m<sup>3</sup> an hour depending on viscosity, oil layer thickness and sea conditions. Suitable in calm waters.
- **Komara Disc Skimmer** - useful for light to medium crudes and some light fuel oils. This apparatus has plastic discs driven hydraulically from a remote diesel hydraulic power pack. Oil collected in the sump is discharged by hose to storage. It is useful in harbours and calm water and provides a high ratio of oil to water recovery. 12 and 30 tonne per hour capacities available.
- **Sea Skimmer 50** - a high performance (up to 50 tonnes per hour) disc skimmer with onboard pump. Used in open seas, harbours and bays.

## 001.4 Oil Recovery Systems

- **Rope Mop** - A high oil to water ratio recovery device used for collecting a wide range of oils where access might be a problem for conventional skimmers. The Mop is 30m to 90m long and made of polypropylene fibres interwoven through a central rope core. Gathered oil is squeezed out through a mangle into a sump.
- **Egmopol** - a self propelled heavy oil recovery vessel with 15 cubic meters storage capacity. Suitable for calm (inshore) water only.
- **Ro-Vac Vacuum System** - a mobile vacuum system fitted with a pressure washer, for use on all oils. Useful on beaches and/or rocky shores.

**General Description****001.5 Spray Systems**

- **Simplex 6810 Helicopter Bucket** - an aerial dispersant bucket spray system suitable for spot slick treatment offshore. It uses the latest generation of dispersant suitable for airborne techniques. (See also Appendix C - Dispersant Information)
- **Vikospray II** - a boat mounted dispersant spraying system, suitable for spraying dispersant either diluted or neat.
- **Warren Springs** - original boat mounted spray system that uses breaker boards to speed up dispersion.

**001.6 Temporary Storage**

- **Vikotank** - a 13 000 litre capacity self supporting, polyester tank, suitable for use on land only.
- **Fastank** - a 9000 litre capacity aluminium framed, polyester, temporary tank, suitable for use on land only.
- **Pillowtanks** - various capacity rubberised, polyester, temporary storage tanks, which can float and can be used either on or offshore.

## **002. AMOSPlan Equipment**

*GLOBEX Far East* is an Associate Member of the Australian Marine Oil Spill Centre (AMOSC) and as such has access to the Australian Industry Cooperative Oil Spill Response arrangements. The AMOSPlan equipment and National Plan equipment is held as part of the contingency plans of the Australian Oil Industry and the Australian government. This equipment is identified in MOSES (Marine Oil Spill Equipment System). Details of location, type, quantity and accessibility of equipment in the area are provided in the MOSES database extract reproduced in the following pages. Normal requests for assistance should be directed at AMOSC in Geelong to coordinate but this equipment can also be accessed through the contacts shown or AMSA\* - Marine Environment Protection, Canberra. Skilled oil spill response personnel can also be accessed through this arrangement.

### **002.1 AMOSPlan**

The northern sector of Tasmania and the Southern sector of Victoria are covered by the AMOSPlan (Old MOSAP). AMOSPlan facilities in Tasmania and Victoria mainly consist of equipment suitable for the containment and recovery of land, shoreline and harbour spills. Except for dispersant spray systems, they are as such, not suitable for handling offshore spills until they are close to landfall. Contact details of relevant personnel through whom equipment can be made available are in the following MOSES listing.

### **002.2 National Plan Equipment**

The purpose of the National Plan is to maintain a national integrated Government/industry organisational framework capable of an effective response to oil pollution incidents in the marine environment, and to manage associated funding, equipment, and training programs to support National Plan activities.

As part of the National Plan, stockpile equipment stocks including spraying equipment, oil spill dispersants, control and recovery devices, and ship to ship transfer equipment are held at strategic ports around the coastline of Tasmania and Victoria. (Equipment is either owned by Port Authorities or on permanent loan from the National Plan).

***Note: Equipment and personnel previously listed in MOSAP (Marine Oil Spills Action Plan) and SPEAR (Selected Pollution Equipment Availability Register) lists have now been combined into the new MOSES database.***

Marine Oil Spill Equipment System (MOSES)

MOSES ID	DESCRIPTION	QTY	STATE	LOCATION	OWNER	CONTACT	PHONE	LEVY		NON LEVY	
								IN USE	STANDBY	IN USE	STANDBY
PFA10622	RADIO - TRANSCEIVER VHF - ICOM ICGM1500		ACT	CANBERRA	AMSA	Shayne Wilde	02 62795873	25.00	8.00	30.00	9.00
PFA10623	RADIO - TRANSCEIVER VHF - ICOM ICGM1500		ACT	CANBERRA	AMSA	Shayne Wilde	02 62795873	25.00	8.00	30.00	9.00
PFA10625	RADIO - TRANSCEIVER UHF - ICM10A -HEADSET WITH VOX		ACT	CANBERRA	AMSA	Shayne Wilde	02 62795873	25.00	8.00	30.00	9.00
PFA10624	RADIO - TRANSCEIVER UHF - ICM10A -HEADSET WITH VOX		ACT	CANBERRA	AMSA	Shayne Wilde	02 62795873	25.00	8.00	30.00	9.00
PFA10628	RADIO - TRANSCEIVER UHF - ICM10A -HEADSET WITH VOX		ACT	CANBERRA	AMSA	Shayne Wilde	02 62795873	25.00	8.00	30.00	9.00
PDM10722	TRACKER - SATELLITE TYPE WITH FLASHING LIGHT		ACT	CANBERRA	AMSA	Shayne Wilde	02 62795873				
PFA10939	GPS RECEIVER - ENSIGN XL		ACT	CANBERRA	AMSA	Shayne Wilde	02 62795873				
PDM10975	TRACKER - SATELLITE TYPE WITH FLASHING LIGHT		ACT	CANBERRA	AMSA	Shayne Wilde	02 62795873				
PFA-6585	RADIO - TRANSCEIVER - SATCOM - ATLAS SP1600		ACT	CANBERRA	AMSA	Shayne Wilde	02 62795873	300.00	90.00	345.00	104.00
PAG10977	INSTRUMENT - GAS DETECTOR - DRAGON		ACT	CANBERRA	AMSA	Shayne Wilde	02 62795873				
PEA11337	GENERATOR SET - PORTABLE 0.6KVA		ACT	CANBERRA	AMSA	Shayne Wilde	02 62795873				
UNK-0010	RADIO - TRANSCEIVER VHF - ICOM ICA20		ACT	CANBERRA	AMSA	Shayne Wilde	02 62795873				
UNK-0009	RADIO - TRANSCEIVER VHF - ICOM ICA20		ACT	CANBERRA	AMSA	Shayne Wilde	02 62795873				
PFA10940	GPS RECEIVER - ENSIGN XL		ACT	CANBERRA	AMSA	Shayne Wilde	02 62795873				
PFA10938	GPS RECEIVER - TRANSPAK II		ACT	CANBERRA	AMSA	Shayne Wilde	02 62795873				
PFA10629	RADIO - TRANSCEIVER UHF - ICM10A -HEADSET WITH VOX		ACT	CANBERRA	AMSA	Shayne Wilde	02 62795873	25.00	8.00	30.00	9.00
PFA10627	RADIO - TRANSCEIVER UHF - ICM10A -HEADSET WITH VOX		ACT	CANBERRA	AMSA	Shayne Wilde	02 62795873	25.00	8.00	30.00	9.00
PFA10626	RADIO - TRANSCEIVER UHF - ICM10A -HEADSET WITH VOX		ACT	CANBERRA	AMSA	Shayne Wilde	02 62795873	25.00	8.00	30.00	9.00

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Marine Oil Spill Equipment System (MOSES)

MOSES ID	DESCRIPTION	QTY	STATE	LOCATION	OWNER	CONTACT	PHONE	LEVY		NON LEVY	
								IN USE	STANDBY	IN USE	STANDBY
MOD-A321	Dispersant - Shell VDC	2 t	NSW	Newcastle - Ampol	Ampol	John Murray	02 49694925				
PAL-A014	Spray Unit Vessel Mounted Vikospray		NSW	Newcastle - Ampol	Ampol	John Murray	02 49694925				
VCA-A251	Trailer - Oil Spill		NSW	Newcastle - Ampol	Ampol	John Murray	02 49694925				
MOD-A315	Dispersant - BP 1100X	1.3 t	NSW	Banksmeadow - Ampol	Ampol	Fred Youngques	02 96681313				
WCE-A302	Barge - Utility - 9.5m		NSW	Kurnell - Ampol	Ampol	Fred Youngques	02 96681313				
WCE-A303	Boat - Seaal 4.3m		NSW	Kurnell - Ampol	Ampol	Fred Youngques	02 96681313				
WCA-A283	Boat - Mongrel 5m		NSW	Kurnell - Ampol	Ampol	Fred Youngques	02 96681313				
WCA-A279	Boat - Quintrex with disp. storage & spray equip		NSW	Kurnell - Ampol	Ampol	Fred Youngques	02 96681313				
WCA-A282	Boat - River Truck with spray equipment		NSW	Kurnell - Ampol	Ampol	Fred Youngques	02 96681313				
PDI-A200	Boom Beach Austpol Beach Boom	60 m	NSW	Kurnell - Ampol	Ampol	Fred Youngques	02 96681313				
PDI-A199	Boom Beach Beach Guardian	200 m	NSW	Kurnell - Ampol	Ampol	Fred Youngques	02 96681313				
PDI-A201	Boom Beach Beach Guardian	200 m	NSW	Kurnell - Ampol	Ampol	Fred Youngques	02 96681313				
PDF-A145	Boom Self Buoyant Slickbar Mk10	400 m	NSW	Kurnell - Ampol	Ampol	Fred Youngques	02 96681313				
PDF-A146	Boom Self Buoyant Trojan GP	500 m	NSW	Kurnell - Ampol	Ampol	Fred Youngques	02 96681313				
MOD-A316	Dispersant - Corexit 8667	1.2 t	NSW	Kurnell - Ampol	Ampol	Fred Youngques	02 96681313				
MOD-A317	Dispersant - Corexit 9527	2 t	NSW	Kurnell - Ampol	Ampol	Fred Youngques	02 96681313				
WCF-A309	Oil Recovery Unit Watermaster		NSW	Kurnell - Ampol	Ampol	Fred Youngques	02 96681313				
PDE-A143	Skimmer - Lamor - Oil Pack Skimming System		NSW	Kurnell - Ampol	Ampol	Fred Youngques	02 96681313				
PDC-A119	Skimmer - Disc Komara 12K MK1		NSW	Kurnell - Ampol	Ampol	Fred Youngques	02 96681313				
PDA-A087	Skimmer - Weir Manta Ray Slickskim		NSW	Kurnell - Ampol	Ampol	Fred Youngques	02 96681313				
PBD-A046	Tank - Oil Fastank 2000 lt		NSW	Kurnell - Ampol	Ampol	Fred Youngques	02 96681313				
PBD-A045	Tank - Oil Fastank 2000 lt		NSW	Kurnell - Ampol	Ampol	Fred Youngques	02 96681313				
VCA-A246	Trailer - Oil Spill		NSW	Kurnell - Ampol	Ampol	Fred Youngques	02 96681313				
VCA-A245	Trailer - Oil Spill		NSW	Kurnell - Ampol	Ampol	Fred Youngques	02 96681313				
PAL-5215	PUMP - DISPERSANT SYSTEM - WSL		NSW	SYDNEY	AMSA	Port Ops Comm	02 92964000	100.00	30.00	115.00	35.00
PAL-5213	PUMP - DISPERSANT SYSTEM - WSL		NSW	SYDNEY	AMSA	Port Ops Comm	02 92964000	100.00	30.00	115.00	35.00
PAL-5212	PUMP - DISPERSANT SYSTEM - WSL		NSW	SYDNEY	AMSA	Port Ops Comm	02 92964000	100.00	30.00	115.00	35.00
PDK-5220	SPRAY BUCKET - DISPERSANT HELICOPTER - SIMPLEX		NSW	SYDNEY	AMSA	Port Ops Comm	02 92964000				
PDK-5219	SPRAY BUCKET - DISPERSANT HELICOPTER - SIMPLEX		NSW	SYDNEY	AMSA	Port Ops Comm	02 92964000				
PBD-5211	TANK - RECOVERED OIL COLLAPSIBLE TRANSPAC		NSW	SYDNEY	AMSA	Port Ops Comm	02 92964000	150.00	45.00	175.00	53.00
PBD-5210	TANK - RECOVERED OIL COLLAPSIBLE TRANSPAC		NSW	SYDNEY	AMSA	Port Ops Comm	02 92964000	150.00	45.00	175.00	53.00
PBD-5209	TANK - RECOVERED OIL COLLAPSIBLE TRANSPAC		NSW	SYDNEY	AMSA	Port Ops Comm	02 92964000	150.00	45.00	175.00	53.00
PBD-5208	TANK - RECOVERED OIL COLLAPSIBLE TRANSPAC		NSW	SYDNEY	AMSA	Port Ops Comm	02 92964000	150.00	45.00	175.00	53.00
PBD-5207	TANK - RECOVERED OIL COLLAPSIBLE TRANSPAC		NSW	SYDNEY	AMSA	Port Ops Comm	02 92964000	150.00	45.00	175.00	53.00
PBD-5206	TANK - RECOVERED OIL COLLAPSIBLE TRANSPAC		NSW	SYDNEY	AMSA	Port Ops Comm	02 92964000	150.00	45.00	175.00	53.00
VCA-5218	TRAILER - BOX TANDEM AXLE		NSW	SYDNEY	AMSA	Port Ops Comm	02 92964000	100.00	30.00	115.00	35.00
PDO11647	ANCHOR KIT - SMALL 15KG SET OF 5		NSW	EDEN	AMSA	Capt Max Saunc	02 64961719				
PDA11040	SKIMMER - WEIR - FOILEX MINI		NSW	EDEN	AMSA	Capt Max Saunc	02 64961719	200.00	60.00	230.00	69.00
PBD11974	TANK - RECOVERED OIL FLEXIDAM 10000 LT		NSW	EDEN	AMSA	Capt Max Saunc	02 64961719	100.00	30.00	115.00	35.00
PBD11973	TANK - RECOVERED OIL FLEXIDAM 10000 LT		NSW	EDEN	AMSA	Capt Max Saunc	02 64961719	100.00	30.00	115.00	35.00

## Marine Oil Spill Equipment System (MOSES)

MOSES ID	DESCRIPTION	QTY	STATE	LOCATION	OWNER	CONTACT	PHONE	LEVY		NON LEVY	
								IN USE	STANDBY	IN USE	STANDBY
PDF-4904	BOOM - SELF BUOYANT - AUST-POL D2	500 m	NSW	EDEN	AMSA	Capt Max Saunc	02 64961719	45.00	14.00	55.00	17.00
PDI7660C	BOOM - BEACH - STRUCTURFLEX LAND SEA	500m	NSW	SYDNEY	AMSA	Port Ops Comm	02 92964000				
UNK-0026	BOOM - SELF BUOYANT - PACIFIC GP 500	1300m	NSW	SYDNEY	AMSA	Port Ops Comm	02 92964000				
PDI7661D	BOOM - SELF BUOYANT SLICKBAR MK32E	1500 n	NSW	SYDNEY	AMSA	Port Ops Comm	02 92964000	75.00	23.00	90.00	27.00
PDJ-4331	BOOM - TOWED - SELF INFLATING - EXPANDI		NSW	SYDNEY	AMSA	Port Ops Comm	02 92964000				
BP7660C	BOOM BALLAST PUMP - BEACH - STRUCTURFLEX LAND SEA		NSW	SYDNEY	AMSA	Port Ops Comm	02 92964000				
IP7660C	BOOM INFLATION PUMP BEACH - STRUCTURFLEX LAND SEA		NSW	SYDNEY	AMSA	Port Ops Comm	02 92964000				
UNK-0015	MOTOR - OUTBOARD - EVINRUDE 70HP		NSW	SYDNEY	AMSA	Port Ops Comm	02 92964000				
UNK-0014	MOTOR - OUTBOARD - EVINRUDE 70HP		NSW	SYDNEY	AMSA	Port Ops Comm	02 92964000				
WCF10489	VESSEL - OIL RECOVERY - MARCO H28		NSW	SYDNEY	AMSA	Port Ops Comm	02 92964000	2750.00	825.00	3165.00	950.00
PDF5004B	BOOM - SELF BUOYANT - PACIFIC GP 500	150m	NSW	LORD HOWE IS	AMSA	Clive Wilson	02 65632266	45.00	14.00	55.00	17.00
MOD-0387	DISPERSANT ARDROX 6120	9 t	NSW	NEWCASTLE	AMSA	Gary Webb	02 49272432				
PDI7660F	BOOM - BEACH - STRUCTURFLEX LAND SEA	350m	NSW	NEWCASTLE	AMSA	Gary Webb	02 49272432				
PDF5004A	BOOM - SELF BUOYANT - PACIFIC GP 500	3200m	NSW	NEWCASTLE	AMSA	Gary Webb	02 49272432	45.00	14.00	55.00	17.00
PDF11949	BOOM - SELF BUOYANT - STRUCTURFLEX GP	300M	NSW	NEWCASTLE	AMSA	Gary Webb	02 49272432	75.00	23.00	90.00	27.00
PDO10782	ANCHOR KIT - SMALL 15KG SET OF 5		NSW	NEWCASTLE	AMSA	Gary Webb	02 49272432				
PBD10738	TANK - RECOVERED OIL FLEXIDAM 10000 LT		NSW	NEWCASTLE	AMSA	Gary Webb	02 49272432	100.00	30.00	115.00	35.00
PBD10727	TANK - RECOVERED OIL FLEXIDAM 10000 LT		NSW	NEWCASTLE	AMSA	Gary Webb	02 49272432	100.00	30.00	115.00	35.00
PDD-5006	SKIMMER - ROPE MOP - OMI 140		NSW	NEWCASTLE	AMSA	Gary Webb	02 49272432	250.00	75.00	290.00	87.00
VCA-5005	TRAILER - BOX TANDEM AXLE		NSW	NEWCASTLE	AMSA	Gary Webb	02 49272432	100.00	30.00	115.00	35.00
PDO10785	ANCHOR KIT - SMALL 15KG SET OF 5		NSW	PORT KEMBLA	AMSA	Duty Officer	02 42744 571				
PDF-5070	BOOM - SELF BUOYANT - AUST-POL D2	1500 n	NSW	PORT KEMBLA	AMSA	Duty Officer	02 42744 571	45.00	14.00	55.00	17.00
PDF-5069	BOOM - SELF BUOYANT - PACIFIC GP 500	500 m	NSW	PORT KEMBLA	AMSA	Duty Officer	02 42744 571	45.00	14.00	55.00	17.00
MOD-0389	DISPERSANT BP A-B	1.6 t	NSW	PORT KEMBLA	AMSA	Duty Officer	02 42744 571				
MOD-0391	DISPERSANT COREXIT 9527	4 t	NSW	PORT KEMBLA	AMSA	Duty Officer	02 42744 571				
PAN10779	MOTOR - OUTBOARD - TOHATSU 50 HP		NSW	PORT KEMBLA	AMSA	Duty Officer	02 42744 571				
PDI7660G	BOOM - BEACH - STRUCTURFLEX LAND SEA	150m	NSW	PORT KEMBLA	AMSA	Duty Officer	02 42744 571				
PAN-5028	MOTOR - OUTBOARD - JOHNSON 35HP		NSW	PORT KEMBLA	AMSA	Duty Officer	02 42744 571				
UNK-0017	SKIMMER - DISC - HOYLE T DISC		NSW	PORT KEMBLA	AMSA	Duty Officer	02 42744 571				
PDA-4942	SKIMMER - WEIR - DOUGLAS SKIMPAK		NSW	PORT KEMBLA	AMSA	Duty Officer	02 42744 571	150.00	45.00	175.00	53.00
PDA11980	SKIMMER - WEIR - FOILEX		NSW	PORT KEMBLA	AMSA	Duty Officer	02 42744 571				
PBD11946	TANK - RECOVERED OIL FLEXIDAM 10000 LT		NSW	PORT KEMBLA	AMSA	Duty Officer	02 42744 571	100.00	30.00	115.00	35.00
PBD11945	TANK - RECOVERED OIL FLEXIDAM 10000 LT		NSW	PORT KEMBLA	AMSA	Duty Officer	02 42744 571	100.00	30.00	115.00	35.00
PBD11964	TANK - RECOVERED OIL FLEXIDAM 10000 LT		NSW	YAMBA	AMSA	Capt Alan Jones	02 66462002	100.00	30.00	115.00	35.00
PBD11979	TANK - RECOVERED OIL FLEXIDAM 10000 LT		NSW	YAMBA	AMSA	Capt Alan Jones	02 66462002	100.00	30.00	115.00	35.00
MOD-0388	DISPERSANT ARDROX 6120	9 t	NSW	SYDNEY	AMSA	Port Ops Comm	02 92964000				
MOD-0390	DISPERSANT BP A-B	35 t	NSW	SYDNEY	AMSA	Port Ops Comm	02 92964000				
MOD-0392	DISPERSANT COREXIT 9527	10 t	NSW	SYDNEY	AMSA	Port Ops Comm	02 92964000				
PDO10967	ANCHOR KIT - LARGE 100KG SET OF 6		NSW	SYDNEY	AMSA	Port Ops Comm	02 92964000				
WCE-4483	BARGE - RECOVERED OIL ALUMINIUM - MITRA		NSW	SYDNEY	AMSA	Port Ops Comm	02 92964000	400.00	120.00	460.00	138.00

Marine Oil Spill Equipment System (MOSES)

MOSES ID	DESCRIPTION	QTY	STATE	LOCATION	OWNER	CONTACT	PHONE	LEVY		NON LEVY	
								IN USE	STANDBY	IN USE	STANDBY
WCE-5032	BARGE - RECOVERED OIL ALUMINIUM		NSW	SYDNEY	AMSA	Port Ops Comm 02	92964000				
PDG-9691	BOOM - INFLATABLE - ROULUNDS RO BAY 1500	800 m	NSW	SYDNEY	AMSA	Port Ops Comm 02	92964000	5750.00	1725.00	6615.00	1985.00
PDG-5017	BOOM - INFLATABLE - ROULUNDS RO BAY 1500	1200 m	NSW	SYDNEY	AMSA	Port Ops Comm 02	92964000	5750.00	1725.00	6615.00	1985.00
PDF-4464	BOOM - SELF BUOYANT - AUST-POL D2	450 m	NSW	SYDNEY	AMSA	Port Ops Comm 02	92964000	45.00	14.00	55.00	17.00
PDF-5019	BOOM - SELF BUOYANT - PACIFIC GP 800	300 m	NSW	SYDNEY	AMSA	Port Ops Comm 02	92964000	125.00	38.00	145.00	44.00
PDH-5021	BOOM - SELF INFLATING - EXPANDI 3000	300 m	NSW	SYDNEY	AMSA	Port Ops Comm 02	92964000	250.00	75.00	290.00	87.00
PAN-6381	MOTOR - OUTBOARD - EVINRUDE 70HP		NSW	SYDNEY	AMSA	Port Ops Comm 02	92964000				
PAN-6380	MOTOR - OUTBOARD - EVINRUDE 70HP		NSW	SYDNEY	AMSA	Port Ops Comm 02	92964000				
PFA-5051	RADIO - REPEATER UHF - PHILLIPS		NSW	SYDNEY	AMSA	Port Ops Comm 02	92964000				
PFA-5050	RADIO - REPEATER UHF - MOTOROLA FLEXAR		NSW	SYDNEY	AMSA	Port Ops Comm 02	92964000				
PFA-5048	RADIO - TRANSCEIVER UHF - MOTOROLA		NSW	SYDNEY	AMSA	Port Ops Comm 02	92964000				
PFA-5040	RADIO - TRANSCEIVER UHF - MOTOROLA		NSW	SYDNEY	AMSA	Port Ops Comm 02	92964000				
PFA-5043	RADIO - TRANSCEIVER UHF - MOTOROLA		NSW	SYDNEY	AMSA	Port Ops Comm 02	92964000				
PFA-5042	RADIO - TRANSCEIVER UHF - MOTOROLA		NSW	SYDNEY	AMSA	Port Ops Comm 02	92964000				
PFA-5041	RADIO - TRANSCEIVER UHF - MOTOROLA		NSW	SYDNEY	AMSA	Port Ops Comm 02	92964000				
PFA-5039	RADIO - TRANSCEIVER UHF - MOTOROLA		NSW	SYDNEY	AMSA	Port Ops Comm 02	92964000				
PFA-5038	RADIO - TRANSCEIVER UHF - MOTOROLA		NSW	SYDNEY	AMSA	Port Ops Comm 02	92964000				
PFA-5049	RADIO - TRANSCEIVER UHF - MOTOROLA		NSW	SYDNEY	AMSA	Port Ops Comm 02	92964000				
PFA-5047	RADIO - TRANSCEIVER UHF - MOTOROLA		NSW	SYDNEY	AMSA	Port Ops Comm 02	92964000				
PFA-5046	RADIO - TRANSCEIVER UHF - MOTOROLA		NSW	SYDNEY	AMSA	Port Ops Comm 02	92964000				
PFA-5045	RADIO - TRANSCEIVER UHF - MOTOROLA		NSW	SYDNEY	AMSA	Port Ops Comm 02	92964000				
PFA-5044	RADIO - TRANSCEIVER UHF - MOTOROLA		NSW	SYDNEY	AMSA	Port Ops Comm 02	92964000				
PFA-5033	RADIO - TRANSCEIVER UHF - MOTOROLA MAXAR		NSW	SYDNEY	AMSA	Port Ops Comm 02	92964000				
PFA-5037	RADIO - TRANSCEIVER UHF - MOTOROLA MAXAR		NSW	SYDNEY	AMSA	Port Ops Comm 02	92964000				
PFA-5036	RADIO - TRANSCEIVER UHF - MOTOROLA MAXAR		NSW	SYDNEY	AMSA	Port Ops Comm 02	92964000				
PFA-5035	RADIO - TRANSCEIVER UHF - MOTOROLA MAXAR		NSW	SYDNEY	AMSA	Port Ops Comm 02	92964000				
PFA-5034	RADIO - TRANSCEIVER UHF - MOTOROLA MAXAR		NSW	SYDNEY	AMSA	Port Ops Comm 02	92964000				
PDC-5024	SKIMMER - DISC - MORRIS M130		NSW	SYDNEY	AMSA	Port Ops Comm 02	92964000				
PDB-5023	SKIMMER - SUCTION - VIKOMA VIKOVAC		NSW	SYDNEY	AMSA	Port Ops Comm 02	92964000	300.00	90.00	345.00	104.00
PDA-5018	SKIMMER - WEIR - WALOSEP W1		NSW	SYDNEY	AMSA	Port Ops Comm 02	92964000	1000.00	300.00	1150.00	345.00
PDA-5026	SKIMMER - WEIR - WALOSEP WM		NSW	SYDNEY	AMSA	Port Ops Comm 02	92964000	400.00	120.00	460.00	138.00
PDA-5025	SKIMMER - WEIR - WALOSEP WM		NSW	SYDNEY	AMSA	Port Ops Comm 02	92964000	400.00	120.00	460.00	138.00
VCA10491	TRAILER - TRIPLE AXLE - MARCO		NSW	SYDNEY	AMSA	Port Ops Comm 02	92964000				
WCF-5029	VESSEL - OIL RECOVERY - MARCO CLASS 1		NSW	SYDNEY	AMSA	Port Ops Comm 02	92964000				
PAF-5022	WINCH - BOOM RECOVERY ELECTRIC FOR EXPANDI		NSW	SYDNEY	AMSA	Port Ops Comm 02	92964000				
PDF5004C	BOOM - SELF BUOYANT - PACIFIC GP 800	200M	NSW	YAMBA	AMSA	Capt Alan Jones 02	66462002	125.00	38.00	145.00	44.00
PDA10773	SKIMMER - WEIR - DESMI MINI MAX		NSW	YAMBA	AMSA	Capt Alan Jones 02	66462002	200.00	60.00	230.00	69.00
WCA-A286	Boat - Punt 10 with trailer		NSW	Port Kembla - BHPT	BHP Tran:	Chris Donaghy	042 764700				
VCA-A254	Trailer - Oil Spill		NSW	Port Kembla - BHPT	BHP Tran:	Chris Donaghy	042 764700				
MOD-A360	Dispersant - Shell VDC	4 t	NSW	Eden - Mobil	Mobil	Gary Hinchcliffe	02 64961113				

## Marine Oil Spill Equipment System (MOSES)

MOSES ID	DESCRIPTION	QTY	STATE	LOCATION	OWNER	CONTACT	PHONE	LEVY		NON LEVY	
								IN USE	STANDBY	IN USE	STANDBY
PAL-A025	Spray Unit Vessel Mounted Vikospray		NSW	Eden - Mobil	Mobil	Gary Hinchcliffe	02 64961113				
PDF-A414	Boom Self Bouyant Gamlen	300 m	NSW	Newcastle - P/A	Newcastle	Gary Webb	02 49272432				
PDH-A416	Boom Self Inflating Expandi 3000	350 m	NSW	Newcastle - P/A	Newcastle	Gary Webb	02 49272432				
PDD-A412	Skimmer - Disc Komara 12K		NSW	Newcastle - P/A	Newcastle	Gary Webb	02 49272432				
PDD-A413	Skimmer- Weir Desmi 250		NSW	Newcastle - P/A	Newcastle	Gary Webb	02 49272432				
PDI-A421	Boom Beach Austpol D2	1020 n	NSW	Sydney - RAN	Royal Aus	Lt Alistair Richar	02 93592358				
PAF-A387	Winch-Expandi Rotopac		NSW	Sydney - RAN	Royal Aus	Lt Alistair Richar	02 93592358				
WCE-A306	Barge - Bunkering Amarina		NSW	Gore Bay - Shell	Shell (Gor	Rob King	02 98978226				
PDF-A158	Boom Self Buoyant GP 800	280 m	NSW	Gore Bay - Shell	Shell (Gor	Rob King	02 98978226				
PDF-A157	Boom Self Buoyant GP 800 (on catamaran)	120 m	NSW	Gore Bay - Shell	Shell (Gor	Rob King	02 98978226				
PDF-A159	Boom Self Buoyant Slickbar (Gamlen Trojan)	200 m	NSW	Gore Bay - Shell	Shell (Gor	Rob King	02 98978226				
PDH-A190	Boom Self Inflating Expandi 3000 (on catamaran)	200 m	NSW	Gore Bay - Shell	Shell (Gor	Rob King	02 98978226				
PDH-A189	Boom Self Inflating Expandi 3000 (on catamaran)	200 m	NSW	Gore Bay - Shell	Shell (Gor	Rob King	02 98978226				
WCC-A297	Catamaran - Aluminium 9m with 120m GP800 Boom		NSW	Gore Bay - Shell	Shell (Gor	Rob King	02 98978226				
WCC-A298	Catamaran - Aluminium 9m with 200m Expandi Boom		NSW	Gore Bay - Shell	Shell (Gor	Rob King	02 98978226				
MOD-A378	Dispersant - Shell VDC	1 t	NSW	Gore Bay - Shell	Shell (Gor	Rob King	02 98978226				
PDE-A144	Skimmer - Belt Elastic Drum		NSW	Gore Bay - Shell	Shell (Gor	Rob King	02 98978226				
PDC-A130	Skimmer - Disc Komara 12K		NSW	Gore Bay - Shell	Shell (Gor	Rob King	02 98978226				
PDB-A111	Skimmer - Suction Pacific Multi Cleaner		NSW	Gore Bay - Shell	Shell (Gor	Rob King	02 98978226				
PDB-A110	Skimmer - Suction Pacific Multi Cleaner		NSW	Gore Bay - Shell	Shell (Gor	Rob King	02 98978226				
PAL-A033	Spray Unit Vessel Mounted Vikospray		NSW	Gore Bay - Shell	Shell (Gor	Rob King	02 98978226				
PBD-A071	Tank - Oil Fastank 9000 lt		NSW	Gore Bay - Shell	Shell (Gor	Rob King	02 98978226				
PBD-A072	Tank - Oil Fastank 9000 lt		NSW	Gore Bay - Shell	Shell (Gor	Rob King	02 98978226				
PBD-A073	Tank - Oil Rigid Weir 2000 lt		NSW	Gore Bay - Shell	Shell (Gor	Rob King	02 98978226				
PDI-A418	Boom - Beach Austpol	200 m	NSW	Port Botany - SPA	Sydney Pt	Port Ops Comm	02 92964000				
PDI-A417	Boom - Beach Austpol A	475 m	NSW	Port Botany - SPA	Sydney Pt	Port Ops Comm	02 92964000				
PDI-A420	Boom - Cube Austpol	800 m	NSW	Port Botany - SPA	Sydney Pt	Port Ops Comm	02 92964000				
WCE-A423	Barge - Storage Lancer 25t		NSW	Sydney - P/A	Sydney Pt	Port Ops Comm	02 92964000				
WCE-A422	Barge - Storage Lancer 25t		NSW	Sydney - P/A	Sydney Pt	Port Ops Comm	02 92964000				
PDI-A419	Boom - Beach Austpol	200 m	NSW	Sydney - P/A	Sydney Pt	Port Ops Comm	02 92964000				
PDH-A415	Boom Self Expanding Expandi 3000	200 m	NSW	Sydney - P/A	Sydney Pt	Port Ops Comm	02 92964000				
PBD-A389	Liner-Oil Bund 100t		NSW	Sydney - P/A	Sydney Pt	Port Ops Comm	02 92964000				
PBD-A388	Liner-Oil Bund 100t		NSW	Sydney - P/A	Sydney Pt	Port Ops Comm	02 92964000				
PDA-A411	Skimmer-Weir Walosep WM		NSW	Sydney - P/A	Sydney Pt	Port Ops Comm	02 92964000				
PBD-A394	Tank-Recovered Oil 10t		NSW	Sydney - P/A	Sydney Pt	Port Ops Comm	02 92964000				
PBD-A393	Tank-Recovered Oil 10t		NSW	Sydney - P/A	Sydney Pt	Port Ops Comm	02 92964000				
PBD-A392	Tank-Recovered Oil 10t		NSW	Sydney - P/A	Sydney Pt	Port Ops Comm	02 92964000				
PBD-A391	Tank-Recovered Oil 10t		NSW	Sydney - P/A	Sydney Pt	Port Ops Comm	02 92964000				
PBD-A390	Tank-Recovered Oil 10t		NSW	Sydney - P/A	Sydney Pt	Port Ops Comm	02 92964000				
PBD-A399	Tank-Recovered Oil 2t		NSW	Sydney - P/A	Sydney Pt	Port Ops Comm	02 92964000				

**Marine Oil Spill Equipment System (MOSES)**

MOSES ID	DESCRIPTION	QTY	STATE	LOCATION	OWNER CONTACT	PHONE	LEVY		NON LEVY	
							IN USE	STANDBY	IN USE	STANDBY
PBD-A398	Tank-Recovered Oil 2t		NSW	Sydney - P/A	Sydney Pt Port Ops Comm 02	92964000				
PBD-A397	Tank-Recovered Oil 2t		NSW	Sydney - P/A	Sydney Pt Port Ops Comm 02	92964000				
PBD-A396	Tank-Recovered Oil 2t		NSW	Sydney - P/A	Sydney Pt Port Ops Comm 02	92964000				
PBD-A395	Tank-Recovered Oil 2t		NSW	Sydney - P/A	Sydney Pt Port Ops Comm 02	92964000				
PBD-A404	Tank-Recovered Oil 5t		NSW	Sydney - P/A	Sydney Pt Port Ops Comm 02	92964000				
PBD-A403	Tank-Recovered Oil 5t		NSW	Sydney - P/A	Sydney Pt Port Ops Comm 02	92964000				
PBD-A402	Tank-Recovered Oil 5t		NSW	Sydney - P/A	Sydney Pt Port Ops Comm 02	92964000				
PBD-A401	Tank-Recovered Oil 5t		NSW	Sydney - P/A	Sydney Pt Port Ops Comm 02	92964000				
PBD-A400	Tank-Recovered Oil 5t		NSW	Sydney - P/A	Sydney Pt Port Ops Comm 02	92964000				
PBD-A405	Tank-Recovered Oil 9t		NSW	Sydney - P/A	Sydney Pt Port Ops Comm 02	92964000				
PBD-A410	Tank-Recovered Pillow Tank 40t		NSW	Sydney - P/A	Sydney Pt Port Ops Comm 02	92964000				
PBD-A409	Tank-Recovered Pillow Tank 40t		NSW	Sydney - P/A	Sydney Pt Port Ops Comm 02	92964000				
PBD-A408	Tank-Recovered Pillow Tank 40t		NSW	Sydney - P/A	Sydney Pt Port Ops Comm 02	92964000				
PBD-A407	Tank-Recovered Pillow Tank 40t		NSW	Sydney - P/A	Sydney Pt Port Ops Comm 02	92964000				
PBD-A406	Tank-Recovered Pillow Tank 40t		NSW	Sydney - P/A	Sydney Pt Port Ops Comm 02	92964000				

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Marine Oil Spill Equipment System (MOSES)

MOSES ID	DESCRIPTION	QTY	STATE	LOCATION	OWNER	CONTACT	PHONE	LEVY		NON LEVY	
								IN USE	STANDBY	IN USE	STANDBY
MOD-A320	Dispersant - Shell VDC	2 t	QLD	Mackay - Ampol	Ampol	Mark Harris	07 9551233				
PAL-A013	Spray Unit Vessel Mounted Vikospray		QLD	Mackay - Ampol	Ampol	Mark Harris	07 9551233				
VCA-A250	Trailer - Oil Spill		QLD	Mackay - Ampol	Ampol	Mark Harris	07 9551233				
WCA-A284	Boat - 14 ft aluminium with 40 hp o/b motor		QLD	Brisbane - Ampol	Ampol	Alan Snell	07 33627221				
PDF-A147	Boom Self Buoyant GP 800	150 m	QLD	Brisbane - Ampol	Ampol	Alan Snell	07 33627221				
MOD-A318	Dispersant - Gamadox	7.9 t	QLD	Brisbane - Ampol	Ampol	Alan Snell	07 33627221				
MOD-A319	Dispersant - Shell VDC	1 t	QLD	Brisbane - Ampol	Ampol	Alan Snell	07 33627221				
PAL-A012	Spray Unit Vessel Mounted Vikospray		QLD	Brisbane - Ampol	Ampol	Alan Snell	07 33627221				
VCA-A247	Trailer - Oil Spill		QLD	Brisbane - Ampol	Ampol	Alan Snell	07 33627221				
VCA-A248	Trailer - Oil Spill 6x4		QLD	Brisbane - Ampol	Ampol	Alan Snell	07 33627221				
MOD-0399	DISPERSANT BP A-B	2 t	QLD	BOWEN	AMSA	Mike Smith	07 7861966				
PDF-4895	BOOM - SELF BUOYANT - AUST-POL D2	200 m	QLD	BOWEN	AMSA	Mike Smith	07 7861966	45.00	14.00	55.00	17.00
PAL-4896	PUMP - DISPERSANT HONDA PACIFIC		QLD	BOWEN	AMSA	Mike Smith	07 7861966	100.00	30.00	115.00	35.00
PDB-4938	SKIMMER - SUCTION - SLICKSKIM MANTA RAY		QLD	BUNDABERG	AMSA	Phil Mumford	07 41594233				
PBD11976	TANK - RECOVERED OIL FLEXIDAM 10000 LT		QLD	BUNDABERG	AMSA	Phil Mumford	07 41594233	100.00	30.00	115.00	35.00
PBD11941	TANK - RECOVERED OIL FLEXIDAM 10000 LT		QLD	BUNDABERG	AMSA	Phil Mumford	07 41594233	100.00	30.00	115.00	35.00
PDF-5072	BOOM - SELF BUOYANT - AUST-POL D2	200 m	QLD	BUNDABERG	AMSA	Phil Mumford	07 41594233	45.00	14.00	55.00	17.00
PAL-5071	PUMP DISPERSANT FLEX TOOL		QLD	BUNDABERG	AMSA	Phil Mumford	07 41594233				
PDO10790	ANCHOR KIT - SMALL 15KG SET OF 5		QLD	BUNDABERG	AMSA	Phil Mumford	07 41594233				
MOD-0401	DISPERSANT BP A-B	1 t	QLD	CAIRNS	AMSA	Chris Boland	07 40523888				
PDH-4497	BOOM - SELF INFLATING - VERSATECH ZOOM 12/18	600 m	QLD	CAIRNS	AMSA	Chris Boland	07 40523888	250.00	75.00	290.00	87.00
UNK-13	MOTOR - OUTBOARD - JOHNSON 25HP		QLD	CAIRNS	AMSA	Chris Boland	07 40523888				
PAL-5097	PUMP - DISPERSANT HONDA PACIFIC		QLD	CAIRNS	AMSA	Chris Boland	07 40523888	100.00	30.00	115.00	35.00
UNK-0016	PUNT - ALUMINIUM - STESSCO 4.5M		QLD	CAIRNS	AMSA	Chris Boland	07 40523888				
VCA11954	TRAILER - BOAT SINGLE AXLE		QLD	CAIRNS	AMSA	Chris Boland	07 40523888	75.00	23.00	90.00	27.00
PDF-5073	BOOM - SELF BUOYANT - AUST-POL D2	300 m	QLD	CAIRNS	AMSA	Chris Boland	07 40523888	45.00	14.00	55.00	17.00
PDF-5074	BOOM - SELF BUOYANT - PACIFIC GP 800	300 m	QLD	CAIRNS	AMSA	Chris Boland	07 40523888	125.00	38.00	145.00	44.00
PAL-4370	PUMP - DISPERSANT SYSTEM - WSL		QLD	CAIRNS	AMSA	Chris Boland	07 40523888	100.00	30.00	115.00	35.00
PDC-4276	SKIMMER - DISC - VIKOMA KOMARA 12K MK3		QLD	CAIRNS	AMSA	Chris Boland	07 40523888	400.00	120.00	460.00	138.00
VCA-5075	TRAILER - BOX TANDEM AXLE		QLD	CAIRNS	AMSA	Chris Boland	07 40523888	100.00	30.00	115.00	35.00
PDI10936	BOOM - BEACH - STRUCTURFLEX LAND SEA	300 m	QLD	CAIRNS	AMSA	Chris Boland	07 40523888				
MOD-0402	DISPERSANT BP A-B	1 t	QLD	GLADSTONE	AMSA	Noel Bowley	07 49761333				
PDH-4392	BOOM - SELF INFLATING - VERSATECH ZOOM 12/18	600 m	QLD	GLADSTONE	AMSA	Noel Bowley	07 49761333	250.00	75.00	290.00	87.00
WCC-5007	CATAMARAN - GRP - TURBO 12M		QLD	GLADSTONE	AMSA	Noel Bowley	07 49761333	2000.00	600.00	2300.00	690.00
PAL-4439	PUMP - DISPERSANT SYSTEM - WSL		QLD	GLADSTONE	AMSA	Noel Bowley	07 49761333	100.00	30.00	115.00	35.00
PBD11944	TANK - RECOVERED OIL FLEXIDAM 10000 LT		QLD	GLADSTONE	AMSA	Noel Bowley	07 49761333	100.00	30.00	115.00	35.00
PBD11939	TANK - RECOVERED OIL FLEXIDAM 10000 LT		QLD	GLADSTONE	AMSA	Noel Bowley	07 49761333	100.00	30.00	115.00	35.00
PBD-4351	TANK - RECOVERED OIL COLLAPSIBLE TRANSPAC		QLD	GLADSTONE	AMSA	Noel Bowley	07 49761333	150.00	45.00	175.00	53.00
PBD-4356	TANK - RECOVERED OIL COLLAPSIBLE TRANSPAC		QLD	GLADSTONE	AMSA	Noel Bowley	07 49761333	150.00	45.00	175.00	53.00
PAN-4908	MOTOR - OUTBOARD - JOHNSON 25HP		QLD	GLADSTONE	AMSA	Noel Bowley	07 49761333				

## Marine Oil Spill Equipment System (MOSES)

MOSES ID	DESCRIPTION	QTY	STATE	LOCATION	OWNER	CONTACT	PHONE	LEVY		NON LEVY	
								IN USE	STANDBY	IN USE	STANDBY
PAL-4906	PUMP - DISPERSANT HONDA PACIFIC		QLD	GLADSTONE	AMSA	Noel Bowley	07 49761333	100.00	30.00	115.00	35.00
WCA-4907	PUNT - ALUMINIUM - STESSCO 4.5M		QLD	GLADSTONE	AMSA	Noel Bowley	07 49761333				
PDD-4379	SKIMMER - ROPE MOP - OMI 260		QLD	GLADSTONE	AMSA	Noel Bowley	07 49761333	400.00	120.00	460.00	138.00
VCA-4909	TRAILER - BOAT		QLD	GLADSTONE	AMSA	Noel Bowley	07 49761333				
VCA-4910	TRAILER - BOX TANDEM AXLE		QLD	GLADSTONE	AMSA	Noel Bowley	07 49761333	100.00	30.00	115.00	35.00
PDA11038	SKIMMER - WEIR - FOILEX MINI		QLD	GROOTE EYLANDT	AMSA	David Murgatroy	08 89874251	200.00	60.00	230.00	69.00
MOD-0407	DISPERSANT TERGO R40	12 t	QLD	HORN ISLAND	AMSA	Greg Kirk	07 40691405				
PDL-4314	FENDER - PNEUMATIC SLING TYPE - YOKOHAMA		QLD	BRISBANE	AMSA	Keith Brown	02 6279 5603	910.00	273.00	1050.00	315.00
PDL-4343	FENDER - PNEUMATIC SLING TYPE - YOKOHAMA		QLD	BRISBANE	AMSA	Keith Brown	02 6279 5603	910.00	273.00	1050.00	315.00
PDL-4330	FENDER - PNEUMATIC SLING TYPE - YOKOHAMA		QLD	BRISBANE	AMSA	Keith Brown	02 6279 5603	910.00	273.00	1050.00	315.00
PDL-4322	FENDER - PNEUMATIC SLING TYPE - YOKOHAMA		QLD	BRISBANE	AMSA	Keith Brown	02 6279 5603	910.00	273.00	1050.00	315.00
MOD-0397	DISPERSANT ARDROX 6120	16.8 t	QLD	BRISBANE	AMSA	Keith Brown	02 6279 5603				
MOD-0400	DISPERSANT BP A-B	61.8 t	QLD	BRISBANE	AMSA	Keith Brown	02 6279 5603				
PDI11633	BOOM - BEACH - STRUCTURFLEX LAND SEA	140 m	QLD	MACKAY	AMSA	Andy Anderson	07 49558161				
PDF11046	BOOM - SELF BUOYANT - STRUCTURFLEX GP	300 m	QLD	MACKAY	AMSA	Andy Anderson	07 49558161	75.00	23.00	90.00	27.00
PDH-4836	BOOM - SELF INFLATING - VERSATECH ZOOM 12/18	600 m	QLD	MACKAY	AMSA	Andy Anderson	07 49558161	250.00	75.00	290.00	87.00
MOD-0403	DISPERSANT BP A-B	3.8 t	QLD	MACKAY	AMSA	Andy Anderson	07 49558161				
MOD-0437	DISPERSANT TERGO R40	10 t	QLD	MACKAY	AMSA	Andy Anderson	07 49558161				
PBD11943	TANK - RECOVERED OIL FLEXIDAM 10000 LT		QLD	MACKAY	AMSA	Andy Anderson	07 49558161	100.00	30.00	115.00	35.00
PBD11938	TANK - RECOVERED OIL FLEXIDAM 10000 LT		QLD	MACKAY	AMSA	Andy Anderson	07 49558161	100.00	30.00	115.00	35.00
PDF-4914	BOOM - SELF BUOYANT - AUST-POL D2	100 m	QLD	MACKAY	AMSA	Andy Anderson	07 49558161	45.00	14.00	55.00	17.00
PDF-5472	BOOM - SELF BUOYANT - AUST-POL D2	200 m	QLD	MACKAY	AMSA	Andy Anderson	07 49558161	45.00	14.00	55.00	17.00
PAN-4917	MOTOR - OUTBOARD - JOHNSON 75HP		QLD	MACKAY	AMSA	Andy Anderson	07 49558161				
PAL-4918	PUMP - DISPERSANT HONDA PACIFIC		QLD	MACKAY	AMSA	Andy Anderson	07 49558161	100.00	30.00	115.00	35.00
PAL-4363	PUMP - DISPERSANT SYSTEM - WSL		QLD	MACKAY	AMSA	Andy Anderson	07 49558161	100.00	30.00	115.00	35.00
WCA-6207	PUNT - ALUMINIUM - QUINTREX SLOGGER 4.5M		QLD	MACKAY	AMSA	Andy Anderson	07 49558161	100.00	30.00	115.00	35.00
PDC-4915	SKIMMER - DISC - VIKOMA KOMARA 12K MK3		QLD	MACKAY	AMSA	Andy Anderson	07 49558161	400.00	120.00	460.00	138.00
VCA-4916	TRAILER - BOAT		QLD	MACKAY	AMSA	Andy Anderson	07 49558161				
WCF10490	VESSEL - OIL RECOVERY - MARCO H28		QLD	MACKAY	AMSA	Barry Lee	07 49577238	2750.00	825.00	3165.00	950.00
PDB10774	SKIMMER - SUCTION - VIKOMA SHOREVAC		QLD	MACKAY	AMSA	Andy Anderson	07 49558161	300.00	90.00	345.00	104.00
VCA10492	TRAILER - TRIPLE AXLE - MARCO		QLD	MACKAY	AMSA	Barry Lee	07 49577238				
PBD10734	TANK - RECOVERED OIL FLEXIDAM 10000 LT		QLD	MOURILYAN	AMSA	Wayne Anzolin	07 40632507	100.00	30.00	115.00	35.00
PDF-5545	BOOM - SELF BUOYANT - AUST-POL D2	300 m	QLD	MOURILYAN	AMSA	Wayne Anzolin	07 40632507	45.00	14.00	55.00	17.00
PDC-5202	SKIMMER - DISC - MORRIS M130		QLD	MOURILYAN	AMSA	Greg Kirk	07 40691405				
PDY-7505	STARTER MOTOR HYDRAMATIC		QLD	BRISBANE	AMSA	Keith Brown	02 6279 5603				
PAG-5131	TEST BENCH - HYDRAULIC		QLD	BRISBANE	AMSA	Keith Brown	02 6279 5603				
PDF-4352	BOOM - SELF BUOYANT - AMERICAN MARINE MAXIMAX	100 m	QLD	BRISBANE	AMSA	Chris Priestley	07 38603529	150.00	45.00	175.00	53.00
PDF-4940	BOOM - SELF BUOYANT - PACIFIC GP 800	300 m	QLD	BRISBANE	AMSA	Chris Priestley	07 38603529	125.00	38.00	145.00	44.00
PDH-5710	BOOM - SELF INFLATING - VERSATECH ZOOM 12/18	200 m	QLD	BRISBANE	AMSA	Chris Priestley	07 38603529	250.00	75.00	290.00	87.00
PAL-4919	PUMP - DISPERSANT HONDA PACIFIC		QLD	BRISBANE	AMSA	Chris Priestley	07 38603529	100.00	30.00	115.00	35.00

Marine Oil Spill Equipment System (MOSES)

MOSES ID	DESCRIPTION	QTY	STATE	LOCATION	OWNER	CONTACT	PHONE	LEVY		NON LEVY	
								IN USE	STANDBY	IN USE	STANDBY
WCA-4495	PUNT - ALUMINIUM - LIFEGUARD 4.5M		QLD	BRISBANE	AMSA	Chris Priestley	07 38603529				
PFA-4920	RADIO - REPEATER UHF - PHILLIPS		QLD	BRISBANE	AMSA	Chris Priestley	07 38603529				
PFA-4929	RADIO - TRANSCEIVER UHF - SPX		QLD	BRISBANE	AMSA	Chris Priestley	07 38603529	25.00	8.00	30.00	9.00
PFA-4928	RADIO - TRANSCEIVER UHF - SPX		QLD	BRISBANE	AMSA	Chris Priestley	07 38603529	25.00	8.00	30.00	9.00
PFA-4927	RADIO - TRANSCEIVER UHF - SPX		QLD	BRISBANE	AMSA	Chris Priestley	07 38603529	25.00	8.00	30.00	9.00
PFA-4926	RADIO - TRANSCEIVER UHF - SPX		QLD	BRISBANE	AMSA	Chris Priestley	07 38603529	25.00	8.00	30.00	9.00
PFA-4925	RADIO - TRANSCEIVER UHF - SPX		QLD	BRISBANE	AMSA	Chris Priestley	07 38603529	25.00	8.00	30.00	9.00
PFA-4924	RADIO - TRANSCEIVER UHF - SPX		QLD	BRISBANE	AMSA	Chris Priestley	07 38603529	25.00	8.00	30.00	9.00
PFA-4923	RADIO - TRANSCEIVER UHF - SPX		QLD	BRISBANE	AMSA	Chris Priestley	07 38603529	25.00	8.00	30.00	9.00
PFA-4922	RADIO - TRANSCEIVER UHF - SPX		QLD	BRISBANE	AMSA	Chris Priestley	07 38603529	25.00	8.00	30.00	9.00
PFA-4921	RADIO - TRANSCEIVER VHF - PHILLIPS		QLD	BRISBANE	AMSA	Chris Priestley	07 38603529	25.00	8.00	30.00	9.00
PDC-4941	SKIMMER - DISC - HOYLE T DISC		QLD	BRISBANE	AMSA	Chris Priestley	07 38603529	400.00	120.00	460.00	138.00
PDK-4289	SPRAY BUCKET - DISPERSANT HELICOPTER - SIMPLEX		QLD	BRISBANE	AMSA	Chris Priestley	07 38603529				
VCA-4421	TRAILER - BOX TANDEM AXLE		QLD	BRISBANE	AMSA	Chris Priestley	07 38603529	100.00	30.00	115.00	35.00
VCA-4943	TRAILER - BOX TANDEM AXLE		QLD	BRISBANE	AMSA	Chris Priestley	07 38603529	100.00	30.00	115.00	35.00
WCE-9901	BARGE - RECOVERED OIL INFLATABLE - LANCER		QLD	BRISBANE	AMSA	Keith Brown	02 6279 5603	1000.00	300.00	1150.00	345.00
WCE-9900	BARGE - RECOVERED OIL INFLATABLE - LANCER		QLD	BRISBANE	AMSA	Keith Brown	02 6279 5603	1000.00	300.00	1150.00	345.00
PAD-5130	BENCH - TOOL STORAGE - BEACH INCL TOOLS		QLD	BRISBANE	AMSA	Keith Brown	02 6279 5603				
PAH-5016	BLOWER - BACK PACK - STIHL SR400		QLD	BRISBANE	AMSA	Keith Brown	02 6279 5603				
PAH-5015	BLOWER - BACK PACK - STIHL SR400		QLD	BRISBANE	AMSA	Keith Brown	02 6279 5603				
PDJ-6377	BOOM - SWEEP - INFLATABLE - NOFI V SWEEP		QLD	BRISBANE	AMSA	Keith Brown	02 6279 5603	1250.00	375.00	1440.00	432.00
PAH-5136	COMPRESSOR - PORTABLE - HONDA 3.5HP		QLD	BRISBANE	AMSA	Keith Brown	02 6279 5603				
PDY-7502	MOTOR/PUMP HYDRAMATIC		QLD	BRISBANE	AMSA	Keith Brown	02 6279 5603				
PAL-4325	PUMP - DISPERSANT SYSTEM - WSL		QLD	BRISBANE	AMSA	Keith Brown	02 6279 5603	100.00	30.00	115.00	35.00
PAL-4387	PUMP - DISPERSANT SYSTEM - WSL		QLD	BRISBANE	AMSA	Keith Brown	02 6279 5603	100.00	30.00	115.00	35.00
PAL-4445	PUMP - DISPERSANT SYSTEM - WSL		QLD	BRISBANE	AMSA	Keith Brown	02 6279 5603	100.00	30.00	115.00	35.00
PAL-4442	PUMP - DISPERSANT SYSTEM - WSL		QLD	BRISBANE	AMSA	Keith Brown	02 6279 5603	100.00	30.00	115.00	35.00
PAL-4435	PUMP - DISPERSANT SYSTEM - WSL		QLD	BRISBANE	AMSA	Keith Brown	02 6279 5603	100.00	30.00	115.00	35.00
PAL-4320	PUMP - DISPERSANT SYSTEM - WSL		QLD	BRISBANE	AMSA	Keith Brown	02 6279 5603	100.00	30.00	115.00	35.00
PAL-4317	PUMP - DISPERSANT SYSTEM - WSL		QLD	BRISBANE	AMSA	Keith Brown	02 6279 5603	100.00	30.00	115.00	35.00
PAL-4308	PUMP - DISPERSANT SYSTEM - WSL		QLD	BRISBANE	AMSA	Keith Brown	02 6279 5603	100.00	30.00	115.00	35.00
PAM-5473	PUMP - SALVAGE - AMSA PATTERN		QLD	BRISBANE	AMSA	Keith Brown	02 6279 5603				
PAM-4340	PUMP - SALVAGE - AMSA PATTERN		QLD	BRISBANE	AMSA	Keith Brown	02 6279 5603				
PAM11983	PUMP - SALVAGE - HYDROTECH		QLD	BRISBANE	AMSA	Keith Brown	02 6279 5603				
PAM-5129	PUMP - SALVAGE - MARFLEX		QLD	BRISBANE	AMSA	Keith Brown	02 6279 5603	3000.00	900.00	3450.00	1035.00
PAM-5128	PUMP - SALVAGE - MARFLEX		QLD	BRISBANE	AMSA	Keith Brown	02 6279 5603	3000.00	900.00	3450.00	1035.00
PAM-4319	PUMP - SALVAGE - THEUNE EUREKA		QLD	BRISBANE	AMSA	Keith Brown	02 6279 5603				
PAH11711	PUMP - SHORELINE FLUSHING		QLD	BRISBANE	AMSA	Keith Brown	02 6279 5603				
WCA-5203	PUNT - ALUMINIUM - QUINTREX FISHFINDER 4.9M		QLD	BRISBANE	AMSA	Keith Brown	02 6279 5603	100.00	30.00	115.00	35.00
PDA11961	SKIMMER - WEIR - GLOBAL		QLD	BRISBANE	AMSA	Keith Brown	02 6279 5603				

## Marine Oil Spill Equipment System (MOSES)

MOSES ID	DESCRIPTION	QTY	STATE	LOCATION	OWNER	CONTACT	PHONE	LEVY		NON LEVY	
								IN USE	STANDBY	IN USE	STANDBY
PDA-4937	SKIMMER - WEIR - MEGATOR ALPHA		QLD	BRISBANE	AMSA	Keith Brown	02 6279 5603	150.00	45.00	175.00	53.00
PDK-4380	SPRAY BUCKET - DISPERSANT HELICOPTER - SIMPLEX		QLD	BRISBANE	AMSA	Keith Brown	02 6279 5603				
PDY-7564	STARTER MOTOR		QLD	BRISBANE	AMSA	Keith Brown	02 6279 5603				
PDY-7506	STARTER MOTOR SPRING		QLD	BRISBANE	AMSA	Keith Brown	02 6279 5603				
PAG-4297	TEST EQUIP - HYDRAULIC INCL 2 FLOW CELLS DIGITAL		QLD	BRISBANE	AMSA	Keith Brown	02 6279 5603				
PAG-4369	TESTER - SOUND PRESSURE COLUMBIA INCL CALIBRAT		QLD	BRISBANE	AMSA	Keith Brown	02 6279 5603				
PDY-7509	VALVE SPRAY CONTROL		QLD	BRISBANE	AMSA	Keith Brown	02 6279 5603				
PDI7660B	BOOM - BEACH - STRUCTURFLEX LAND SEA	1000 n	QLD	BRISBANE	AMSA	Chris Priestley	07 38603529				
BP7660B	BOOM BALLAST PUMP - BEACH - STRUCTURFLEX LAND SEA		QLD	BRISBANE	AMSA	Chris Priestley	07 38603529				
IP7660B	BOOM INFLATION PUMP BEACH - STRUCTURFLEX LAND SEA		QLD	BRISBANE	AMSA	Chris Priestley	07 38603529				
MOD-O433	DISPERSANT - ARDROX 6120	1.8 t	QLD	BRISBANE	AMSA	Chris Priestley	07 38603529				
MOD-0438	DISPERSANT - TERGO R40	6 t	QLD	BRISBANE	AMSA	Chris Priestley	07 38603529				
PDF11630	BOOM - SELF BUOYANT - STRUCTURFLEX GP	105 m	QLD	PORT ALMA	AMSA	Col Munro	07 49346931	75.00	23.00	90.00	27.00
PDA11981	SKIMMER - WEIR - FOILEX		QLD	PORT ALMA	AMSA	Col Munro	07 49346931				
PDF-5061	BOOM - SELF BUOYANT - PACIFIC GP 800	200 m	QLD	PORT ALMA	AMSA	Col Munro	07 49346931	125.00	38.00	145.00	44.00
PAL-5062	PUMP - DISPERSANT HONDA PACIFIC		QLD	PORT ALMA	AMSA	Col Munro	07 49346931	100.00	30.00	115.00	35.00
PDF-4935	BOOM - SELF BUOYANT - PACIFIC GP 500	120 m	QLD	SOUTHPORT	AMSA	Ian Whitehouse	07 55838275	45.00	14.00	55.00	17.00
UNK-0018	SKIMMER - SUCTION - SLICKSKIM MANTA RAY		QLD	SOUTHPORT	AMSA	Ian Whitehouse	07 55838275				
PDH-4905	BOOM - SELF INFLATING - EXPANDI 3000	300 m	QLD	SOUTHPORT	AMSA	Ian Whitehouse	07 55838275	250.00	75.00	290.00	87.00
MOD-0404	DISPERSANT BP A-B	2.4 t	QLD	THURSDAY ISLAND	AMSA	Greg Kirk	07 40691405				
PDF11045	BOOM - SELF BUOYANT - STRUCTURFLEX GP	300 m	QLD	THURSDAY ISLAND	AMSA	Greg Kirk	07 40691405	75.00	23.00	90.00	27.00
PAL-4372	PUMP - DISPERSANT SYSTEM - WSL		QLD	THURSDAY ISLAND	AMSA	Greg Kirk	07 40691405	100.00	30.00	115.00	35.00
PDA11036	SKIMMER - WEIR - FOILEX MINI		QLD	THURSDAY ISLAND	AMSA	Greg Kirk	07 40691405	200.00	60.00	230.00	69.00
MOD-0398	DISPERSANT ARDROX 6120	10.8 t	QLD	TOWNSVILLE	AMSA	Barry Berwick	07 47602303				
MOD-0405	DISPERSANT BP A-B	27.4 t	QLD	TOWNSVILLE	AMSA	Barry Berwick	07 47602303				
PDF11047	BOOM - SELF BUOYANT - STRUCTURFLEX GP	200 m	QLD	TOWNSVILLE	AMSA	Barry Berwick	07 47602303	75.00	23.00	90.00	27.00
PDJ11962	BOOM - SWEEP - INFLATABLE - NOFI V SWEEP		QLD	TOWNSVILLE	AMSA	Barry Berwick	07 47602303	1250.00	375.00	1440.00	432.00
MOD-0436	DISPERSANT TERGO R40	4 t	QLD	TOWNSVILLE	AMSA	Barry Berwick	07 47602303				
PAL-4443	PUMP - DISPERSANT SYSTEM - WSL		QLD	TOWNSVILLE	AMSA	Barry Berwick	07 47602303	100.00	30.00	115.00	35.00
PBD-4260	TANK - RECOVERED OIL COLLAPSIBLE TRANSPAC		QLD	TOWNSVILLE	AMSA	Barry Berwick	07 47602303	150.00	45.00	175.00	53.00
PBD-4262	TANK - RECOVERED OIL COLLAPSIBLE TRANSPAC		QLD	TOWNSVILLE	AMSA	Barry Berwick	07 47602303	150.00	45.00	175.00	53.00
PDG-9690	BOOM - INFLATABLE - ROULUNDS RO BAY 1500	600 m	QLD	TOWNSVILLE	AMSA	Barry Berwick	07 47602303	5750.00	1725.00	6615.00	1985.00
PDG-5978	BOOM - INFLATABLE - ROULUNDS RO BAY 1500	600 m	QLD	TOWNSVILLE	AMSA	Barry Berwick	07 47602303	5750.00	1725.00	6615.00	1985.00
PDF-5090	BOOM - SELF BUOYANT - PACIFIC GP 800	300 m	QLD	TOWNSVILLE	AMSA	Barry Berwick	07 47602303	125.00	38.00	145.00	44.00
PDH-5708	BOOM - SELF INFLATING - VERSATECH ZOOM 12/18	200 m	QLD	TOWNSVILLE	AMSA	Barry Berwick	07 47602303	250.00	75.00	290.00	87.00
WCC-4383	CATAMARAN - GRP - CHITON 12M		QLD	TOWNSVILLE	AMSA	Barry Berwick	07 47602303	2000.00	600.00	2300.00	690.00
WCB-5096	DINGHY - INFLATABLE - ZODIAC 4M		QLD	TOWNSVILLE	AMSA	Ian Wood	07 47715135	175.00	53.00	205.00	62.00
PAN-5100	MOTOR - OUTBOARD - EVINRUDE 25HP		QLD	TOWNSVILLE	AMSA	Barry Berwick	07 47602303				
PAN-5095	MOTOR - OUTBOARD - YAMAHA 15 HP		QLD	TOWNSVILLE	AMSA	Ian Wood	07 47715135				
PAL-5092	PUMP - DISPERSANT HONDA PACIFIC		QLD	TOWNSVILLE	AMSA	Barry Berwick	07 47602303	100.00	30.00	115.00	35.00

## Marine Oil Spill Equipment System (MOSES)

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MOSES ID	DESCRIPTION	QTY	STATE	LOCATION	OWNER	CONTACT	PHONE	LEVY		NON LEVY	
								IN USE	STANDBY	IN USE	STANDBY
PAL-4364	PUMP - DISPERSANT SYSTEM - WSL		QLD	TOWNSVILLE	AMSA	Barry Berwick	07 47602303	100.00	30.00	115.00	35.00
PAL-4366	PUMP - DISPERSANT SYSTEM - WSL		QLD	TOWNSVILLE	AMSA	Barry Berwick	07 47602303	100.00	30.00	115.00	35.00
PAL-4358	PUMP - DISPERSANT SYSTEM - WSL		QLD	TOWNSVILLE	AMSA	Barry Berwick	07 47602303	100.00	30.00	115.00	35.00
PAL-4375	PUMP - DISPERSANT SYSTEM - WSL		QLD	TOWNSVILLE	AMSA	Barry Berwick	07 47602303	100.00	30.00	115.00	35.00
WCA-5099	PUNT - ALUMINIUM - QUINTREX SLOGGER 4.5M		QLD	TOWNSVILLE	AMSA	Barry Berwick	07 47602303	100.00	30.00	115.00	35.00
PDA-4355	SKIMMER - WEIR - GT185		QLD	TOWNSVILLE	AMSA	Barry Berwick	07 47602303	1000.00	300.00	1150.00	345.00
PDK-5098	SPRAY BUCKET - DISPERSANT HELICOPTER - SIMPLEX		QLD	TOWNSVILLE	AMSA	Ian Wood	07 47715135				
PBD-5093	TANK - RECOVERED OIL COLLAPSIBLE TRANSPAC		QLD	TOWNSVILLE	AMSA	Barry Berwick	07 47602303	150.00	45.00	175.00	53.00
VCA-5091	TRAILER - BOX TANDEM AXLE		QLD	TOWNSVILLE	AMSA	Ian Wood	07 47715135	100.00	30.00	115.00	35.00
PDO10969	ANCHOR KIT - LARGE 100KG SET OF 6		QLD	TOWNSVILLE	AMSA	Barry Berwick	07 47602303				
PBD10733	TANK - RECOVERED OIL FLEXIDAM 10000 LT		QLD	TOWNSVILLE	AMSA	Barry Berwick	07 47602303	100.00	30.00	115.00	35.00
MOD-0406	DISPERSANT BP A-B	2.2 t	QLD	WEIPA	AMSA	Mike Beebie	07 40697165				
UNK-0002	BOOM - SELF BUOYANT - PACIFIC GP 800	300 m	QLD	WEIPA	AMSA	Mike Beebie	07 40697165				
UNK-0011	PUMP - DISPERSANT - HONDA PACIFIC		QLD	WEIPA	AMSA	Mike Beebie	07 40697165				
PAL-4243	PUMP - DISPERSANT SYSTEM - WSL		QLD	WEIPA	AMSA	Mike Beebie	07 40697165	100.00	30.00	115.00	35.00
PDO10968	ANCHOR KIT - LARGE 100KG SET OF 6		QLD	WHYTE IS - (BRISBA)	AMSA	Peter Boyle	07 32584888				
PDB10775	SKIMMER - SUCTION - VIKOMA SHOREVAC		QLD	WHYTE IS - (BRISBA)	AMSA	Peter Boyle	07 32584888	300.00	90.00	345.00	104.00
PBD10728	TANK - RECOVERED OIL FLEXIDAM 10000 LT		QLD	WHYTE IS - (BRISBA)	AMSA	Peter Boyle	07 32584888	100.00	30.00	115.00	35.00
PBD10723	TANK - RECOVERED OIL FLEXIDAM 10000 LT		QLD	WHYTE IS - (BRISBA)	AMSA	Peter Boyle	07 32584888	100.00	30.00	115.00	35.00
PDO10974	ANCHOR KIT - SMALL 15KG SET OF 5		QLD	WHYTE IS - (BRISBA)	AMSA	Peter Boyle	07 32584888				
PDF10780	BOOM - SELF BUOYANT - GLOBAL GP 330	60 m	QLD	WHYTE IS - (BRISBA)	AMSA	Peter Boyle	07 32584888	20.00	6.00	25.00	8.00
PAN11632	MOTOR - OUTBOARD - EVINRUDE 15HP		QLD	WHYTE IS - (BRISBA)	AMSA	Peter Boyle	07 32584888				
NEW-0037	MOTOR - OUTBOARD - EVINRUDE 15HP		QLD	WHYTE IS - (BRISBA)	AMSA	Peter Boyle	07 32584888				
VCA11953	TRAILER - BOAT SINGLE AXLE		QLD	WHYTE IS - (BRISBA)	AMSA	Peter Boyle	07 32584888	75.00	23.00	90.00	27.00
WCE-5082	BARGE - RECOVERED OIL ALUMINIUM - TIGRIS		QLD	WHYTE IS - (BRISBA)	AMSA	Peter Boyle	07 32584888	400.00	120.00	460.00	138.00
PDG-9689	BOOM - INFLATABLE - ROULUNDS RO BAY 1500	1200 m	QLD	WHYTE IS - (BRISBA)	AMSA	Peter Boyle	07 32584888	5750.00	1725.00	6615.00	1985.00
PDF-5085	BOOM - SELF BUOYANT - PACIFIC GP 800	300 m	QLD	WHYTE IS - (BRISBA)	AMSA	Peter Boyle	07 32584888	125.00	38.00	145.00	44.00
PDJ-4350	BOOM - SWEEP - SELF BUOYANT - GIANT TROILBOOM		QLD	WHYTE IS - (BRISBA)	AMSA	Peter Boyle	07 32584888	2750.00	825.00	3165.00	950.00
WCC-4381	CATAMARAN - GRP - TRITON 12M		QLD	WHYTE IS - (BRISBA)	AMSA	Peter Boyle	07 32584888	2000.00	600.00	2300.00	690.00
PAN-5084	MOTOR - OUTBOARD - JOHNSON 25HP		QLD	WHYTE IS - (BRISBA)	AMSA	Peter Boyle	07 32584888				
WCA-4496	PUNT - ALUMINIUM - LIFE GUARD 4.5M		QLD	WHYTE IS - (BRISBA)	AMSA	Peter Boyle	07 32584888				
WCA-5083	PUNT - ALUMINIUM - STESSCO 4.5M		QLD	WHYTE IS - (BRISBA)	AMSA	Peter Boyle	07 32584888				
PFA-5079	RADIO - TRANSCEIVER VHF - AWA		QLD	WHYTE IS - (BRISBA)	AMSA	Peter Boyle	07 32584888	25.00	8.00	30.00	9.00
PFA-5078	RADIO - TRANSCEIVER VHF - AWA		QLD	WHYTE IS - (BRISBA)	AMSA	Peter Boyle	07 32584888	25.00	8.00	30.00	9.00
PDA-5471	SKIMMER - WEIR - DESMI 250		QLD	WHYTE IS - (BRISBA)	AMSA	Peter Boyle	07 32584888	1000.00	300.00	1150.00	345.00
VCA-4282	TRAILER - BOAT TANDEM AXLE		QLD	WHYTE IS - (BRISBA)	AMSA	Peter Boyle	07 32584888	100.00	30.00	115.00	35.00
WCF-4278	VESSEL - OIL RECOVERY - MARCO CLASS 1		QLD	WHYTE IS - (BRISBA)	AMSA	Peter Boyle	07 32584888				
VCA-A253	Trailer - Oil Spill		QLD	Gladstone - BHPT	BHP Tran:	Darren Marshall	07 9722613				
PDF-A148	Boom Self Buoyant Gamlen Trojan (on Larcom )	200 m	QLD	Gladstone - BHPT on	BHP Tran:	Darren Marshall	07 9722613				
PAL-A019	Spray Unit Vessel Mounted Vikospray		QLD	Gladstone - BP	BP	Wayne Johnson	07 49721996				

## Marine Oil Spill Equipment System (MOSES)

MOSES ID	DESCRIPTION	QTY	STATE	LOCATION	OWNER	CONTACT	PHONE	LEVY		NON LEVY	
								IN USE	STANDBY	IN USE	STANDBY
VCA-A258	Trailer - Oil Spill		QLD	Gladstone - BP	BP	Wayne Johnson	07 49721996				
VCA-A259	Trailer - Oil Spill		QLD	Whinstanes - BP	BP	Darryl Donaldso	07 33647111				
WCE-A304	Barge - Boom Laying Vanta with boom		QLD	Brisbane - BP	BP Refine	Graham Hein	07 32437314				
MOD-A330	Dispersant - Shell VDC	4 t	QLD	Brisbane - BP	BP Refine	Graham Hein	07 32437314				
WCA-A287	Punt - Trailer mounted with Vikospray & dispersant		QLD	Brisbane - BP	BP Refine	Graham Hein	07 32437314				
VCA-A255	Trailer - Oil Spill		QLD	Brisbane - BP	BP Refine	Graham Hein	07 32437314				
PDH-A180	Boom Self Inflating Versatech Zoom 12/18	200 m	QLD	Brisbane - BP at Prodr	BP Refine	Graham Hein	07 32437314				
PDH-A179	Boom Self Inflating Versatech Zoom 12/18	400 m	QLD	Brisbane - BP on Van	BP Refine	Graham Hein	07 32437314				
PAL-A015	Spray Unit Vessel Mounted Vikospray		QLD	Brisbane - BP on punt	BP Refine	Graham Hein	07 32437314				
PDC-A121	Skimmer - Disc Komara 12K Mk3		QLD	Brisbane - BP on traile	BP Refine	Graham Hein	07 32437314				
PDF-A431	Boom Self Bouyant Gamlen	180 m	QLD	Bundaberg - P/A	Bundaber	Phil Mumford	07 41594233				
PDC-A429	Skimmer-Lockheed Mini-Clean		QLD	Cairns - P/A	Cairns Poi	Chris Boland	07 40523888				
WCF-A437	Vessel - Oil Recovery Marco		QLD	Cairns - QDot	Cairns Poi	Chris Boland	07 40523888				
PDC-A426	Skimmer- Lockheed Cleansweep		QLD	Gladstone P/A	Gladstone	Noel Bowley	07 49761333				
WCF-A438	Vessel - Oil Recovery Marco		QLD	Gladstone P/A	Gladstone	Noel Bowley	07 49761333				
PDF-A432	Boom Self Bouyant Gamlen	300 m	QLD	Mackay - P/A	Mackay P.	Andy Anderson	07 49558161				
PDC-A428	Skimmer-Lockheed Mini-Clean		QLD	Mackay - P/A	Mackay P.	Andy Anderson	07 49558161				
VCA-A267	Trailer - Oil Spill		QLD	Bundaberg - Mobil	Mobil	George Holland	07 41594433				
MOD-A358	Dispersant - Shell VDC	4 t	QLD	Bundaberg - Port Auth	Mobil	George Holland	07 41594433				
PDC-A126	Skimmer - Disc Komara 12K Mk3		QLD	Bundaberg - Port Auth	Mobil	George Holland	07 41594433				
PAL-A023	Spray Unit Vessel Mounted Vikospray		QLD	Bundaberg - Port Auth	Mobil	George Holland	07 41594433				
MOD-A359	Dispersant - Shell VDC	4 t	QLD	Cairns - Mobil	Mobil	Kym Condon	07 40515155				
PAL-A024	Spray Unit Vessel Mounted Vikospray		QLD	Cairns - Mobil	Mobil	Kym Condon	07 40515155				
MOD-A365	Dispersant - Shell VDC	4 t	QLD	Weipa - Mobil	Mobil	Robert O'Neill	07 40697120				
PAL-A028	Spray Unit Vessel Mounted Vikospray		QLD	Weipa - Mobil	Mobil	Robert O'Neill	07 40697120				
PDK-A434	Spray Bucket Dispersant Helicopter Rotortech		QLD	Horn Island - QDoT	Port Corp	Greg Kirk	07 40691405				
OBG-A424	Communciation - Satcom Unit		QLD	Brisbane - QDoT	Queenslar	John Wright	07 34043045				
PDC-A425	Skimmer - Lockheed Mini-Clean		QLD	Brisbane - QDot	Queenslar	John Wright	07 34043045				
WCF-A436	Vessel - Oil Recovery Marco		QLD	Cairns - QDot	Queenslar	John Wright	07 34043045				
PDK-A435	Spray Bucket Dispersant Helicopter Rotortech		QLD	Mackay - QDoT	Queenslar	Barry Lee	07 49577238				
PDF-A430	Boom Hoyle Mini		QLD	Southport - QDoT	Queenslar	Ian Whitehouse	07 55838275				
PDF-A433	Boom Self Bouyant Gamlen	45 m	QLD	Southport - QDoT	Queenslar	Ian Whitehouse	07 55838275				
WCF-A439	Vessel - Oil Recovery Marco		QLD	Townsville - QDoT	Queenslar	Ian Wood	07 47715135				
PDF-A154	Boom Self Buoyant GP 300	60 m	QLD	Brisbane - Shell	Shell	Duty Supervisor	07 3364 5300				
PDF-A155	Boom Self Buoyant GP 800	120 m	QLD	Brisbane - Shell	Shell	Duty Supervisor	07 3364 5300				
MOD-A374	Dispersant - Shell VDC	4 t	QLD	Gladstone - BP	Shell	John Phillips	07 9721288				
MOD-A379	Dispersant - Shell VDC	1 t	QLD	Townsville - Shell	Shell	Allan Barnes	07 47224601				
PAL-A034	Spray Unit Vessel Mounted Vikospray		QLD	Townsville - Shell	Shell	Allan Barnes	07 47224601				
VCA-A276	Trailer - Oil Spill		QLD	Townsville - Shell	Shell	Allan Barnes	07 47224601				

## Marine Oil Spill Equipment System (MOSES)

MOSES ID	DESCRIPTION	QTY	STATE	LOCATION	OWNER	CONTACT	PHONE	LEVY		NON LEVY	
								IN USE	STANDBY	IN USE	STANDBY
MOD-0409	DISPERSANT BP A-B	27.8 t	SA	ADELAIDE	AMSA	Mark Jenneys	08 83475026				
PDI7660D	BOOM - BEACH - STRUCTURFLEX LAND SEA	700 m	SA	ADELAIDE	AMSA	Mark Jenneys	08 83475026				
BP7660D	BOOM -BALLAST PUMP BEACH - STRUCTURFLEX LAND SEA		SA	ADELAIDE	AMSA	Mark Jenneys	08 83475026				
IP7660D	BOOM INFLATION PUMP BEACH - STRUCTURFLEX LAND SEA		SA	ADELAIDE	AMSA	Mark Jenneys	08 83475026				
PBD-4272	TANK - RECOVERED OIL COLLAPSIBLE TRANSPAC		SA	ADELAIDE	AMSA	Mark Jenneys	08 83475026	150.00	45.00	175.00	53.00
PBD-4388	TANK - RECOVERED OIL COLLAPSIBLE TRANSPAC		SA	ADELAIDE	AMSA	Mark Jenneys	08 83475026	150.00	45.00	175.00	53.00
PBD-4386	TANK - RECOVERED OIL COLLAPSIBLE TRANSPAC		SA	ADELAIDE	AMSA	Mark Jenneys	08 83475026	150.00	45.00	175.00	53.00
PDK-4477	SPRAY BUCKET - DISPERSANT HELICOPTER - SIMPLEX		SA	ADELAIDE	AMSA	Mark Jenneys	08 83475026				
VCA-4337	TRAILER - BOX TANDEM AXLE		SA	ADELAIDE	AMSA	Mark Jenneys	08 83475026	100.00	30.00	115.00	35.00
PDI7660A	BOOM - BEACH - STRUCTURFLEX LAND SEA	200 m	SA	ADELAIDE	AMSA	Mark Jenneys	08 83475026				
PDF-4316	BOOM - SELF BUOYANT - AMERICAN MARINE MAXIMAX	200 m	SA	ADELAIDE	AMSA	Mark Jenneys	08 83475026	150.00	45.00	175.00	53.00
PDF-5002	BOOM - SELF BUOYANT - PACIFIC GP 500	200 m	SA	ADELAIDE	AMSA	Mark Jenneys	08 83475026	45.00	14.00	55.00	17.00
PDF7661B	BOOM - SELF BUOYANT SLICKBAR MK32E	600 m	SA	ADELAIDE	AMSA	Mark Jenneys	08 83475026				
PDI7661B	BOOM - SELF BUOYANT SLICKBAR MK32E	600 m	SA	ADELAIDE	AMSA	Mark Jenneys	08 83475026	75.00	23.00	90.00	27.00
BP7660A	BOOM BALLAST PUMP - BEACH - STRUCTURFLEX LAND SEA		SA	ADELAIDE	AMSA	Mark Jenneys	08 83475026				
IP7660A	BOOM INFLATION PUMP BEACH - STRUCTURFLEX LAND SEA		SA	ADELAIDE	AMSA	Mark Jenneys	08 83475026				
BR-4316	BOOM REEL- SELF BUOYANT - AMERICAN MARINE MAXIM/	3	SA	ADELAIDE	AMSA	Mark Jenneys	08 83475026				
WCC-4206	CATAMARAN - GRP - MUREX 12M		SA	ADELAIDE	AMSA	Mark Jenneys	08 83475026	2000.00	600.00	2300.00	690.00
WCB-4329	DINGHY - INFLATABLE - AVON 4M		SA	ADELAIDE	AMSA	Mark Jenneys	08 83475026	175.00	53.00	205.00	62.00
MOD-0439	DISPERSANT - TERGO R40	10 t	SA	ADELAIDE	AMSA	Mark Jenneys	08 83475026				
MOD-0408	DISPERSANT ARDROX 6120	9.6 t	SA	ADELAIDE	AMSA	Mark Jenneys	08 83475026				
MOD-0435	DISPERSANT COREXIT 9527	4.4 t	SA	ADELAIDE	AMSA	Mark Jenneys	08 83475026				
PAL-4269	PUMP - DISPERSANT SYSTEM - WSL		SA	ADELAIDE	AMSA	Mark Jenneys	08 83475026	100.00	30.00	115.00	35.00
PAL-4440	PUMP - DISPERSANT SYSTEM - WSL		SA	ADELAIDE	AMSA	Mark Jenneys	08 83475026	100.00	30.00	115.00	35.00
PAL-4447	PUMP - DISPERSANT SYSTEM - WSL		SA	ADELAIDE	AMSA	Mark Jenneys	08 83475026	100.00	30.00	115.00	35.00
PAL-4441	PUMP - DISPERSANT SYSTEM - WSL		SA	ADELAIDE	AMSA	Mark Jenneys	08 83475026	100.00	30.00	115.00	35.00
PAL-4271	PUMP - DISPERSANT SYSTEM - WSL		SA	ADELAIDE	AMSA	Mark Jenneys	08 83475026	100.00	30.00	115.00	35.00
PFA-5067	RADIO - REPEATER UHF - MOTOROLA FLEXAR		SA	ADELAIDE	AMSA	Mark Jenneys	08 83475026				
PFA-5064	RADIO - TRANSCEIVER UHF - MOTOROLA		SA	ADELAIDE	AMSA	Mark Jenneys	08 83475026				
PFA-5066	RADIO - TRANSCEIVER UHF - MOTOROLA		SA	ADELAIDE	AMSA	Mark Jenneys	08 83475026				
PFA-5065	RADIO - TRANSCEIVER UHF - MOTOROLA		SA	ADELAIDE	AMSA	Mark Jenneys	08 83475026				
PFA-5063	RADIO - TRANSCEIVER UHF - MOTOROLA		SA	ADELAIDE	AMSA	Mark Jenneys	08 83475026				
PDD-4996	SKIMMER - ROPE MOP - OMI 260		SA	ADELAIDE	AMSA	Mark Jenneys	08 83475026	400.00	120.00	460.00	138.00
PDB-4339	SKIMMER - SUCTION - SLICKSKIM MANTA RAY		SA	ADELAIDE	AMSA	Mark Jenneys	08 83475026				
PDB-4490	SKIMMER - SUCTION - VIKOVAC		SA	ADELAIDE	AMSA	Mark Jenneys	08 83475026				
PBD10730	TANK - RECOVERED OIL FLEXIDAM 10000 LT		SA	ADELAIDE	AMSA	Mark Jenneys	08 83475026	100.00	30.00	115.00	35.00
PBD-4268	TANK - RECOVERED OIL COLLAPSIBLE TRANSPAC		SA	ADELAIDE	AMSA	Mark Jenneys	08 83475026	150.00	45.00	175.00	53.00
VCA-4323	TRAILER - BOX SINGLE AXLE		SA	ADELAIDE	AMSA	Mark Jenneys	08 83475026	75.00	23.00	90.00	27.00
VCA-5003	TRAILER - BOX TANDEM AXLE		SA	ADELAIDE	AMSA	Mark Jenneys	08 83475026	100.00	30.00	115.00	35.00
WCF-5020	VESSEL - OIL RECOVERY - JBF DIP 1003		SA	ADELAIDE	AMSA	Mark Jenneys	08 83475026				

## Marine Oil Spill Equipment System (MOSES)

MOSES ID	DESCRIPTION	QTY	STATE	LOCATION	OWNER	CONTACT	PHONE	LEVY		NON LEVY	
								IN USE	STANDBY	IN USE	STANDBY
PDI7660E	BOOM - BEACH - STRUCTURFLEX LAND SEA	100 m	SA	PT LINCOLN	AMSA	Mark Jenneys	08 83475026				
UNK-0001	BOOM - SELF BUOYANT - PACIFIC GP 800	300 m	SA	PT LINCOLN	AMSA	Mark Jenneys	8 83475026				
PDF7661C	BOOM - SELF BUOYANT SLICKBAR MK32E	600 m	SA	PT LINCOLN	AMSA	Mark Jenneys	8 83475026				
WCC-4480	CATAMARAN - ALUMINIUM - CONCH 12M		SA	PT LINCOLN	AMSA	Mark Jenneys	8 83475026	2000.00	600.00	2300.00	690.00
PAN10799	MOTOR - OUTBOARD - JOHNSON 115HP		SA	PT LINCOLN	AMSA	Mark Jenneys	8 83475026				
PAN10800	MOTOR - OUTBOARD - JOHNSON 115HP		SA	PT LINCOLN	AMSA	Mark Jenneys	8 83475026				
PAL-4434	PUMP - DISPERSANT SYSTEM - WSL		SA	PT LINCOLN	AMSA	Mark Jenneys	8 83475026	100.00	30.00	115.00	35.00
PDC-4936	SKIMMER - DISC - VIKOMA KOMARA 9K		SA	PT LINCOLN	AMSA	Mark Jenneys	8 83475026	250.00	75.00	290.00	87.00
PDB-4997	SKIMMER - SUCTION - SLICKSKIM MANTA RAY		SA	PT LINCOLN	AMSA	Mark Jenneys	8 83475026				
PDA11042	SKIMMER - WEIR - FOILEX MINI		SA	PT LINCOLN	AMSA	Mark Jenneys	8 83475026	200.00	60.00	230.00	69.00
PBD10729	TANK - RECOVERED OIL FLEXIDAM 10000 LT		SA	PT LINCOLN	AMSA	Mark Jenneys	8 83475026	100.00	30.00	115.00	35.00
PBD-5225	TANK - RECOVERED OIL COLLAPSIBLE TRANSPAC		SA	PT LINCOLN	AMSA	Mark Jenneys	8 83475026	150.00	45.00	175.00	53.00
VCA-5217	TRAILER - BOX TANDEM AXLE		SA	PT LINCOLN	AMSA	Mark Jenneys	8 83475026	100.00	30.00	115.00	35.00
PDO10783	ANCHOR KIT - SMALL 15KG SET OF 5		SA	PT LINCOLN	AMSA	Mark Jenneys	8 83475026				
UNK-0003	BOOM - BEACH - SKIMMEX SHORELINE	400 m	SA	PT PIRIE	AMSA	Mark Jenneys	08 83475026				
UNK-0028	BOOM - SELF BUOYANT - AMERICAN MARINE MAXIMAX	200 m	SA	PT PIRIE	AMSA	Mark Jenneys	08 83475026				
PDF-5068	BOOM - SELF BUOYANT - AUST-POL D2	200 m	SA	PT PIRIE	AMSA	Mark Jenneys	08 83475026	45.00	14.00	55.00	17.00
VCA-4311	TRAILER - BOX TANDEM AXLE		SA	PT PIRIE	AMSA	Mark Jenneys	08 83475026	100.00	30.00	115.00	35.00
WCB-4345	DINGHY - INFLATABLE - AVON 4M		SA	PT PIRIE	AMSA	Mark Jenneys	08 83475026	175.00	53.00	205.00	62.00
PDF-5127	BOOM - SELF BUOYANT - PACIFIC GP 500	200 m	SA	THEVENARD	AMSA	Mark Jenneys	08 83475026	45.00	14.00	55.00	17.00
PDF-5027	BOOM - SELF BUOYANT - PACIFIC GP 800	300 m	SA	THEVENARD	AMSA	Mark Jenneys	08 83475026	125.00	38.00	145.00	44.00
PDF11044	BOOM - SELF BUOYANT - STRUCTURFLEX GP	300 m	SA	THEVENARD	AMSA	Mark Jenneys	08 83475026	75.00	23.00	90.00	27.00
VCA11956	TRAILER - BOX TANDEM AXLE		SA	THEVENARD	AMSA	Mark Jenneys	08 83475026	100.00	30.00	115.00	35.00
PDH-4848	BOOM - SELF INFLATING - VERSATECH ZOOM 12/18	300 m	SA	WALLAROO	AMSA	Mark Jenneys	08 83475026	250.00	75.00	290.00	87.00
PDJ-A442	BOOM - TOWED GIANT TROLLBOOM		SA	ADELAIDE	Department	Mark Jenneys	08 83475026				
PDF-A440	BOOM - SELF BUOYANT SLICKBAR MK10	200 m	SA	ADELAIDE	Department	Mark Jenneys	08 83475026				
PDA-A441	SKIMMER - WEIR - DESTROIL 210		SA	ADELAIDE	Department	Mark Jenneys	08 83475026				
WCA-A290	Boat - Aluminium Pontoon Hull c/w spray equip		SA	Pt Stanvac - Mobil	Mobil Refi	Phil Rowbotton	08 83926306				
PDG-A172	Boom Inflatable Ro-Boom (Bay)	200 m	SA	Pt Stanvac - Mobil	Mobil Refi	Phil Rowbotton	08 83926306				
PDG-A173	Boom Inflatable Vikoma Hi Sprint 950	500 m	SA	Pt Stanvac - Mobil	Mobil Refi	Phil Rowbotton	08 83926306				
PDF-A151	Boom Self Buoyant Slickbar Mk10	400 m	SA	Pt Stanvac - Mobil	Mobil Refi	Phil Rowbotton	08 83926306				
MOD-A361	Dispersant - BP AB	5.7 t	SA	Pt Stanvac - Mobil	Mobil Refi	Phil Rowbotton	08 83926306				
MOD-A362	Dispersant - Corexit 9527	4.1 t	SA	Pt Stanvac - Mobil	Mobil Refi	Phil Rowbotton	08 83926306				
MOD-A364	Dispersant - Shell VDC	8.2 t	SA	Pt Stanvac - Mobil	Mobil Refi	Phil Rowbotton	08 83926306				
MOD-A363	Dispersant - Shell VDC	10.5 t	SA	Pt Stanvac - Mobil	Mobil Refi	Phil Rowbotton	08 83926306				
WCC-A293	Launch Beatie 3.6t dispersant		SA	Pt Stanvac - Mobil	Mobil Refi	Phil Rowbotton	08 83926306				
WCC-A294	Launch Eric Coombes 2.4t of dispersant		SA	Pt Stanvac - Mobil	Mobil Refi	Phil Rowbotton	08 83926306				
WCC-A295	Launch Pegasus		SA	Pt Stanvac - Mobil	Mobil Refi	Phil Rowbotton	08 83926306				
PDC-A127	Skimmer - Disc Komara 12K Mk2		SA	Pt Stanvac - Mobil	Mobil Refi	Phil Rowbotton	08 83926306				
PDC-A128	Skimmer - Disc Vikoma Seaskimmer		SA	Pt Stanvac - Mobil	Mobil Refi	Phil Rowbotton	08 83926306				



## Marine Oil Spill Equipment System (MOSES)

MOSES ID	DESCRIPTION	QTY	STATE	LOCATION	OWNER	CONTACT	PHONE	LEVY		NON LEVY	
								IN USE	STANDBY	IN USE	STANDBY
VCA-A249	Trailer - Oil Spill		TAS	Hobart - Ampol	Ampol	Brad Aylett	03 62781345				
PDO10787	ANCHOR KIT - SMALL 15KG SET OF 5		TAS	LAUNCESTON	AMSA	Charles Black	03 63820111				
NEW-0056	BOOM - BEACH - STRUCTURFLEX LAND SEA	200 m	TAS	LAUNCESTON	AMSA	Charles Black	03 63820111				
PDH-4849	BOOM - SELF INFLATING - VERSATECH ZOOM 12/18	300 m	TAS	LAUNCESTON	AMSA	Charles Black	03 63820111	250.00	75.00	290.00	87.00
MOD-0411	DISPERSANT BP A-B	25.6 t	TAS	LAUNCESTON	AMSA	Charles Black	03 63820111				
PAN-4283	MOTOR - OUTBOARD - EVINRUDE 25HP		TAS	LAUNCESTON	AMSA	Charles Black	03 63820111				
PAL-4433	PUMP - DISPERSANT SYSTEM - WSL		TAS	LAUNCESTON	AMSA	Charles Black	03 63820111	100.00	30.00	115.00	35.00
PAL-4251	PUMP - DISPERSANT SYSTEM - WSL		TAS	LAUNCESTON	AMSA	Charles Black	03 63820111	100.00	30.00	115.00	35.00
WCA-4287	PUNT - ALUMINIUM - KAYFA 5.2M		TAS	LAUNCESTON	AMSA	Charles Black	03 63820111	100.00	30.00	115.00	35.00
PDA11043	SKIMMER - WEIR - FOILEX MINI		TAS	LAUNCESTON	AMSA	Charles Black	03 63820111	200.00	60.00	230.00	69.00
PBD11940	TANK - RECOVERED OIL FLEXIDAM 10000 LT		TAS	LAUNCESTON	AMSA	Charles Black	03 63820111	100.00	30.00	115.00	35.00
PBD11935	TANK - RECOVERED OIL FLEXIDAM 10000 LT		TAS	LAUNCESTON	AMSA	Charles Black	03 63820111	100.00	30.00	115.00	35.00
VCA-4291	TRAILER - BOAT TANDEM AXLE		TAS	LAUNCESTON	AMSA	Charles Black	03 63820111	100.00	30.00	115.00	35.00
MOD-0412	DISPERSANT BP A-B	3.6 t	TAS	BURNIE	AMSA	Stephen Loosmic	03 64314744				
PDO10973	ANCHOR KIT - SMALL 15KG SET OF 5		TAS	BURNIE	AMSA	Mike Boss-Walk	03 6434 7300				
PDF11950	BOOM - SELF BUOYANT - STRUCTURFLEX GP	195 m	TAS	BURNIE	AMSA	Mike Boss-Walk	03 6434 7300	75.00	23.00	90.00	27.00
PDH-4255	BOOM - SELF INFLATING - EXPANDI 3000	200 m	TAS	BURNIE	AMSA	Mike Boss-Walk	03 6434 7300	250.00	75.00	290.00	87.00
PAN-4897	MOTOR - OUTBOARD - MARINER 25HP		TAS	BURNIE	AMSA	Mike Boss-Walk	03 6434 7300				
WCA-4399	PUNT - ALUMINIUM - KAYFA 5.2M		TAS	BURNIE	AMSA	Mike Boss-Walk	03 6434 7300	100.00	30.00	115.00	35.00
PDA10771	SKIMMER - WEIR - PHAROS HARBOURMATE		TAS	BURNIE	AMSA	Mike Boss-Walk	03 6434 7300	200.00	60.00	230.00	69.00
PBD11972	TANK - RECOVERED OIL FLEXIDAM 10000 LT		TAS	BURNIE	AMSA	Mike Boss-Walk	03 6434 7300	100.00	30.00	115.00	35.00
PBD11971	TANK - RECOVERED OIL FLEXIDAM 10000 LT		TAS	BURNIE	AMSA	Mike Boss-Walk	03 6434 7300	100.00	30.00	115.00	35.00
VCA11957	TRAILER - BOAT SINGLE AXLE		TAS	BURNIE	AMSA	Mike Boss-Walk	03 6434 7300	75.00	23.00	90.00	27.00
VCA11958	TRAILER - BOX SINGLE AXLE		TAS	BURNIE	AMSA	Mike Boss-Walk	03 6434 7300				
PDO11645	ANCHOR KIT - SMALL 15KG SET OF 5		TAS	DEVONPORT	AMSA	Richard O'Neill	03 64240911				
PDI11637	BOOM - BEACH - STRUCTURFLEX LAND SEA	160 m	TAS	DEVONPORT	AMSA	Richard O'Neill	03 64240911				
PDH-5709	BOOM - SELF INFLATING - VERSATECH ZOOM 18/24	475 m	TAS	DEVONPORT	AMSA	Richard O'Neill	03 64240911	300.00	90.00	345.00	104.00
MOD-0410	DISPERSANT ARDROX 6120	7.6 t	TAS	DEVONPORT	AMSA	Richard O'Neill	03 64240911				
MOD-0413	DISPERSANT BP A-B	16.2 t	TAS	DEVONPORT	AMSA	Richard O'Neill	03 64240911				
PAL-4436	PUMP - DISPERSANT SYSTEM - WSL		TAS	DEVONPORT	AMSA	Richard O'Neill	03 64240911	100.00	30.00	115.00	35.00
PAL-4481	PUMP - DISPERSANT SYSTEM - WSL		TAS	DEVONPORT	AMSA	Richard O'Neill	03 64240911	100.00	30.00	115.00	35.00
PDC-4288	SKIMMER - DISC - VIKOMA KOMARA 12K MK2		TAS	DEVONPORT	AMSA	Richard O'Neill	03 64240911	400.00	120.00	460.00	138.00
PDD-4394	SKIMMER - ROPE MOP - PETRO CSC62		TAS	DEVONPORT	AMSA	Richard O'Neill	03 64240911	550.00	165.00	635.00	191.00
PDA11982	SKIMMER - WEIR - FOILEX		TAS	DEVONPORT	AMSA	Richard O'Neill	03 64240911				
PDK-4384	SPRAY BUCKET - DISPERSANT HELICOPTER - SIMPLEX		TAS	DEVONPORT	AMSA	Richard O'Neill	03 64240911				
VCA-4285	TRAILER - BOAT TANDEM AXLE		TAS	DEVONPORT	AMSA	Richard O'Neill	03 64240911	100.00	30.00	115.00	35.00
VCA-4400	TRAILER - BOX TANDEM AXLE		TAS	DEVONPORT	AMSA	Richard O'Neill	03 64240911	100.00	30.00	115.00	35.00
PDO10788	ANCHOR KIT - SMALL 15KG SET OF 5		TAS	HOBART	AMSA	Port Control	03 62351061				
PDI11638	BOOM - BEACH - STRUCTURFLEX LAND SEA	200 m	TAS	HOBART	AMSA	Port Control	03 62351061				
PDH-4939	BOOM - SELF INFLATING - EXPANDI 3000	300 m	TAS	HOBART	AMSA	Port Control	03 62351061	250.00	75.00	290.00	87.00

Marine Oil Spill Equipment System (MOSES)

MOSES ID	DESCRIPTION	QTY	STATE	LOCATION	OWNER	CONTACT	PHONE	LEVY		NON LEVY	
								IN USE	STANDBY	IN USE	STANDBY
MOD-0414	DISPERSANT BP A-B	38.4 t	TAS	HOBART	AMSA	Port Control	03 62351061				
PAN-4368	MOTOR - OUTBOARD - MARINER 40HP		TAS	HOBART	AMSA	Port Control	03 62351061				
PAL-4494	PUMP - DISPERSANT SYSTEM - WSL		TAS	HOBART	AMSA	Port Control	03 62351061	100.00	30.00	115.00	35.00
PAL-4233	PUMP - DISPERSANT SYSTEM - WSL		TAS	HOBART	AMSA	Port Control	03 62351061	100.00	30.00	115.00	35.00
PAL-4235	PUMP - DISPERSANT SYSTEM - WSL		TAS	HOBART	AMSA	Port Control	03 62351061	100.00	30.00	115.00	35.00
PAL-4221	PUMP - DISPERSANT SYSTEM - WSL		TAS	HOBART	AMSA	Port Control	03 62351061	100.00	30.00	115.00	35.00
PAL10978	PUMP - DISPERSANT SYSTEM - SEASPRAY		TAS	HOBART	AMSA	Port Control	03 62351061	250.00	75.00	290.00	87.00
WCA-4912	PUNT - ALUMINIUM - KAYFA 5.2M		TAS	HOBART	AMSA	Port Control	03 62351061	100.00	30.00	115.00	35.00
PFA-4362	RADIO - TRANSCEIVER VHF - AWA XP3		TAS	HOBART	AMSA	Port Control	03 62351061	25.00	8.00	30.00	9.00
PDC-4225	SKIMMER - DISC - VIKOMA KOMARA 12K MK2		TAS	HOBART	AMSA	Port Control	03 62351061	400.00	120.00	460.00	138.00
PDD-4248	SKIMMER - ROPE MOP - ORI PIRANHA 1000		TAS	HOBART	AMSA	Port Control	03 62351061	250.00	75.00	290.00	87.00
PDA11041	SKIMMER - WEIR - FOILEX MINI		TAS	HOBART	AMSA	Port Control	03 62351061	200.00	60.00	230.00	69.00
PBD11942	TANK - RECOVERED OIL FLEXIDAM 10000 LT		TAS	HOBART	AMSA	Port Control	03 62351061	100.00	30.00	115.00	35.00
PBD11937	TANK - RECOVERED OIL FLEXIDAM 10000 LT		TAS	HOBART	AMSA	Port Control	03 62351061	100.00	30.00	115.00	35.00
VCA-4913	TRAILER - BOAT TANDEM AXLE		TAS	HOBART	AMSA	Port Control	03 62351061	100.00	30.00	115.00	35.00
VCA11959	TRAILER - BOX TANDEM AXLE		TAS	HOBART	AMSA	Port Control	03 62351061	100.00	30.00	115.00	35.00
VCA-4217	TRAILER - BOX TANDEM AXLE		TAS	HOBART	AMSA	Port Control	03 62351061	100.00	30.00	115.00	35.00
MOD-A333	Dispersant - Shell VDC	1 t	TAS	Burnie - BP	BP	Stephen Loosm	03 64314744				
VCA-A257	Trailer - Oil Spill		TAS	Burnie - BP	BP	Stephen Loosm	03 64314744				
PAL-A016	Spray Unit Vessel Mounted Vikospray		TAS	Burnie - Port Authority	BP	Stephen Loosm	03 64314744				
MOD-A335	Dispersant - BP 1100X	1.6 t	TAS	Hobart - Tasfuel	BP (Tasfu	Glenn Thompso	03 62286377				
VCA-A266	Trailer - Oil Spill		TAS	LAUNCESTON	Mobil	Wayne Goss	03 63821131				
MOD-A357	Dispersant - Shell VDC	1 t	TAS	Launceston - Port Auth	Mobil	Wayne Goss	03 63821131				
PAL-A022	Spray Unit Vessel Mounted Vikospray		TAS	Launceston - Port Auth	Mobil	Wayne Goss	03 63821131				
MOD-A372	Dispersant - Shell VDC	2 t	TAS	Devonport - Shell	Shell	Steven Roe	03 64245924				
PAL-A030	Spray Unit Vessel Mounted Vikospray		TAS	Devonport - Shell	Shell	Steven Roe	03 64245924				
VCA-A273	Trailer - Oil Spill		TAS	Devonport - Shell	Shell	Steven Roe	03 64245924				

## Marine Oil Spill Equipment System (MOSES)

MOSES ID	DESCRIPTION	QTY	STATE	LOCATION	OWNER	CONTACT	PHONE	LEVY		NON LEVY	
								IN USE	STANDBY	IN USE	STANDBY
WCE-A301	Barge - Storage Lancer 25t		VIC	Geelong - AMOSC	AMOSC	Duty Officer	03 52721555				
WCE-A300	Barge - Storage Lancer 25t		VIC	Geelong - AMOSC	AMOSC	Duty Officer	03 52721555				
WCE-A299	Barge - Storage Lancer 25t		VIC	Geelong - AMOSC	AMOSC	Duty Officer	03 52721555				
PDI-A198	Boom Accessory Beach Guardian Deployment Kit		VIC	Geelong - AMOSC	AMOSC	Duty Officer	03 52721555				
PDI-A197	Boom Accessory Beach Guardian Deployment Kit		VIC	Geelong - AMOSC	AMOSC	Duty Officer	03 52721555				
PDI-A196	Boom Accessory Beach Guardian Deployment Kit		VIC	Geelong - AMOSC	AMOSC	Duty Officer	03 52721555				
PDI-A195	Boom Accessory Beach Guardian Deployment Kit		VIC	Geelong - AMOSC	AMOSC	Duty Officer	03 52721555				
PDG-A167	Boom Accessory Ro-Boom Power Pack		VIC	Geelong - AMOSC	AMOSC	Duty Officer	03 52721555				
PDG-A166	Boom Accessory Ro-Boom Power Pack		VIC	Geelong - AMOSC	AMOSC	Duty Officer	03 52721555				
PDG-A165	Boom Accessory Ro-Boom Power Pack		VIC	Geelong - AMOSC	AMOSC	Duty Officer	03 52721555				
PDG-A164	Boom Accessory Ro-Boom Power Pack		VIC	Geelong - AMOSC	AMOSC	Duty Officer	03 52721555				
PDG-A163	Boom Accessory Ro-Boom Power Pack		VIC	Geelong - AMOSC	AMOSC	Duty Officer	03 52721555				
PDO-A232	Boom Anchor Kit including 12x30kg anchors		VIC	Geelong - AMOSC	AMOSC	Duty Officer	03 52721555				
PDO-A231	Boom Anchor Kit including 12x30kg anchors		VIC	Geelong - AMOSC	AMOSC	Duty Officer	03 52721555				
PDO-A230	Boom Anchor Kit including 12x30kg anchors		VIC	Geelong - AMOSC	AMOSC	Duty Officer	03 52721555				
PDO-A229	Boom Anchor Kit including 12x30kg anchors		VIC	Geelong - AMOSC	AMOSC	Duty Officer	03 52721555				
PDO-A228	Boom Anchor Kit including 12x30kg anchors		VIC	Geelong - AMOSC	AMOSC	Duty Officer	03 52721555				
PDO-A227	Boom Anchor Kit including 12x30kg anchors		VIC	Geelong - AMOSC	AMOSC	Duty Officer	03 52721555				
PDO-A236	Boom Anchor Kit Shore Anchors		VIC	Geelong - AMOSC	AMOSC	Duty Officer	03 52721555				
PDO-A235	Boom Anchor Kit Shore Anchors		VIC	Geelong - AMOSC	AMOSC	Duty Officer	03 52721555				
PDO-A234	Boom Anchor Kit Shore Anchors		VIC	Geelong - AMOSC	AMOSC	Duty Officer	03 52721555				
PDO-A233	Boom Anchor Kit Shore Anchors		VIC	Geelong - AMOSC	AMOSC	Duty Officer	03 52721555				
PDO-A237	Boom Anchor Kit Shore Anchors		VIC	Geelong - AMOSC	AMOSC	Duty Officer	03 52721555				
PDI-A194	Boom Beach Beach Guardian	2000 n	VIC	Geelong - AMOSC	AMOSC	Duty Officer	03 52721555				
PDG-A162	Boom Inflatable Ro-Boom 1500 (with winder)	3000 n	VIC	Geelong - AMOSC	AMOSC	Duty Officer	03 52721555				
PDG-A161	Boom Inflatable Ro-skim Boom 1500 (with winder)	72 m	VIC	Geelong - AMOSC	AMOSC	Duty Officer	03 52721555				
PDH-A177	Boom Self Inflating Versatech Zoom	3350 n	VIC	Geelong - AMOSC	AMOSC	Duty Officer	03 52721555				
PAK-A004	Cleaner Industrial - Electric/Steam Gen on trailer		VIC	Geelong - AMOSC	AMOSC	Duty Officer	03 52721555				
PAK-A003	Cleaner Industrial - Electric/Steam Gen on trailer		VIC	Geelong - AMOSC	AMOSC	Duty Officer	03 52721555				
PAK-A002	Cleaner Industrial - Electric/Steam Gen on trailer		VIC	Geelong - AMOSC	AMOSC	Duty Officer	03 52721555				
PAK-A001	Cleaner Industrial - Electric/Steam Gen on trailer		VIC	Geelong - AMOSC	AMOSC	Duty Officer	03 52721555				
PFA-A238	Communications - Base Station VHF/UHF		VIC	Geelong - AMOSC	AMOSC	Duty Officer	03 52721555				
PFA-A240	Communications - Radio TX/RX UHF Handheld 3 units		VIC	Geelong - AMOSC	AMOSC	Duty Officer	03 52721555				
PFA-A239	Communications - Radio TX/RX UHF Handheld 3 units		VIC	Geelong - AMOSC	AMOSC	Duty Officer	03 52721555				
PFA-A243	Communications - Radio TX/RX VHF Airband Handheld		VIC	Geelong - AMOSC	AMOSC	Duty Officer	03 52721555				
PFA-A242	Communications - Radio TX/RX VHF Handheld 3 units		VIC	Geelong - AMOSC	AMOSC	Duty Officer	03 52721555				
PFA-A241	Communications - Radio TX/RX VHF Handheld 3 units		VIC	Geelong - AMOSC	AMOSC	Duty Officer	03 52721555				
PFA-A244	Communications - Satellite TCS 9200 phone/fax		VIC	Geelong - AMOSC	AMOSC	Duty Officer	03 52721555				
MOD-A310	Dispersant - Dasic Slickgone NS (1t tanks)	102 t	VIC	Geelong - AMOSC	AMOSC	Duty Officer	03 52721555				
MOD-A311	Dispersant - Dasic Slickgone NS (200 lt drums)	48 t	VIC	Geelong - AMOSC	AMOSC	Duty Officer	03 52721555				

## Marine Oil Spill Equipment System (MOSES)

MOSES ID	DESCRIPTION	QTY	STATE	LOCATION	OWNER	CONTACT	PHONE	LEVY		NON LEVY	
								IN USE	STANDBY	IN USE	STANDBY
WCF-A308	Oil Recovery Vessel Egmpol Barge		VIC	Geelong - AMOSC	AMOSC	Duty Officer	03 52721555				
MOF-A312	Oiled Fauna Kit		VIC	Geelong - AMOSC	AMOSC	Duty Officer	03 52721555				
PAL-A006	Pump - Dispersant Transfer diesel powered		VIC	Geelong - AMOSC	AMOSC	Duty Officer	03 52721555				
PAL-A005	Pump - Dispersant Transfer diesel powered		VIC	Geelong - AMOSC	AMOSC	Duty Officer	03 52721555				
PAL-A009	Pump - GP Transfer diesel powered		VIC	Geelong - AMOSC	AMOSC	Duty Officer	03 52721555				
PAL-A008	Pump - GP Transfer diesel powered		VIC	Geelong - AMOSC	AMOSC	Duty Officer	03 52721555				
PAL-A007	Pump - GP Transfer diesel powered		VIC	Geelong - AMOSC	AMOSC	Duty Officer	03 52721555				
PDC-A117	Skimmer - Disc Komara 12K Mk2		VIC	Geelong - AMOSC	AMOSC	Duty Officer	03 52721555				
PDC-A116	Skimmer - Disc Komara 12K Mk2		VIC	Geelong - AMOSC	AMOSC	Duty Officer	03 52721555				
PDC-A115	Skimmer - Disc Komara 30K		VIC	Geelong - AMOSC	AMOSC	Duty Officer	03 52721555				
PDC-A114	Skimmer - Disc Komara 30K		VIC	Geelong - AMOSC	AMOSC	Duty Officer	03 52721555				
PDD-A133	Skimmer - Rope Mop OM 240 DP on trailer		VIC	Geelong - AMOSC	AMOSC	Duty Officer	03 52721555				
PDD-A132	Skimmer - Rope Mop OM 240 DP on trailer		VIC	Geelong - AMOSC	AMOSC	Duty Officer	03 52721555				
PDD-A135	Skimmer - Rope Mop OM 260 DP on trailer		VIC	Geelong - AMOSC	AMOSC	Duty Officer	03 52721555				
PDD-A134	Skimmer - Rope Mop OM 260 DP on trailer		VIC	Geelong - AMOSC	AMOSC	Duty Officer	03 52721555				
PDB-A101	Skimmer - Suction Ro-Vac		VIC	Geelong - AMOSC	AMOSC	Duty Officer	03 52721555				
PDB-A100	Skimmer - Suction Ro-Vac		VIC	Geelong - AMOSC	AMOSC	Duty Officer	03 52721555				
PDB-A099	Skimmer - Suction Ro-Vac		VIC	Geelong - AMOSC	AMOSC	Duty Officer	03 52721555				
PDB-A098	Skimmer - Suction Ro-Vac		VIC	Geelong - AMOSC	AMOSC	Duty Officer	03 52721555				
PDA-A082	Skimmer - Weir Desmi 250		VIC	Geelong - AMOSC	AMOSC	Duty Officer	03 52721555				
PDA-A084	Skimmer - Weir GT 185		VIC	Geelong - AMOSC	AMOSC	Duty Officer	03 52721555				
PDA-A083	Skimmer - Weir GT 185		VIC	Geelong - AMOSC	AMOSC	Duty Officer	03 52721555				
PDA-A086	Skimmer - Weir Ro-Skim		VIC	Geelong - AMOSC	AMOSC	Duty Officer	03 52721555				
PDA-A085	Skimmer - Weir Ro-Skim		VIC	Geelong - AMOSC	AMOSC	Duty Officer	03 52721555				
MOS-A313	Sorbent Boom 3M Oilsorb	1104m	VIC	Geelong - AMOSC	AMOSC	Duty Officer	03 52721555				
MOS-A314	Sorbent Pads 3M 450x450	88 pac	VIC	Geelong - AMOSC	AMOSC	Duty Officer	03 52721555				
PDK-A216	Spray Bucket Dispersant Helicopter Simplex 6810		VIC	Geelong - AMOSC	AMOSC	Duty Officer	03 52721555				
PDK-A215	Spray Bucket Dispersant Helicopter Simplex 6810		VIC	Geelong - AMOSC	AMOSC	Duty Officer	03 52721555				
PAL-A010	Spray Unit Vessel Mounted Vikospray		VIC	Geelong - AMOSC	AMOSC	Duty Officer	03 52721555				
PBD-A042	Tank - Oil Fastank 9000 It		VIC	Geelong - AMOSC	AMOSC	Duty Officer	03 52721555				
PBD-A041	Tank - Oil Fastank 9000 It		VIC	Geelong - AMOSC	AMOSC	Duty Officer	03 52721555				
PBD-A040	Tank - Oil Fastank 9000 It		VIC	Geelong - AMOSC	AMOSC	Duty Officer	03 52721555				
PBD-A039	Tank - Oil Fastank 9000 It		VIC	Geelong - AMOSC	AMOSC	Duty Officer	03 52721555				
PBD-A038	Tank - Oil Fastank 9000 It		VIC	Geelong - AMOSC	AMOSC	Duty Officer	03 52721555				
PBD-A037	Tank - Oil Fastank 9000 It		VIC	Geelong - AMOSC	AMOSC	Duty Officer	03 52721555				
PBD-A044	Tank - Oil Vikotank 13000 It		VIC	Geelong - AMOSC	AMOSC	Duty Officer	03 52721555				
PBD-A043	Tank - Oil Vikotank 13000 It		VIC	Geelong - AMOSC	AMOSC	Duty Officer	03 52721555				
VCA-A252	Trailer - Oil Spill		VIC	Newport - Ampol	Ampol	Hem Kumar	03 92879620				
MOD-0419	DISPERSANT COREXIT 9527	4 t	VIC	GEELONG	AMSA	Ian Trezise	03 52221644				
MOD-0434	DISPERSANT ARDROX 6120	9.6 t	VIC	GEELONG	AMSA	Ian Trezise	03 52221644				

## Marine Oil Spill Equipment System (MOSES)

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MOSES ID	DESCRIPTION	QTY	STATE	LOCATION	OWNER	CONTACT	PHONE	LEVY		NON LEVY	
								IN USE	STANDBY	IN USE	STANDBY
PDH-4457	BOOM - SELF INFLATING - EXPANDI 3000	300 m	VIC	GEELONG	AMSA	Ian Trezise	03 52221644	250.00	75.00	290.00	87.00
WCB-4892	DINGHY - SEMI RIGID - ZODIAC PRO 5.3M		VIC	GEELONG	AMSA	Ian Trezise	03 52221644	300.00	90.00	345.00	104.00
PAN-4324	MOTOR - OUTBOARD - JOHNSON 30HP		VIC	GEELONG	AMSA	Ian Trezise	03 52221644				
PAN-4893	MOTOR - OUTBOARD - YAMAHA 70 HP		VIC	GEELONG	AMSA	Ian Trezise	03 52221644				
PAL-4410	PUMP - DISPERSANT - LOMBARDINI		VIC	GEELONG	AMSA	Ian Trezise	03 52221644	100.00	30.00	105.00	32.00
WCA-4408	PUNT - ALUMINIUM - QUINTREX SLOGGER 4.5M		VIC	GEELONG	AMSA	Ian Trezise	03 52221644	100.00	30.00	115.00	35.00
PFA-4230	RADIO - TRANSCEIVER UHF - BRODIE KING		VIC	GEELONG	AMSA	Ian Trezise	03 52221644	25.00	8.00	30.00	9.00
PFA-4424	RADIO - TRANSCEIVER UHF - BRODIE KING		VIC	GEELONG	AMSA	Ian Trezise	03 52221644	25.00	8.00	30.00	9.00
PFA-4240	RADIO - TRANSCEIVER UHF - BRODIE KING		VIC	GEELONG	AMSA	Ian Trezise	03 52221644	25.00	8.00	30.00	9.00
PDC-4413	SKIMMER - DISC - VIKOMA KOMARA 12K MK3		VIC	GEELONG	AMSA	Ian Trezise	03 52221644	400.00	120.00	460.00	138.00
PDD-4452	SKIMMER - ROPE MOP - ORI BARRACUDA 2000		VIC	GEELONG	AMSA	Ian Trezise	03 52221644	400.00	120.00	460.00	138.00
PDK-4412	SPRAY BUCKET - DISPERSANT HELICOPTER - SIMPLEX		VIC	GEELONG	AMSA	Ian Trezise	03 52221644				
PBD-4415	TANK - RECOVERED OIL COLLAPSIBLE TRANSPAC		VIC	GEELONG	AMSA	Ian Trezise	03 52221644	150.00	45.00	175.00	53.00
PBD-4407	TANK - RECOVERED OIL COLLAPSIBLE TRANSPAC		VIC	GEELONG	AMSA	Ian Trezise	03 52221644	150.00	45.00	175.00	53.00
VCA-4414	TRAILER - BOAT		VIC	GEELONG	AMSA	Ian Trezise	03 52221644				
VCA-4361	TRAILER - BOAT		VIC	GEELONG	AMSA	Ian Trezise	03 52221644				
VCA-4458	TRAILER - BOX TANDEM AXLE		VIC	GEELONG	AMSA	Ian Trezise	03 52221644	100.00	30.00	115.00	35.00
VCA-4419	TRAILER - BOX TANDEM AXLE		VIC	GEELONG	AMSA	Ian Trezise	03 52221644	100.00	30.00	115.00	35.00
VCA-4418	TRAILER - BOX TANDEM AXLE		VIC	GEELONG	AMSA	Ian Trezise	03 52221644	100.00	30.00	115.00	35.00
VCA-4417	TRAILER - BOX TANDEM AXLE		VIC	GEELONG	AMSA	Ian Trezise	03 52221644	100.00	30.00	115.00	35.00
VCA-5001	TRAILER - BOX TANDEM AXLE		VIC	LAKES ENTRANCE	AMSA	Trevor Rudge	03 51521974	100.00	30.00	115.00	35.00
WCE-4983	BARGE - LANDING - CLAM 12M		VIC	MELBOURNE	AMSA	Mike Williams	03 92865520	2000.00	600.00	2300.00	690.00
PDI-4977	BOOM - BEACH - SKIMMEX SHORELINE	450 m	VIC	MELBOURNE	AMSA	Ben Cropley	03 96297994	120.00	36.00	140.00	42.00
PDJ11636	BOOM - BEACH - STRUCTURFLEX LAND SEA	140 m	VIC	MELBOURNE	AMSA	Ben Cropley	03 96297994				
UNK-0007	BOOM - BEACH - STRUCTURFLEX LAND SEA	160 m	VIC	MELBOURNE	AMSA	Ben Cropley	03 96297994				
PDI-4976	BOOM - INFLATABLE - SKIMMEX CURTAIN 370MM	90 m	VIC	MELBOURNE	AMSA	Ben Cropley	03 96297994				
PDG-4975	BOOM - INFLATABLE - SKIMMEX CURTAIN 650MM	90 m	VIC	MELBOURNE	AMSA	Ben Cropley	03 96297994				
PDH-4847	BOOM - SELF INFLATING - VERSATECH ZOOM 12/18	325 m	VIC	MELBOURNE	AMSA	Ben Cropley	03 96297994	250.00	75.00	290.00	87.00
MOD-0415	DISPERSANT ARDROX 6120	4.8 t	VIC	MELBOURNE	AMSA	Ben Cropley	03 96297994				
MOD-0417	DISPERSANT BP A-B	20.8 t	VIC	MELBOURNE	AMSA	Ben Cropley	03 96297994				
PAL-5010	PUMP - DISPERSANT SYSTEM - WSL		VIC	MELBOURNE	AMSA	Ben Cropley	03 96297994	100.00	30.00	115.00	35.00
PAH-4284	PUMP - GENERAL PURPOSE - HONDA WD 20X		VIC	MELBOURNE	AMSA	Ben Cropley	03 96297994				
PAH-4290	PUMP - GENERAL PURPOSE - HONDA WD 20X		VIC	MELBOURNE	AMSA	Ben Cropley	03 96297994				
PAH-4286	PUMP - GENERAL PURPOSE - HONDA WD 20X		VIC	MELBOURNE	AMSA	Ben Cropley	03 96297994				
PAM10976	PUMP - RECOVERED OIL TRANSFER - ELASTEC S3E		VIC	MELBOURNE	AMSA	Ben Cropley	03 96297994				
PAL10976	PUMP - RECOVERED OIL TRANSFER - ELASTEC S3E		VIC	MELBOURNE	AMSA	Ben Cropley	03 96297994	250.00	75.00	290.00	87.00
PFA-4985	RADIO - TRANSCEIVER VHF - GME		VIC	MELBOURNE	AMSA	Ben Cropley	03 96297994	25.00	8.00	30.00	9.00
PAF-4215	WINCH - BOOM RECOVERY - MARCO POWER BLOCK		VIC	MELBOURNE	AMSA	Ben Cropley	03 96297994				
PDO10786	ANCHOR KIT - SMALL 15KG SET OF 5		VIC	MELBOURNE	AMSA	Ben Cropley	03 96297994				
PDI-4974	BOOM - INFLATABLE - SKIMMEX CURTAIN 300MM	35 m	VIC	MELBOURNE	AMSA	Ben Cropley	03 96297994				

Marine Oil Spill Equipment System (MOSES)

MOSES ID	DESCRIPTION	QTY	STATE	LOCATION	OWNER	CONTACT	PHONE	LEVY		NON LEVY	
								IN USE	STANDBY	IN USE	STANDBY
PDF-4978	BOOM - SELF BUOYANT - AUST-POL D2	200 m	VIC	MELBOURNE	AMSA	Ben Cropley	03 96297994	45.00	14.00	55.00	17.00
PDF-5153	BOOM - SELF BUOYANT - PACIFIC GP 500	675 m	VIC	MELBOURNE	AMSA	Ben Cropley	03 96297994	45.00	14.00	55.00	17.00
PAK-4994	CLEANER - HIGH PRESSURE WATER - SILVAN 100MX		VIC	MELBOURNE	AMSA	Ben Cropley	03 96297994				
WCB-4365	DINGHY - SEMI RIGID - ZODIAC PRO 5.3M		VIC	MELBOURNE	AMSA	Ben Cropley	03 96297994	300.00	90.00	345.00	104.00
PEA-4373	GENERATING SET - PORTABLE 3 KVA		VIC	MELBOURNE	AMSA	Ben Cropley	03 96297994				
PEA-4357	GENERATING SET - PORTABLE 3 KVA		VIC	MELBOURNE	AMSA	Ben Cropley	03 96297994				
PBD-4214	LOCKER - EQUIPMENT - ALUMINIUM		VIC	MELBOURNE	AMSA	Ben Cropley	03 96297994				
PBD-4254	LOCKER - EQUIPMENT - ALUMINIUM		VIC	MELBOURNE	AMSA	Ben Cropley	03 96297994				
PBD-4244	LOCKER - EQUIPMENT - ALUMINIUM		VIC	MELBOURNE	AMSA	Ben Cropley	03 96297994				
PBD-4228	LOCKER - EQUIPMENT - ALUMINIUM		VIC	MELBOURNE	AMSA	Ben Cropley	03 96297994				
PAN-4987	MOTOR - OUTBOARD - EVINRUDE 25HP		VIC	MELBOURNE	AMSA	Ben Cropley	03 96297994				
PAN-4972	MOTOR - OUTBOARD - EVINRUDE 70HP		VIC	MELBOURNE	AMSA	Ben Cropley	03 96297994				
PAN-4971	MOTOR - OUTBOARD - EVINRUDE 70HP		VIC	MELBOURNE	AMSA	Ben Cropley	03 96297994				
PAN-4377	MOTOR - OUTBOARD - JOHNSON 70HP		VIC	MELBOURNE	AMSA	Ben Cropley	03 96297994				
PAL-5014	PUMP - DISPERSANT SYSTEM - WSL		VIC	MELBOURNE	AMSA	Ben Cropley	03 96297994	100.00	30.00	115.00	35.00
PAL-5013	PUMP - DISPERSANT SYSTEM - WSL		VIC	MELBOURNE	AMSA	Ben Cropley	03 96297994	100.00	30.00	115.00	35.00
PAL-5011	PUMP - DISPERSANT SYSTEM - WSL		VIC	MELBOURNE	AMSA	Ben Cropley	03 96297994	100.00	30.00	115.00	35.00
PAL-4982	PUMP - DISPERSANT SYSTEM - SILVAN		VIC	MELBOURNE	AMSA	Ben Cropley	03 96297994	125.00	38.00	145.00	44.00
PAH-4292	PUMP - GENERAL PURPOSE - HONDA WD 20X		VIC	MELBOURNE	AMSA	Ben Cropley	03 96297994				
PAH-4973	PUMP - GENERAL PURPOSE - HONDA WD 20X		VIC	MELBOURNE	AMSA	Ben Cropley	03 96297994				
WCA-4986	PUNT - ALUMINIUM - QUINTREX SLOGGER 4.5M		VIC	MELBOURNE	AMSA	Ben Cropley	03 96297994	100.00	30.00	115.00	35.00
PFA-4956	RADIO - TRANSCEIVER UHF - MOTOROLA HT440		VIC	MELBOURNE	AMSA	Ben Cropley	03 96297994				
PFA-4954	RADIO - TRANSCEIVER UHF - MOTOROLA HT440		VIC	MELBOURNE	AMSA	Ben Cropley	03 96297994				
PFA-4953	RADIO - TRANSCEIVER UHF - MOTOROLA HT440		VIC	MELBOURNE	AMSA	Ben Cropley	03 96297994				
PFA-4952	RADIO - TRANSCEIVER UHF - MOTOROLA HT440		VIC	MELBOURNE	AMSA	Ben Cropley	03 96297994				
PFA-4951	RADIO - TRANSCEIVER UHF - MOTOROLA HT440		VIC	MELBOURNE	AMSA	Ben Cropley	03 96297994				
PFA-4957	RADIO - TRANSCEIVER UHF - MOTOROLA MAXAR		VIC	MELBOURNE	AMSA	Ben Cropley	03 96297994				
PFA-4948	RADIO - TRANSCEIVER UHF - SPX		VIC	MELBOURNE	AMSA	Ben Cropley	03 96297994	25.00	8.00	30.00	9.00
PFA-4947	RADIO - TRANSCEIVER UHF - SPX		VIC	MELBOURNE	AMSA	Ben Cropley	03 96297994	25.00	8.00	30.00	9.00
PFA-4946	RADIO - TRANSCEIVER UHF - SPX		VIC	MELBOURNE	AMSA	Ben Cropley	03 96297994	25.00	8.00	30.00	9.00
PFA-4945	RADIO - TRANSCEIVER UHF - SPX		VIC	MELBOURNE	AMSA	Ben Cropley	03 96297994	25.00	8.00	30.00	9.00
PFA-4950	RADIO - TRANSCEIVER VHF AIR - ICOM ICA20		VIC	MELBOURNE	AMSA	Ben Cropley	03 96297994	25.00	8.00	30.00	9.00
PFA-4949	RADIO - TRANSCEIVER VHF AIR - ICOM ICA20		VIC	MELBOURNE	AMSA	Ben Cropley	03 96297994	25.00	8.00	30.00	9.00
PDE-4429	SKIMMER - BELT - SHARK SERIES 5000		VIC	MELBOURNE	AMSA	Ben Cropley	03 96297994	1000.00	300.00	1150.00	345.00
PDD-4961	SKIMMER - ROPE MOP - OMI 140		VIC	MELBOURNE	AMSA	Ben Cropley	03 96297994	250.00	75.00	290.00	87.00
PDD-4960	SKIMMER - ROPE MOP - OMI 140		VIC	MELBOURNE	AMSA	Ben Cropley	03 96297994	250.00	75.00	290.00	87.00
PDD-4959	SKIMMER - ROPE MOP - OMI 140		VIC	MELBOURNE	AMSA	Ben Cropley	03 96297994	250.00	75.00	290.00	87.00
PDD-4958	SKIMMER - ROPE MOP - OMI 140		VIC	MELBOURNE	AMSA	Ben Cropley	03 96297994	250.00	75.00	290.00	87.00
PDD-4962	SKIMMER - ROPE MOP - OMI 140		VIC	MELBOURNE	AMSA	Ben Cropley	03 96297994	250.00	75.00	290.00	87.00
PDD-4964	SKIMMER - ROPE MOP - OMI 260		VIC	MELBOURNE	AMSA	Ben Cropley	03 96297994	400.00	120.00	460.00	138.00

## Marine Oil Spill Equipment System (MOSES)

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MOSES ID	DESCRIPTION	QTY	STATE	LOCATION	OWNER	CONTACT	PHONE	LEVY		NON LEVY	
								IN USE	STANDBY	IN USE	STANDBY
PDB10776	SKIMMER - SUCTION - VIKOMA SHOREVAC		VIC	MELBOURNE	AMSA	Ben Cropley	03 96297994	300.00	90.00	345.00	104.00
PDB-4963	SKIMMER - SUCTION - VIKOMA VIKOVAC		VIC	MELBOURNE	AMSA	Ben Cropley	03 96297994	300.00	90.00	345.00	104.00
PBD10732	TANK - RECOVERED OIL FLEXIDAM 10000 LT		VIC	MELBOURNE	AMSA	Ben Cropley	03 96297994	100.00	30.00	115.00	35.00
PBD10731	TANK - RECOVERED OIL FLEXIDAM 10000 LT		VIC	MELBOURNE	AMSA	Ben Cropley	03 96297994	100.00	30.00	115.00	35.00
PBD-4992	TANK - RECOVERED OIL COLLAPSIBLE TRANSPAC		VIC	MELBOURNE	AMSA	Ben Cropley	03 96297994	150.00	45.00	175.00	53.00
PBD-4991	TANK - RECOVERED OIL COLLAPSIBLE TRANSPAC		VIC	MELBOURNE	AMSA	Ben Cropley	03 96297994	150.00	45.00	175.00	53.00
PBD-4990	TANK - RECOVERED OIL COLLAPSIBLE TRANSPAC		VIC	MELBOURNE	AMSA	Ben Cropley	03 96297994	150.00	45.00	175.00	53.00
PBD-4989	TANK - RECOVERED OIL COLLAPSIBLE TRANSPAC		VIC	MELBOURNE	AMSA	Ben Cropley	03 96297994	150.00	45.00	175.00	53.00
PAO-4427	TOWER - FLOODLIGHTS - CLARK		VIC	MELBOURNE	AMSA	Ben Cropley	03 96297994				
PAO-4423	TOWER - FLOODLIGHTS - CLARK		VIC	MELBOURNE	AMSA	Ben Cropley	03 96297994				
VCA-4374	TRAILER - BOAT		VIC	MELBOURNE	AMSA	Ben Cropley	03 96297994				
VCA-4980	TRAILER - BOAT SINGLE AXLE		VIC	MELBOURNE	AMSA	Ben Cropley	03 96297994	75.00	23.00	90.00	27.00
VCA-4967	TRAILER - BOX SINGLE AXLE		VIC	MELBOURNE	AMSA	Ben Cropley	03 96297994	75.00	23.00	90.00	27.00
VCA-4966	TRAILER - BOX SINGLE AXLE		VIC	MELBOURNE	AMSA	Ben Cropley	03 96297994	75.00	23.00	90.00	27.00
VCA-4238	TRAILER - BOX SINGLE AXLE		VIC	MELBOURNE	AMSA	Ben Cropley	03 96297994	75.00	23.00	90.00	27.00
VCA-4965	TRAILER - BOX TANDEM AXLE		VIC	MELBOURNE	AMSA	Ben Cropley	03 96297994	100.00	30.00	115.00	35.00
VCA-4231	TRAILER - BOX TANDEM AXLE		VIC	MELBOURNE	AMSA	Ben Cropley	03 96297994	100.00	30.00	115.00	35.00
VCA-4970	TRAILER - TANDEM AXLE - MARCO		VIC	MELBOURNE	AMSA	Ben Cropley	03 96297994	100.00	30.00	115.00	35.00
WCF-4969	VESSEL - OIL RECOVERY - MARCO CLASS 1		VIC	MELBOURNE	AMSA	Ben Cropley	03 96297994				
VCA-5000	TRAILER - BOX TANDEM AXLE		VIC	PAYNESVILLE	AMSA	Trevor Rudge	03 51521974	100.00	30.00	115.00	35.00
VCA-4999	TRAILER - BOX TANDEM AXLE		VIC	PORT WELSHPOOL	AMSA	Trevor Rudge	03 51521974	100.00	30.00	115.00	35.00
PDO11646	ANCHOR KIT - SMALL 15KG SET OF 5		VIC	PORTLAND	AMSA	Capt Don O'Don	03 55250900				
PAF-5115	REELS - BOOM STORAGE & RECOVERY		VIC	PORTLAND	AMSA	Capt Don O'Don	03 55250900				
PDC-4293	SKIMMER - DISC - VIKOMA KOMARA 12K MK2		VIC	PORTLAND	AMSA	Capt Don O'Don	03 55250900	400.00	120.00	460.00	138.00
PBD11967	TANK - RECOVERED OIL FLEXIDAM 10000 LT		VIC	PORTLAND	AMSA	Capt Don O'Don	03 55250900	100.00	30.00	115.00	35.00
PBD11968	TANK - RECOVERED OIL FLEXIDAM 10000 LT		VIC	PORTLAND	AMSA	Capt Don O'Don	03 55250900	100.00	30.00	115.00	35.00
PDF-5111	BOOM - SELF BUOYANT - AUST-POL D2	200 m	VIC	PORTLAND	AMSA	Capt Don O'Don	03 55250900	45.00	14.00	55.00	17.00
PDA11037	SKIMMER - WEIR - FOILEX MINI		VIC	PORTLAND	AMSA	Capt Don O'Don	03 55250900	200.00	60.00	230.00	69.00
PBD-5077	TANK - RECOVERED OIL - ALUMINIUM		VIC	PORTLAND	AMSA	Capt Don O'Don	03 55250900				
PBD-5113	TANK - RECOVERED OIL COLLAPSIBLE TRANSPAC		VIC	PORTLAND	AMSA	Capt Don O'Don	03 55250900	150.00	45.00	175.00	53.00
PBD-5114	TANK - RECOVERED OIL COLLAPSIBLE TRANSPAC		VIC	PORTLAND	AMSA	Capt Don O'Don	03 55250900	150.00	45.00	175.00	53.00
VCA-5076	TRAILER - BOX SINGLE AXLE		VIC	PORTLAND	AMSA	Capt Don O'Don	03 55250900	75.00	23.00	90.00	27.00
VCA-5117	TRAILER - BOX TANDEM AXLE		VIC	PORTLAND	AMSA	Capt Don O'Don	03 55250900	100.00	30.00	115.00	35.00
VCA-5118	TRAILER - BOX TANDEM AXLE		VIC	PORTLAND	AMSA	Capt Don O'Don	03 55250900	100.00	30.00	115.00	35.00
MOD-0416	DISPERSANT ARDROX 6120	5 t	VIC	WESTERN PORT	AMSA	Dick Cox	03 59839406				
MOD-0418	DISPERSANT BP A-B	19.6 t	VIC	WESTERN PORT	AMSA	Dick Cox	03 59839406				
MOD-0420	DISPERSANT COREXIT 9527	2.6 t	VIC	WESTERN PORT	AMSA	Dick Cox	03 59839406				
PDO10966	ANCHOR KIT - LARGE 100KG SET OF 4		VIC	WESTERN PORT	AMSA	Dick Cox	03 59839406				
WCE-5147	BARGE - LANDING - TROCHUS 15M		VIC	WESTERN PORT	AMSA	Dick Cox	03 59839406	3000.00	900.00	3450.00	1035.00
WCE-4263	BARGE - RECOVERED OIL ALUMINIUM - MALEA		VIC	WESTERN PORT	AMSA	Dick Cox	03 59839406	400.00	120.00	460.00	138.00

## Marine Oil Spill Equipment System (MOSES)

MOSES ID	DESCRIPTION	QTY	STATE	LOCATION	OWNER	CONTACT	PHONE	LEVY		NON LEVY	
								IN USE	STANDBY	IN USE	STANDBY
PDG-6083	BOOM - INFLATABLE - VIKOMA HIGH SPRINT	250 m	VIC	WESTERN PORT	AMSA	Dick Cox	03 59839406	3500.00	1050.00	4025.00	1208.00
PDH-4279	BOOM - SELF INFLATING - VERSATECH ZOOM 12/18	300 m	VIC	WESTERN PORT	AMSA	Dick Cox	03 59839406	250.00	75.00	290.00	87.00
PDJ-4280	BOOM - SWEEP - SELF BUOYANT - GIANT TROILBOOM		VIC	WESTERN PORT	AMSA	Dick Cox	03 59839406	2750.00	825.00	3165.00	950.00
PAN-5101	MOTOR - OUTBOARD - JOHNSON 25HP		VIC	WESTERN PORT	AMSA	Dick Cox	03 59839406				
PAN-4264	MOTOR - OUTBOARD - MARINER 40HP		VIC	WESTERN PORT	AMSA	Dick Cox	03 59839406				
PAL-5008	PUMP - DISPERSANT SYSTEM - WSL		VIC	WESTERN PORT	AMSA	Dick Cox	03 59839406	100.00	30.00	115.00	35.00
PAL-5104	PUMP - DISPERSANT SYSTEM - WSL		VIC	WESTERN PORT	AMSA	Dick Cox	03 59839406	100.00	30.00	115.00	35.00
PAL-5012	PUMP - DISPERSANT SYSTEM - WSL		VIC	WESTERN PORT	AMSA	Dick Cox	03 59839406	100.00	30.00	115.00	35.00
PAL-5009	PUMP - DISPERSANT SYSTEM - WSL		VIC	WESTERN PORT	AMSA	Dick Cox	03 59839406	100.00	30.00	115.00	35.00
WCA-4266	PUNT - ALUMINIUM - KAYFA 5.2M		VIC	WESTERN PORT	AMSA	Dick Cox	03 59839406	100.00	30.00	115.00	35.00
WCA-4259	PUNT - ALUMINIUM - QUINTREX SLOGGER 4.5M		VIC	WESTERN PORT	AMSA	Dick Cox	03 59839406				
PFA-4455	RADIO - TRANSCEIVER VHF - ICOM ICM11		VIC	WESTERN PORT	AMSA	Dick Cox	03 59839406	25.00	8.00	30.00	9.00
PFA-5109	RADIO TRANSCEIVER VHF STANDARD		VIC	WESTERN PORT	AMSA	Dick Cox	03 59839406	25.00	8.00	30.00	9.00
PDK-4257	SPRAY BUCKET - DISPERSANT HELICOPTER - SIMPLEX		VIC	WESTERN PORT	AMSA	Dick Cox	03 59839406				
VCA-4256	TRAILER - BOAT TANDEM AXLE		VIC	WESTERN PORT	AMSA	Dick Cox	03 59839406	100.00	30.00	115.00	35.00
PDG-4265	BOOM - INFLATABLE - VIKOMA HIGH INTEG 1500	600 m	VIC	WESTERN PORT	AMSA	Dick Cox	03 59839406	5750.00	1725.00	6615.00	1985.00
PDA-5470	SKIMMER - WEIR - DESMI 250		VIC	WESTERN PORT	AMSA	Dick Cox	03 59839406	1000.00	300.00	1150.00	345.00
VCA-A260	Trailer - Oil Spill		VIC	Yarraville - BP	BP	Warren Bolger	03 96805640				
PDI-A202	Boom Beach Shore Guardian	500 m	VIC	Barry Beach - Esso	Esso	Anton Moore	03 56880222				
PDG-A168	Boom Inflatable Ro-Trawl 72m		VIC	Barry Beach - Esso	Esso	Anton Moore	03 56880222				
PDG-A169	Boom Inflatable Sea Sentinel	1000 m	VIC	Barry Beach - Esso	Esso	Anton Moore	03 56880222				
PDH-A183	Boom Self Inflating Expandi 3000	300 m	VIC	Barry Beach - Esso	Esso	Anton Moore	03 56880222				
MOD-A341	Dispersant - Corexit 9527	28 t	VIC	Barry Beach - Esso	Esso	Anton Moore	03 56880222				
PDD-A136	Skimmer - Rope Mop OMI Mk 1-4EE		VIC	Barry Beach - Esso	Esso	Anton Moore	03 56880222				
PDB-A103	Skimmer - Suction Ro-Vac		VIC	Barry Beach - Esso	Esso	Anton Moore	03 56880222				
PDB-A102	Skimmer - Suction Ro-Vac		VIC	Barry Beach - Esso	Esso	Anton Moore	03 56880222				
PDA-A088	Skimmer - Weir GT 185		VIC	Barry Beach - Esso	Esso	Anton Moore	03 56880222				
PDA-A089	Skimmer - Weir Ro-Skim		VIC	Barry Beach - Esso	Esso	Anton Moore	03 56880222				
MOS-A347	Sorbent Boom	732 m	VIC	Barry Beach - Esso	Esso	Anton Moore	03 56880222				
PBD-A052	Tank - Oil Fastank 9000 lt		VIC	Barry Beach - Esso	Esso	Anton Moore	03 56880222				
PBD-A051	Tank - Oil Fastank 9000 lt		VIC	Barry Beach - Esso	Esso	Anton Moore	03 56880222				
PBD-A050	Tank - Oil Fastank 9000 lt		VIC	Barry Beach - Esso	Esso	Anton Moore	03 56880222				
PBD-A049	Tank - Oil Fastank 9000 lt		VIC	Barry Beach - Esso	Esso	Anton Moore	03 56880222				
PBD-A048	Tank - Oil Fastank 9000 lt		VIC	Barry Beach - Esso	Esso	Anton Moore	03 56880222				
VCA-A263	Trailer - Oil Spill		VIC	Barry Beach - Esso	Esso	Anton Moore	03 56880222				
VCA-A262	Trailer - Oil Spill		VIC	Barry Beach - Esso	Esso	Anton Moore	03 56880222				
VCA-A261	Trailer - Oil Spill		VIC	Barry Beach - Esso	Esso	Anton Moore	03 56880222				
PDB-A104	Vacuum System Drum Vac		VIC	Barry Beach - Esso	Esso	Anton Moore	03 56880222				
MOD-A343	Dispersant - Corexit 9527	8 t	VIC	Barry Beach - Esso	F Esso	Anton Moore	03 56880222				
MOD-A346	Dispersant - Corexit 9527	8 t	VIC	Barry Beach - Esso	F Esso	Anton Moore	03 56880222				

## Marine Oil Spill Equipment System (MOSES)

MOSES ID	DESCRIPTION	QTY	STATE	LOCATION	OWNER	CONTACT	PHONE	LEVY		NON LEVY	
								IN USE	STANDBY	IN USE	STANDBY
MOD-A342	Dispersant - Corexit 9527	8 t	VIC	Barry Beach - Esso M	Esso	Anton Moore	03 56880222				
MOD-A340	Dispersant - Corexit 9527	10 t	VIC	Barry Beach - Esso M	Esso	Anton Moore	03 56880222				
MOD-A339	Dispersant - Corexit 9527	10 t	VIC	Barry Beach - Esso M	Esso	Anton Moore	03 56880222				
MOD-A344	Dispersant - Corexit 9527	8 t	VIC	Barry Beach - Esso W	Esso	Anton Moore	03 56880222				
MOD-A345	Dispersant - Corexit 9527	10 t	VIC	Barry Beach - Esso M	Esso	Anton Moore	03 56880222				
MOD-A353	Dispersant - Corexit 9527	6 t	VIC	Lakes Entrance - Essc	Esso	Roger Went	03 51496494				
PDI-A203	Boom Beach Shore Guardian	500 m	VIC	Long Island Point - Es	Esso	Jean Talbot	03 59707524				
PDG-A170	Boom Inflatable Sea Sentinel	1000 n	VIC	Long Island Point - Es	Esso	Jean Talbot	03 59707524				
MOD-A349	Dispersant - Corexit 9527	40 t	VIC	Long Island Point - Es	Esso	Jean Talbot	03 59707524				
MOD-A350	Dispersant - Shell VDC	2 t	VIC	Long Island Point - Es	Esso	Jean Talbot	03 59707524				
PDB-A106	Skimmer - Suction Ro-Vac		VIC	Long Island Point - Es	Esso	Jean Talbot	03 59707524				
PDB-A105	Skimmer - Suction Ro-Vac		VIC	Long Island Point - Es	Esso	Jean Talbot	03 59707524				
PDA-A091	Skimmer - Weir GT 185		VIC	Long Island Point - Es	Esso	Jean Talbot	03 59707524				
PDA-A090	Skimmer - Weir Slurp		VIC	Long Island Point - Es	Esso	Jean Talbot	03 59707524				
MOS-A351	Sorbent Boom	1500 n	VIC	Long Island Point - Es	Esso	Jean Talbot	03 59707524				
PDK-A219	Spray Bucket Dispersant Helicopter Simplex 6810		VIC	Long Island Point - Es	Esso	Jean Talbot	03 59707524				
PAL-A020	Spray Unit Vessel Mounted Vikospray		VIC	Long Island Point - Es	Esso	Jean Talbot	03 59707524				
PBD-A053	Tank - Oil Fastank 9000 lt		VIC	Long Island Point - Es	Esso	Jean Talbot	03 59707524				
PBD-A055	Tank - Oil Fastank 9000 lt		VIC	Long Island Point - Es	Esso	Jean Talbot	03 59707524				
PBD-A057	Tank - Oil Fastank 9000 lt		VIC	Long Island Point - Es	Esso	Jean Talbot	03 59707524				
PBD-A056	Tank - Oil Fastank 9000 lt		VIC	Long Island Point - Es	Esso	Jean Talbot	03 59707524				
PBD-A054	Tank - Oil Fastank 9000 lt		VIC	Long Island Point - Es	Esso	Jean Talbot	03 59707524				
VCA-A264	Trailer - Oil Spill		VIC	Long Island Point - Es	Esso	Jean Talbot	03 59707524				
PDA-A092	Skimmer - Weir Ro-Skim		VIC	Long Island Point - Es	Esso	Jean Talbot	03 59707524				
PDH-A184	Boom Self Inflating Expandi	500 m	VIC	Long Island Point - Es	Esso	Jean Talbot	03 59707524				
MOD-A348	Dispersant - Corexit 9527	10 t	VIC	Long Island Point - Es	Esso	Jean Talbot	03 59707524				
WCE-A305	Barge - Oil Recovery Gippsland 003 800t		VIC	Long Island Point - Es	Esso	Jean Talbot	03 59707524				
WCA-A289	Boat - Boom/sledge deployment Sentinel		VIC	Long Island Point - Es	Esso	Jean Talbot	03 59707524				
MOD-A352	Dispersant - Corexit 9527	28 t	VIC	Longford - Esso	Esso	Roger Went	03 51496494				
PDK-A221	Spray Bucket Dispersant Helicopter Simplex 6810		VIC	Longford Heliport - Es	Esso	Roger Went	03 51496494				
PDK-A220	Spray Bucket Dispersant Helicopter Simplex 6810		VIC	Longford Heliport - Es	Esso	Roger Went	03 51496494				
PDG-A448	Boom - Vikoma Hi-Sprint	500 m	VIC	Melbourne	Melbourne	Ben Cropley	03 96297994				
VCD-A443	Caravan - Incident Support Unit		VIC	Melbourne	Melbourne	Ben Cropley	03 96297994				
PDC-A444	Skimmer - Disc Komara 12K Mk2		VIC	Melbourne	Melbourne	Ben Cropley	03 96297994				
PDD-A446	Skimmer - Rope Mop Omi MkII-9		VIC	Melbourne	Melbourne	Ben Cropley	03 96297994				
WCE-A447	Vessel - Hull (Vikoma Seapack)		VIC	Melbourne	Melbourne	Ben Cropley	03 96297994				
PDC-A445	Skimmer - Disc Komara 12K Mk2		VIC	Westernport	Melbourne	Dick Cox	03 59839406				
WCA-A291	Boat - Aluminium with skimmer		VIC	Yarraville - Mobil	Mobil	Tony Glass	03 92865051				
MOD-A366	Dispersant - Corexit 9527	5.1 t	VIC	Yarraville - Mobil	Mobil	Tony Glass	03 92865051				
MOD-A367	Dispersant - Shell VDC	4 t	VIC	Yarraville - Mobil	Mobil	Tony Glass	03 92865051				

Marine Oil Spill Equipment System (MOSES)

MOSES ID	DESCRIPTION	QTY	STATE	LOCATION	OWNER	CONTACT	PHONE	LEVY		NON LEVY	
								IN USE	STANDBY	IN USE	STANDBY
VCA-A269	Trailer - Oil Spill		VIC	Yarraville - Mobil	Mobil	Tony Glass	03 92865051				
PDJ-A212	Boom Spillco	75 m	VIC	Altona - Mobil	Mobil Refi	Mike Williams	03 92865520				
PDF-A150	Boom Self Buoyant Slickbar Mke	800 m	VIC	Altona - Mobil	Mobil Refi	Mike Williams	03 92865520				
MOD-A356	Dispersant - Type ?	1.6 t	VIC	Altona - Mobil	Mobil Refi	Mike Williams	03 92865520				
PDC-A125	Skimmer - Disc Komara 12K MK2		VIC	Altona - Mobil	Mobil Refi	Mike Williams	03 92865520				
PDA-A094	Skimmer - Weir Manta Ray Head		VIC	Altona - Mobil	Mobil Refi	Mike Williams	03 92865520				
VCA-A265	Trailer - Oil Spill		VIC	Altona - Mobil	Mobil Refi	Mike Williams	03 92865520				
PDF-A156	Boom Self Buoyant Gamlen	80 m	VIC	Newport - Shell	Shell	John Zen	03 93921236				
MOD-A375	Dispersant - Shell LTX	4 t	VIC	Newport - Shell	Shell	John Zen	03 93921236				
VCA-A275	Trailer - Oil Spill		VIC	Newport - Shell	Shell	John Zen	03 93921236				
PDH-A188	Boom Self Inflating Expandi 3000	100 m	VIC	Geelong - Shell	Shell Refir	Ian Grose	03 52738466				
PDH-A187	Boom Self Inflating Expandi 3000	100 m	VIC	Geelong - Shell	Shell Refir	Ian Grose	03 52738466				
PDH-A186	Boom Self Inflating Versatech Zoom	150 m	VIC	Geelong - Shell	Shell Refir	Ian Grose	03 52738466				
MOD-A373	Dispersant - Shell VDC	2 t	VIC	Geelong - Shell	Shell Refir	Ian Grose	03 52738466				
PDC-A129	Skimmer - Disc Komara 12K		VIC	Geelong - Shell	Shell Refir	Ian Grose	03 52738466				
PAL-A031	Spray Unit Vessel Mounted Vikospray		VIC	Geelong - Shell	Shell Refir	Ian Grose	03 52738466				
VCA-A274	Trailer - Oil Spill		VIC	Geelong - Shell	Shell Refir	Ian Grose	03 52738466				

## Marine Oil Spill Equipment System (MOSES)

MOSES ID	DESCRIPTION	QTY	STATE	LOCATION	OWNER	CONTACT	PHONE	LEVY		NON LEVY	
								IN USE	STANDBY	IN USE	STANDBY
PDC-A118	Skimmer - Disc Komara 12K Mk2		WA	Albany - Port Authority	Ampol	Chris Hamilton	08 98422905				
PAL-A011	Spray Unit Vessel Mounted Vikospray		WA	Albany - Port Authority	Ampol	Chris Hamilton	08 98422905				
MOD-0423	DISPERSANT BP A-B	3.6 t	WA	ALBANY	AMSA	Con Sappelli	08 92392233				
PDO11639	ANCHOR KIT - SMALL 15KG SET OF 5		WA	ALBANY	AMSA	Con Sappelli	08 92392233				
PDF-4295	BOOM - SELF BUOYANT - PACIFIC GP 800	300 m	WA	ALBANY	AMSA	Con Sappelli	08 92392233	125.00	38.00	145.00	44.00
PAL-4305	PUMP - DISPERSANT SYSTEM - WSL		WA	ALBANY	AMSA	Con Sappelli	08 92392233	100.00	30.00	115.00	35.00
PBD-4404	TANK - RECOVERED OIL COLLAPSIBLE TRANSPAC		WA	ALBANY	AMSA	Con Sappelli	08 92392233	150.00	45.00	175.00	53.00
PBD-4465	TANK - RECOVERED OIL COLLAPSIBLE TRANSPAC		WA	ALBANY	AMSA	Con Sappelli	08 92392233	150.00	45.00	175.00	53.00
VCA-4411	TRAILER - BOX TANDEM AXLE		WA	ALBANY	AMSA	Con Sappelli	08 92392233	100.00	30.00	115.00	35.00
MOD-0424	DISPERSANT BP A-B	2.6 t	WA	BROOME	AMSA	Con Sappelli	08 92392233				
PAL-4473	PUMP - DISPERSANT SYSTEM - WSL		WA	BROOME	AMSA	Con Sappelli	08 92392233	100.00	30.00	115.00	35.00
MOD-0425	DISPERSANT BP A-B	1.6 t	WA	BUNBURY	AMSA	Con Sappelli	08 92392233				
PDO11641	ANCHOR KIT - SMALL 15KG SET OF 5		WA	BUNBURY	AMSA	Con Sappelli	08 92392233				
NEW-0053	BOOM - BEACH - STRUCTURFLEX LAND SEA	140 m	WA	BUNBURY	AMSA	Con Sappelli	08 92392233				
PBD11975	TANK - RECOVERED OIL FLEXIDAM 10000 LT		WA	BUNBURY	AMSA	Con Sappelli	08 92392233	100.00	30.00	115.00	35.00
PBD11936	TANK - RECOVERED OIL FLEXIDAM 10000 LT		WA	BUNBURY	AMSA	Con Sappelli	08 92392233	100.00	30.00	115.00	35.00
PDF-4398	BOOM - SELF BUOYANT - AUST-POL D2	300 m	WA	BUNBURY	AMSA	Con Sappelli	08 92392233	45.00	14.00	55.00	17.00
PAL-5119	PUMP - DISPERSANT SYSTEM - WSL		WA	BUNBURY	AMSA	Con Sappelli	08 92392233	100.00	30.00	115.00	35.00
PDC-5120	SKIMMER - DISC - VIKOMA KOMARA 12K MK2		WA	BUNBURY	AMSA	Con Sappelli	08 92392233	400.00	120.00	460.00	138.00
PBD-4393	TANK - RECOVERED OIL COLLAPSIBLE TRANSPAC		WA	BUNBURY	AMSA	Con Sappelli	08 92392233	150.00	45.00	175.00	53.00
PBD-4405	TANK - RECOVERED OIL COLLAPSIBLE TRANSPAC		WA	BUNBURY	AMSA	Con Sappelli	08 92392233	150.00	45.00	175.00	53.00
VCA-4420	TRAILER - BOX TANDEM AXLE		WA	BUNBURY	AMSA	Con Sappelli	08 92392233	100.00	30.00	115.00	35.00
PDH-4203B	BOOM - SELF INFLATING - VERSATECH ZOOM 12/18	300 m	WA	CAPE LAMBERT	AMSA	Ron Baxter	08 91592150	250.00	75.00	290.00	87.00
MOD-0421	DISPERSANT ARDROX 6120	9.4 t	WA	DAMPIER	AMSA	Lindsay Copeme	08 91596555				
PDJ-4309	BOOM - SWEEP - SELF BUOYANT - GIANT TROILBOOM		WA	DAMPIER	AMSA	Lindsay Copeme	08 91596555	2750.00	825.00	3165.00	950.00
WCB-4307	DINGHY - INFLATABLE - AVON 4M	1	WA	DAMPIER	AMSA	Lindsay Copeme	08 91596555	175.00	53.00	205.00	62.00
PAL-4472	PUMP - DISPERSANT SYSTEM - WSL		WA	DAMPIER	AMSA	Con Sappelli	08 92392233	100.00	30.00	115.00	35.00
NEW-0041	TRAILER - BOX - TANDEM AXLE		WA	DAMPIER	AMSA	Con Sappelli	08 92392233				
VCA11963	TRAILER - BOX - TANDEM AXLE		WA	DAMPIER	AMSA	Con Sappelli	08 92392233				
VCA-0041	TRAILER - BOX - TANDEM AXLE		WA	DAMPIER	AMSA	Con Sappelli	08 92392233	100.00	30.00	115.00	35.00
PDO10970	ANCHOR KIT - LARGE 100KG SET OF 6		WA	DAMPIER	AMSA	Con Sappelli	08 92392233				
PDO10789	ANCHOR KIT - SMALL 15KG SET OF 5		WA	DAMPIER	AMSA	Con Sappelli	08 92392233				
PDI10937	BOOM - BEACH - STRUCTURFLEX LAND SEA	300 m	WA	DAMPIER	AMSA	Con Sappelli	08 92392233				
PDG-9688	BOOM - INFLATABLE - ROULUNDS RO BAY 1500	600 m	WA	DAMPIER	AMSA	Con Sappelli	08 92392233	5750.00	1725.00	6615.00	1985.00
PDH-4203	BOOM - SELF INFLATING - VERSATECH ZOOM 12/18	300 m	WA	DAMPIER	AMSA	Con Sappelli	08 92392233	250.00	75.00	290.00	87.00
PEA-4216	CHARGER - RADIO BATTERIES 6 UNITS		WA	DAMPIER	AMSA	Con Sappelli	08 92392233				
PFA-4461	RADIO - BASE STATION VHF - PHILLIPS		WA	DAMPIER	AMSA	Con Sappelli	08 92392233	75.00	23.00	90.00	27.00
PFA-4222	RADIO TRANSCEIVER - VHF MARINE FREQUENCIES		WA	DAMPIER	AMSA	Con Sappelli	08 92392233				
PFA-4226	RADIO TRANSCEIVER - VHF MARINE FREQUENCIES		WA	DAMPIER	AMSA	Con Sappelli	08 92392233				
PFA-4232	RADIO TRANSCEIVER - VHF MARINE FREQUENCIES		WA	DAMPIER	AMSA	Con Sappelli	08 92392233				

## Marine Oil Spill Equipment System (MOSES)

MOSES ID	DESCRIPTION	QTY	STATE	LOCATION	OWNER	CONTACT	PHONE	LEVY		NON LEVY	
								IN USE	STANDBY	IN USE	STANDBY
PFA-4234	RADIO TRANSCEIVER - VHF MARINE FREQUENCIES		WA	DAMPIER	AMSA	Con Sappelli	08 92392233				
PFA-4247	RADIO TRANSCEIVER - VHF MARINE FREQUENCIES		WA	DAMPIER	AMSA	Con Sappelli	08 92392233				
PFA-4250	RADIO TRANSCEIVER - VHF MARINE FREQUENCIES		WA	DAMPIER	AMSA	Con Sappelli	08 92392233				
PDA-4898	SKIMMER - WEIR - GT185		WA	DAMPIER	AMSA	Con Sappelli	08 92392233	1000.00	300.00	1150.00	345.00
PDK-4237	SPRAY BUCKET - DISPERSANT HELICOPTER - SIMPLEX		WA	DAMPIER	AMSA	Con Sappelli	08 92392233				
PBD10725	TANK - RECOVERED OIL FLEXIDAM 10000 LT		WA	DAMPIER	AMSA	Lindsay Copernicus	08 91596555	100.00	30.00	115.00	35.00
PBD10726	TANK - RECOVERED OIL FLEXIDAM 10000 LT		WA	DAMPIER	AMSA	Con Sappelli	08 92392233	100.00	30.00	115.00	35.00
PBD-4899	TANK - RECOVERED OIL COLLAPSIBLE TRANSPAC		WA	DAMPIER	AMSA	Con Sappelli	08 92392233	150.00	45.00	175.00	53.00
PBD-4900	TANK - RECOVERED OIL COLLAPSIBLE TRANSPAC		WA	DAMPIER	AMSA	Con Sappelli	08 92392233	150.00	45.00	175.00	53.00
MOD-0426	DISPERSANT BP A-B	3.6 t	WA	ESPERANCE	AMSA	Con Sappelli	08 92392233				
PDO11640	ANCHOR KIT - SMALL 15KG SET OF 5		WA	ESPERANCE	AMSA	Con Sappelli	08 92392233				
PDF-4273	BOOM - SELF BUOYANT - PACIFIC GP 500	300 m	WA	ESPERANCE	AMSA	Con Sappelli	08 92392233	45.00	14.00	55.00	17.00
PAL-4299	PUMP - DISPERSANT SYSTEM - WSL		WA	ESPERANCE	AMSA	Con Sappelli	08 92392233	100.00	30.00	115.00	35.00
PDA11039	SKIMMER - WEIR - FOILEX MINI		WA	ESPERANCE	AMSA	Con Sappelli	08 92392233	200.00	60.00	230.00	69.00
MOD-0422	DISPERSANT ARDROX 6120	22.6 t	WA	FREMANTLE	AMSA	Con Sappelli	08 92392233				
MOD-0427	DISPERSANT BP A-B	53.4 t	WA	FREMANTLE	AMSA	Con Sappelli	08 92392233				
MOD-0432	DISPERSANT COREXIT 9527	0.8 t	WA	FREMANTLE	AMSA	Con Sappelli	08 92392233				
PDH-4491	BOOM - SELF INFLATING - EXPANDI 3000	300 m	WA	FREMANTLE	AMSA	Con Sappelli	08 92392233	250.00	75.00	290.00	87.00
PDH-4403	BOOM - SELF INFLATING - VERSATECH ZOOM 12/18	200 m	WA	FREMANTLE	AMSA	Con Sappelli	08 92392233	250.00	75.00	290.00	87.00
PDJ-4493	BOOM - SWEEP - SELF BUOYANT - GIANT TROILBOOM		WA	FREMANTLE	AMSA	Con Sappelli	08 92392233	2750.00	825.00	3165.00	950.00
PDL-6469	FENDER - PNEUMATIC NET TYPE - YOKOHAMA		WA	FREMANTLE	AMSA	Gino Valenti	08 94303369	910.00	273.00	1050.00	315.00
PDL-6470	FENDER - PNEUMATIC NET TYPE - YOKOHAMA		WA	FREMANTLE	AMSA	Gino Valenti	08 94303369	910.00	273.00	1050.00	315.00
PDL-6471	FENDER - PNEUMATIC NET TYPE - YOKOHAMA		WA	FREMANTLE	AMSA	Gino Valenti	08 94303369	910.00	273.00	1050.00	315.00
PDL-6472	FENDER - PNEUMATIC NET TYPE - YOKOHAMA		WA	FREMANTLE	AMSA	Gino Valenti	08 94303369	910.00	273.00	1050.00	315.00
PAN-4478	MOTOR - OUTBOARD - EVINRUDE 50HP		WA	FREMANTLE	AMSA	Con Sappelli	08 92392233				
PAN-4488	MOTOR - OUTBOARD - EVINRUDE 50HP		WA	FREMANTLE	AMSA	Con Sappelli	08 92392233				
PAL-4267	PUMP - DISPERSANT SYSTEM - WSL		WA	FREMANTLE	AMSA	Con Sappelli	08 92392233	100.00	30.00	115.00	35.00
PAH-4431	PUMP - GENERAL PURPOSE - HONDA WD 20X		WA	FREMANTLE	AMSA	Con Sappelli	08 92392233				
PDD-4360	SKIMMER - ROPE MOP - ORI BARRACUDA 2000		WA	FREMANTLE	AMSA	Con Sappelli	08 92392233	400.00	120.00	460.00	138.00
PDB-4459	SKIMMER - SUCTION - VIKOMA VIKOVAC		WA	FREMANTLE	AMSA	Con Sappelli	08 92392233	300.00	90.00	345.00	104.00
PDA-4367	SKIMMER - WEIR - GT185		WA	FREMANTLE	AMSA	Con Sappelli	08 92392233	1000.00	300.00	1150.00	345.00
PDK-4462	SPRAY BUCKET - DISPERSANT HELICOPTER - SIMPLEX		WA	FREMANTLE	AMSA	Con Sappelli	08 92392233				
PBD10737	TANK - RECOVERED OIL FLEXIDAM 10000 LT		WA	FREMANTLE	AMSA	Con Sappelli	08 92392233	100.00	30.00	115.00	35.00
PBD-4326	TANK - RECOVERED OIL COLLAPSIBLE TRANSPAC		WA	FREMANTLE	AMSA	Con Sappelli	08 92392233	150.00	45.00	175.00	53.00
PBD-4479	TANK - RECOVERED OIL COLLAPSIBLE TRANSPAC		WA	FREMANTLE	AMSA	Con Sappelli	08 92392233	150.00	45.00	175.00	53.00
PBD-4484	TANK - RECOVERED OIL COLLAPSIBLE TRANSPAC		WA	FREMANTLE	AMSA	Con Sappelli	08 92392233	150.00	45.00	175.00	53.00
PBD-4486	TANK - RECOVERED OIL COLLAPSIBLE TRANSPAC		WA	FREMANTLE	AMSA	Con Sappelli	08 92392233	150.00	45.00	175.00	53.00
PAF-4489	WINCH - BOOM RECOVERY - MARCO POWER BLOCK		WA	FREMANTLE	AMSA	Con Sappelli	08 92392233				
PAF-4474	WINCH - BOOM RECOVERY ELECTRIC	1	WA	FREMANTLE	AMSA	Con Sappelli	08 92392233				
WCE-6583	BARGE - RECOVERED OIL INFLATABLE - LANCER		WA	FREMANTLE	AMSA	Con Sappelli	08 92392233	1000.00	300.00	1150.00	345.00

## Marine Oil Spill Equipment System (MOSES)

MOSES ID	DESCRIPTION	QTY	STATE	LOCATION	OWNER	CONTACT	PHONE	LEVY		NON LEVY	
								IN USE	STANDBY	IN USE	STANDBY
PDO10971	ANCHOR KIT - LARGE 100KG SET OF 6		WA	FREMANTLE	AMSA	Con Sappelli	08 92392233				
PDO10784	ANCHOR KIT - SMALL 15KG SET OF 5		WA	FREMANTLE	AMSA	Con Sappelli	08 92392233				
WCE-6582	BARGE - RECOVERED OIL INFLATABLE - LANCER		WA	FREMANTLE	AMSA	Con Sappelli	08 92392233	1000.00	300.00	1150.00	345.00
PDG-6082	BOOM - INFLATABLE - ROULUNDS RO BAY 1500	600 m	WA	FREMANTLE	AMSA	Con Sappelli	08 92392233	5750.00	1725.00	6615.00	1985.00
PAL-4303	PUMP - DISPERSANT SYSTEM - WSL		WA	FREMANTLE	AMSA	Con Sappelli	08 92392233	100.00	30.00	115.00	35.00
PAL-4306	PUMP - DISPERSANT SYSTEM - WSL		WA	FREMANTLE	AMSA	Con Sappelli	08 92392233	100.00	30.00	115.00	35.00
PAL-4310	PUMP - DISPERSANT SYSTEM - WSL		WA	FREMANTLE	AMSA	Con Sappelli	08 92392233	100.00	30.00	115.00	35.00
PDC-4321	SKIMMER - DISC - VIKOMA KOMARA 12K MK3		WA	FREMANTLE	AMSA	Con Sappelli	08 92392233	400.00	120.00	460.00	138.00
PDA-4456	SKIMMER - WEIR - WALOSEP WM		WA	FREMANTLE	AMSA	Con Sappelli	08 92392233	400.00	120.00	460.00	138.00
PDK-4347	SPRAY BUCKET - DISPERSANT HELICOPTER - SIMPLEX		WA	FREMANTLE	AMSA	Con Sappelli	08 92392233				
PBD10724	TANK - RECOVERED OIL FLEXIDAM 10000 LT		WA	FREMANTLE	AMSA	Con Sappelli	08 92392233	100.00	30.00	115.00	35.00
VCA-4891	TRAILER - BOAT TANDEM AXLE		WA	FREMANTLE	AMSA	Con Sappelli	08 92392233	100.00	30.00	115.00	35.00
VCA-4406	TRAILER - BOX TANDEM AXLE		WA	FREMANTLE	AMSA	Con Sappelli	08 92392233	100.00	30.00	115.00	35.00
VCA-4416	TRAILER - BOX TANDEM AXLE		WA	FREMANTLE	AMSA	Con Sappelli	08 92392233	100.00	30.00	115.00	35.00
VCA-4886	TRAILER - BOX TANDEM AXLE		WA	FREMANTLE	AMSA	Con Sappelli	08 92392233	100.00	30.00	115.00	35.00
PFA10071	TRANSCEIVER - VHF MULTI CHANNEL		WA	FREMANTLE	AMSA	Con Sappelli	08 92392233				
PFA10073	TRANSCEIVER - VHF MULTI CHANNEL		WA	FREMANTLE	AMSA	Con Sappelli	08 92392233				
PFA10074	TRANSCEIVER - VHF MULTI CHANNEL		WA	FREMANTLE	AMSA	Con Sappelli	08 92392233				
PFA10076	TRANSCEIVER - VHF MULTI CHANNEL		WA	FREMANTLE	AMSA	Con Sappelli	08 92392233				
PFA10077	TRANSCEIVER - VHF MULTI CHANNEL		WA	FREMANTLE	AMSA	Con Sappelli	08 92392233				
PFA10078	TRANSCEIVER - VHF MULTI CHANNEL		WA	FREMANTLE	AMSA	Con Sappelli	08 92392233				
WCF-4428	VESSEL - OIL RECOVERY - MARCO CLASS 1		WA	FREMANTLE	AMSA	Con Sappelli	08 92392233				
MOD-0428	DISPERSANT BP A-B	8 t	WA	GERALDTON	AMSA	Con Sappelli	08 92392233				
PDO11643	ANCHOR KIT - SMALL 15KG SET OF 5	300 m	WA	GERALDTON	AMSA	Con Sappelli	08 92392233				
PDF11948	BOOM - SELF BUOYANT - STRUCTURFLEX GP	195 m	WA	GERALDTON	AMSA	Con Sappelli	08 92392233	75.00	23.00	90.00	27.00
PBD11969	TANK - RECOVERED OIL - FLEXIDAM	300 m	WA	GERALDTON	AMSA	Con Sappelli	08 92392233	100.00	30.00	115.00	35.00
PBD11970	TANK - RECOVERED OIL - FLEXIDAM		WA	GERALDTON	AMSA	Con Sappelli	08 92392233	100.00	30.00	115.00	35.00
PDH-4298	BOOM - SELF INFLATING - VERSATECH ZOOM 12/18	300 m	WA	GERALDTON	AMSA	Con Sappelli	08 92392233	250.00	75.00	290.00	87.00
PDC-4395	SKIMMER - DISC - VIKOMA KOMARA 12K MK2		WA	GERALDTON	AMSA	Con Sappelli	08 92392233	400.00	120.00	460.00	138.00
PBD-4391	TANK - RECOVERED OIL COLLAPSIBLE TRANSPAC		WA	GERALDTON	AMSA	Con Sappelli	08 92392233	150.00	45.00	175.00	53.00
PBD-4401	TANK - RECOVERED OIL COLLAPSIBLE TRANSPAC		WA	GERALDTON	AMSA	Con Sappelli	08 92392233	150.00	45.00	175.00	53.00
PBD-4402	TANK - RECOVERED OIL COLLAPSIBLE TRANSPAC		WA	GERALDTON	AMSA	Con Sappelli	08 92392233	150.00	45.00	175.00	53.00
VCA-4409	TRAILER - BOX TANDEM AXLE		WA	GERALDTON	AMSA	Con Sappelli	08 92392233	100.00	30.00	115.00	35.00
VCA-4318	TRAILER - BOX TANDEM AXLE		WA	KWINANA	AMSA	Con Sappelli	08 92392233	100.00	30.00	115.00	35.00
MOD-0429	DISPERSANT BP A-B	40.8 t	WA	PORT HEDLAND	AMSA	Doug Kayne	08 91731400				
PDO10972	ANCHOR KIT - SMALL 15KG SET OF 5		WA	PORT HEDLAND	AMSA	Con Sappelli	08 92392233				
PDI11635	BOOM - BEACH - STRUCTURFLEX LAND SEA	160 m	WA	PORT HEDLAND	AMSA	Doug Kayne	08 91731400				
PDH-4204	BOOM - SELF BUOYANT - AUST-POL D2	300 m	WA	PORT HEDLAND	AMSA	Doug Kayne	08 91731400				
PDF-4204	BOOM - SELF BUOYANT - AUST-POL D2	300 m	WA	PORT HEDLAND	AMSA	Doug Kayne	08 91731400				
BP-0054	BOOM BALLAST PUMP - BEACH - STRUCTURFLEX LAND SEA		WA	PORT HEDLAND	AMSA	Doug Kayne	08 91731400				

## Marine Oil Spill Equipment System (MOSES)

MOSES ID	DESCRIPTION	QTY	STATE	LOCATION	OWNER	CONTACT	PHONE	LEVY		NON LEVY	
								IN USE	STANDBY	IN USE	STANDBY
IP-0054	BOOM INFLATION PUMP BEACH - STRUCTURFLEX LAND SEA		WA	PORT HEDLAND	AMSA	Doug Kayne	08 91731400				
PAL-4467	PUMP - DISPERSANT SYSTEM - WSL		WA	PORT HEDLAND	AMSA	Doug Kayne	08 91731400	100.00	30.00	115.00	35.00
PBD11977	TANK - RECOVERED OIL FLEXIDAM 10000 LT		WA	PORT HEDLAND	AMSA	Con Sappelli	08 92392233	100.00	30.00	115.00	35.00
PBD11978	TANK - RECOVERED OIL FLEXIDAM 10000 LT		WA	PORT HEDLAND	AMSA	Con Sappelli	08 92392233	100.00	30.00	115.00	35.00
PDH-4396	BOOM - SELF INFLATING - VERSATECH ZOOM 12/18	300 m	WA	PORT HEDLAND	AMSA	Con Sappelli	08 92392233	250.00	75.00	290.00	87.00
PAL-4466	PUMP - DISPERSANT SYSTEM - WSL		WA	PORT HEDLAND	AMSA	Con Sappelli	08 92392233	100.00	30.00	115.00	35.00
PAL-4469	PUMP - DISPERSANT SYSTEM - WSL		WA	PORT HEDLAND	AMSA	Con Sappelli	08 92392233	100.00	30.00	115.00	35.00
PAL-4470	PUMP - DISPERSANT SYSTEM - WSL		WA	PORT HEDLAND	AMSA	Con Sappelli	08 92392233	100.00	30.00	115.00	35.00
MOD-0430	DISPERSANT BP A-B	16.2 t	WA	PORT WALCOTT	AMSA	Ron Baxter	08 91592150				
PAL-4300	PUMP - DISPERSANT SYSTEM - WSL		WA	PORT WALCOTT	AMSA	Con Sappelli	08 92392233	100.00	30.00	115.00	35.00
PAL-4471	PUMP - DISPERSANT SYSTEM - WSL		WA	PORT WALCOTT	AMSA	Con Sappelli	08 92392233	100.00	30.00	115.00	35.00
PDO11642	ANCHOR KIT - SMALL 15KG SET OF 5		WA	USELESS LOOP	AMSA	Con Sappelli	08 92392233				
PDH-5122	BOOM - SELF INFLATING - VERSATECH ZOOM 12/18	300 m	WA	USELESS LOOP	AMSA	Con Sappelli	08 92392233	250.00	75.00	290.00	87.00
NEW-0048	TANK - RECOVERED OIL FLEXIDAM 10000 LT	300 m	WA	USELESS LOOP	AMSA	Con Sappelli	08 92392233				
NEW-0049	TANK - RECOVERED OIL FLEXIDAM 10000 LT	300 m	WA	USELESS LOOP	AMSA	Con Sappelli	08 92392233				
MOD-0431	DISPERSANT BP A-B	2.2 t	WA	WYNDHAM	AMSA	Con Sappelli	08 92392233				
PAL-4468	PUMP - DISPERSANT SYSTEM - WSL		WA	WYNDHAM	AMSA	Con Sappelli	08 92392233	100.00	30.00	115.00	35.00
WCA-A285	Boat - Landing utility vessel with dispersant		WA	Varanus - Apache	Apache	Geoff Whittome	08 94227222				
PDH-A178	Boom Self Inflating Versatech Zoom 12/20	400 m	WA	Varanus - Apache	Apache	Geoff Whittome	08 94227222				
PDJ-A210	Boom Towed Jackson Net 300m		WA	Varanus - Apache	Apache	Geoff Whittome	08 94227222				
MOD-A322	Dispersant - Corexit 9527	2 t	WA	Varanus - Apache	Apache	Geoff Whittome	08 94227222				
PDC-A120	Skimmer - Disc Komara 12K Mk2		WA	Varanus - Apache	Apache	Geoff Whittome	08 94227222				
PDK-A217	Spray Bucket Dispersant Helicopter Simplex 6800		WA	Varanus - Apache	Apache	Geoff Whittome	08 94227222				
PBD-A047	Tank - Oil Skid Mounted 60t		WA	Varanus - Apache	Apache	Geoff Whittome	08 94227222				
MOD-A327	Dispersant - Corexit 9527	7.7 t	WA	Dampier - BHPP	BHP Petrc	Eoin Strack	08 91443310				
MOD-A326	Dispersant - Corexit 9527	3.5 t	WA	Exmouth Airport	BHP Petrc	Eoin Strack	08 91443310				
MOD-A325	Dispersant - Corexit 9527	1.6 t	WA	Ocean Bounty - BHPP	BHP Petrc	Eoin Strack	08 91443310				
MOD-A323	Dispersant - Corexit 9527	1.2 t	WA	Ocean Bounty - BHPP	BHP Petrc	Eoin Strack	08 91443310				
MOD-A324	Dispersant - Corexit 9527	1.2 t	WA	Ocean Bounty - BHPP	BHP Petrc	Eoin Strack	08 91443310				
PDC-A122	Skimmer - Disc Komara 12K Mk2		WA	Esperance - Port Auth	BP (South)	Grant Harris	08 9011065				
PAL-A018	Spray Unit Vessel Mounted Vikospray		WA	Esperance - Port Auth	BP (South)	Grant Harris	08 9011065				
MOD-A331	Dispersant - BP 1100X	2 t	WA	Broome - BP	BP (West)	David Power	08 91921357				
MOS-A332	Sorbent material - Attapulgit (80k)		WA	Broome - BP	BP (West)	David Power	08 91921357				
VCA-A256	Trailer - Oil Spill		WA	Broome - BP	BP (West)	David Power	08 91921357				
PDH-A181	Boom Self Inflating Expandi	300 m	WA	FREMANTLE - VICTC	BP Refine	Alex Brodie	09 4190344				
PDH-A182	Boom Self Inflating Versatech Zoom		WA	Kwinana - BP	BP Refine	Alex Brodie	09 4190344				
MOD-A336	Dispersant - BP AB	4.8 t	WA	Kwinana - BP	BP Refine	Alex Brodie	09 4190344				
MOD-A337	Dispersant - Shell VDC	1 t	WA	Kwinana - BP	BP Refine	Alex Brodie	09 4190344				
MOD-A338	Dispersant - Shell VDC	7 t	WA	Kwinana - BP	BP Refine	Alex Brodie	09 4190344				
PDC-A123	Skimmer - Disc Komara 12K Mk2		WA	Kwinana - BP	BP Refine	Alex Brodie	09 4190344				

## Marine Oil Spill Equipment System (MOSES)

MOSES ID	DESCRIPTION	QTY	STATE	LOCATION	OWNER	CONTACT	PHONE	LEVY	
								IN USE	STANDBY
PDJ-A458	Boom - Troilboom		WA	Fremantle	Fremantle	Gino Valenti	08 94303369		
PDF-A451	Boom Self Bouyant Gamlen	200 m	WA	Fremantle	Fremantle	Gino Valenti	08 94303369		
PDF-A454	Boom Self Bouyant Slickbar Mk10	200 m	WA	Fremantle	Fremantle	Gino Valenti	08 94303369		
PAM-A456	Pump - Salvage Thune Eureka		WA	Fremantle	Fremantle	Gino Valenti	08 94303369		
PAM-A457	Pump - Salvage Thune Eureka		WA	Fremantle	Fremantle	Gino Valenti	08 94303369		
PDA-A449	Skimmer - Disc Destroil DS210		WA	Fremantle	Fremantle	Gino Valenti	08 94303369		
PDA-A455	Skimmer - Disc Slickbar Recovery		WA	Fremantle	Fremantle	Gino Valenti	08 94303369		
PDA-A452	Skimmer - Weir Slickbar Manta Ray		WA	Fremantle	Fremantle	Gino Valenti	08 94303369		
PDA-A453	Skimmer - Weir Slickbar Manta Ray		WA	Fremantle	Fremantle	Gino Valenti	08 94303369		
VCA-A450	Trailer-Oil Spill		WA	Fremantle	Fremantle	Gino Valenti	08 94303369		
PDI-A204	Boom Beach Shore Guardian	200 m	WA	Dampier - Mermaid M:	Mermaid †	Dal Board	08 91444099		
PDG-A171	Boom Inflatable Sea Sentinel	300 m	WA	Dampier - Mermaid M:	Mermaid †	Dal Board	08 91444099		
PDF-A149	Boom Self Buoyant Gamlen Trojan	100 m	WA	Dampier - Mermaid M:	Mermaid †	Dal Board	08 91444099		
PDH-A185	Boom Self Inflating Versatech Zoom 12/18	460 m	WA	Dampier - Mermaid M:	Mermaid †	Dal Board	08 91444099		
PDJ-A211	Boom Towed Jackson Net 600m		WA	Dampier - Mermaid M:	Mermaid †	Dal Board	08 91444099		
MOD-A354	Dispersant - BP AB	3 t	WA	Dampier - Mermaid M:	Mermaid †	Dal Board	08 91444099		
MOD-A355	Dispersant - Corexit 9527	1 t	WA	Dampier - Mermaid M:	Mermaid †	Dal Board	08 91444099		
PDC-A124	Skimmer - Disc Komara 12K		WA	Dampier - Mermaid M:	Mermaid †	Dal Board	08 91444099		
PDD-A137	Skimmer - Rope Mop PWS 9-T		WA	Dampier - Mermaid M:	Mermaid †	Dal Board	08 91444099		
PDA-A093	Skimmer - Weir Vikoma Dragonfly		WA	Dampier - Mermaid M:	Mermaid †	Dal Board	08 91444099		
PDK-A222	Spray Bucket Dispersant Helicopter Simplex 6810		WA	Dampier - Mermaid M:	Mermaid †	Dal Board	08 91444099		
PAL-A021	Spray Unit Vessel Mounted Vikospray		WA	Dampier - Mermaid M:	Mermaid †	Dal Board	08 91444099		
PBD-A058	Tank - Oil Fastank 2000 lt		WA	Dampier - Mermaid M:	Mermaid †	Dal Board	08 91444099		
PBD-A059	Tank - Oil Flexi-tank		WA	Dampier - Mermaid M:	Mermaid †	Dal Board	08 91444099		
PBD-A060	Tank - Oil Towable Bag 20000 lt		WA	Dampier - Mermaid M:	Mermaid †	Dal Board	08 91444099		
PBD-A061	Tank - Oil 36000 lt		WA	Dampier - Mermaid M:	Mermaid †	Dal Board	08 91444099		
PBD-A062	Tank - Oil 56000 lt		WA	Dampier - Mermaid M:	Mermaid †	Dal Board	08 91444099		
MOD-A376	Dispersant - LTXD15	1.2 t	WA	Pt Hedland - Shell	Shell Distr	Martyn Naylor	09 1732638		
VCA-A277	Trailer - Oil Spill		WA	Wyndham - Shell	Shell Distr	Lindsay Middap	08 91611360		
PDH-A191	Boom Self Inflating Versatech Zoom 12/20	200 m	WA	Barrow Island - Wapet	West Aust	Gordon Innes	08 91843700		
PDJ-A213	Boom Towed Jackson Net 500m		WA	Barrow Island - Wapet	West Aust	Gordon Innes	08 91843700		
MOD-A380	Dispersant - Corexit 9527	3.2 t	WA	Barrow Island - Wapet	West Aust	Gordon Innes	08 91843700		
PBD-A074	Tank - Oil Fol-Da-Tank portable frame 5500 lt		WA	Barrow Island - Wapet	West Aust	Gordon Innes	08 91843700		
PBD-A075	Tank - Oil Vikotank portable frameless 5500 lt		WA	Barrow Island - Wapet	West Aust	Gordon Innes	08 91843700		
VCA-A278	Trailer - Oil Spill		WA	Barrow Island - Wapet	West Aust	Gordon Innes	08 91843700		
WCE-A307	Barge - Landing (37m x 9m x 2m)		WA	Barrow/Thevenard Isl	West Aust	Gordon Innes	08 91843700		
PDI-A208	Boom Beach Shore Guardian	100 m	WA	Thevenard Island - W	West Aust	Mick Doyle/C S	08 91843800		
PDH-A192	Boom Self Inflating Versatech Zoom 12/20	600 m	WA	Thevenard Island - W	West Aust	Mick Doyle/C S	08 91843800		
MOD-A381	Dispersant - Corexit 9527	0.4 t	WA	Thevenard Island - W	West Aust	Mick Doyle/C S	08 91843800		
PDD-A142	Skimmer - Rope Mop OM 140		WA	Thevenard Island - W	West Aust	Mick Doyle/C S	08 91843800		

**Marine Oil Spill Equipment System (MOSES)**

MOSES ID	DESCRIPTION	QTY	STATE	LOCATION	OWNER	CONTACT	PHONE	LEVY			
								IN USE	STANDBY	IN USE	STANDBY
PDB-A112	Skimmer - Suction Ro-Vac		WA	Thevenard Island - We	West Aust	Mick Doyle/C S	08 91843800				
PDB-A113	Skimmer - Suction Vacuum Trailer 4000 lt		WA	Thevenard Island - We	West Aust	Mick Doyle/C S	08 91843800				
PDK-A225	Spray Bucket Dispersant Helicopter Simplex 6810		WA	Thevenard Island - We	West Aust	Mick Doyle/C S	08 91843800				
PBD-A076	Tank - Oil Fol-Da-Tank portable frame 5500 lt		WA	Thevenard Island - We	West Aust	Mick Doyle/C S	08 91843800				
PBD-A077	Tank - Oil Trelcone towable floating 10000 lt		WA	Thevenard Island - We	West Aust	Mick Doyle/C S	08 91843800				
PBD-A078	Tank - Oil Trelcone towable floating 10000 lt		WA	Thevenard Island - We	West Aust	Mick Doyle/C S	08 91843800				
PBD-A079	Tank - Oil Vikotank portable frameless 5500 lt		WA	Thevenard Island - We	West Aust	Mick Doyle/C S	08 91843800				
MOD-A382	Dispersant - Corexit 9527	0.8 t	WA	Thevenard Island - We	WMC	Ed Fletcher/Dav	08 9184 6912				
PDK-A226	Spray Bucket Dispersant Helicopter Simplex 6810		WA	Thevenard Island - We	WMC	Ed Fletcher/Dav	08 9184 6912				
WCA-A292	Boat - MV Marella dispersant equipped		WA	Vicksburg - WMC	WMC	Ed Fletcher/Dav	08 9184 6912				
PDH-A193	Boom Texas Boom	1200 m	WA	Vicksburg - WMC	WMC	Ed Fletcher/Dav	08 9184 6912				
MOD-A383	Dispersant - Corexit 9527	1.2 t	WA	Vicksburg - WMC	WMC	Ed Fletcher/Dav	08 9184 6912				
PDG-A176	Boom Vikoma Coastal Pack	300 m	WA	King Bay Supply Base	Woodside	George Ramsha	08 91587110				
PDI-A209	Boom Beach Shore Guardian	200 m	WA	King Bay Supply Base	Woodside	George Ramsha	08 91587110				
PDF-A160	Boom Self Buoyant Gamlen Trojan	125 m	WA	King Bay Supply Base	Woodside	George Ramsha	08 91587110				
PDJ-A214	Boom Towed Jackson Net 600m		WA	King Bay Supply Base	Woodside	George Ramsha	08 91587110				
MOD-A384	Dispersant - BP 1100WD	3.2 t	WA	King Bay Supply Base	Woodside	George Ramsha	08 91587110				
MOD-A385	Dispersant - Corexit 9527	1.0 t	WA	King Bay Supply Base	Woodside	George Ramsha	08 91587110				
MOD-A386	Dispersant - Shell VDC	12 t	WA	King Bay Supply Base	Woodside	George Ramsha	08 91587110				
PDC-A131	Skimmer - Disc Komara 12K		WA	King Bay Supply Base	Woodside	George Ramsha	08 91587110				
PDA-A096	Skimmer - Weir Delta Head DP 008		WA	King Bay Supply Base	Woodside	George Ramsha	08 91587110				
PDA-A097	Skimmer - Weir Dragonfly		WA	King Bay Supply Base	Woodside	George Ramsha	08 91587110				
PAL-A035	Spray Unit Vessel Mounted Vikospray		WA	King Bay Supply Base	Woodside	George Ramsha	08 91587110				
PAL-A036	Spray Unit Vessel Mounted Vikospray		WA	King Bay Supply Base	Woodside	George Ramsha	08 91587110				
PBD-A080	Tank - Oil Fastank		WA	King Bay Supply Base	Woodside	George Ramsha	08 91587110				
PBD-A081	Tank - Oil Fastank		WA	King Bay Supply Base	Woodside	George Ramsha	08 91587110				

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## Marine Oil Spill Equipment System (MOSES)

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MOSES ID	DESCRIPTION	QTY	STATE	LOCATION	OWNER	CONTACT	PHONE	LEVY		NON LEVY	
								IN USE	STANDBY	IN USE	STANDBY
MOD-0393	DISPERSANT ARDROX 6120	9.6 t	NT	DARWIN	AMSA	John Butler	08 89993990				
MOD-0394	DISPERSANT BP A-B	31.4 t	NT	DARWIN	AMSA	John Butler	08 89993990				
PDI11634	BOOM - BEACH - STRUCTURFLEX LAND SEA	160m	NT	DARWIN	AMSA	John Butler	08 89993990				
PDI7661A	BOOM - SELF BUOYANT SLICKBAR MK32E	900 m	NT	DARWIN	AMSA	John Butler	08 89993990	75.00	23.00	90.00	27.00
PDF7661A	BOOM - SELF BUOYANT SLICKBAR MK32E	900 m	NT	DARWIN	AMSA	John Butler	08 89993990				
BP-0055	BOOM BALLAST PUMP - BEACH - STRUCTURFLEX LAND SEA		NT	DARWIN	AMSA	John Butler	08 89993990				
IP-0055	BOOM INFLATION PUMP BEACH - STRUCTURFLEX LAND SEA		NT	DARWIN	AMSA	John Butler	08 89993990				
PAL-4346	PUMP - DISPERSANT SYSTEM - WSL		NT	DARWIN	AMSA	John Butler	08 89993990	100.00	30.00	115.00	35.00
PAL-4437	PUMP - DISPERSANT SYSTEM - WSL		NT	DARWIN	AMSA	John Butler	08 89993990	100.00	30.00	115.00	35.00
PAL-4338	PUMP - DISPERSANT SYSTEM - WSL		NT	DARWIN	AMSA	John Butler	08 89993990	100.00	30.00	115.00	35.00
PAL-4432	PUMP - DISPERSANT SYSTEM - WSL		NT	DARWIN	AMSA	John Butler	08 89993990	100.00	30.00	115.00	35.00
PDD-4463	SKIMMER - ROPE MOP - ORI PIRANHA 1000		NT	DARWIN	AMSA	John Butler	08 89993990	250.00	75.00	290.00	87.00
PBD-4475	TANK - RECOVERED OIL COLLAPSIBLE TRANSPAC		NT	DARWIN	AMSA	John Butler	08 89993990	150.00	45.00	175.00	53.00
PBD-4385	TANK - RECOVERED OIL COLLAPSIBLE TRANSPAC		NT	DARWIN	AMSA	John Butler	08 89993990	150.00	45.00	175.00	53.00
PDO10781	ANCHOR KIT - SMALL 15KG SET OF 8		NT	DARWIN	AMSA	John Butler	08 89993990				
PDF-4451	BOOM - SELF BUOYANT - AUST-POL D2	60 m	NT	DARWIN	AMSA	John Butler	08 89993990	45.00	14.00	55.00	17.00
PDF-4944	BOOM - SELF BUOYANT - AUST-POL D2	240 m	NT	DARWIN	AMSA	John Butler	08 89993990	45.00	14.00	55.00	17.00
PDH-4239	BOOM - SELF INFLATING - VERSATECH ZOOM 12/18	300 m	NT	DARWIN	AMSA	John Butler	08 89993990	250.00	75.00	290.00	87.00
WCA-4981	PUNT - ALUMINIUM - KAYFA 5.2M		NT	DARWIN	AMSA	John Butler	08 89993990	100.00	30.00	115.00	35.00
PDA10772	SKIMMER - WEIR - FOILEX MINI		NT	DARWIN	AMSA	John Butler	08 89993990	200.00	60.00	230.00	69.00
PKD10721	SPRAY BUCKET - HELICOPTER - ROTORTECH TC3		NT	DARWIN	AMSA	John Butler	08 89993990	500.00	150.00	575.00	173.00
PBD10736	TANK - RECOVERED OIL FLEXIDAM 10000 LT		NT	DARWIN	AMSA	John Butler	08 89993990	100.00	30.00	115.00	35.00
PBD10735	TANK - RECOVERED OIL FLEXIDAM 10000 LT		NT	DARWIN	AMSA	John Butler	08 89993990	100.00	30.00	115.00	35.00
VCA-4229	TRAILER - BOX TANDEM AXLE		NT	DARWIN	AMSA	John Butler	08 89993990	100.00	30.00	115.00	35.00
MOD-0395	DISPERSANT BP A-B	10 t	NT	GOVE	AMSA	Steve Roberts	08 89875362				
PAL-4332	PUMP - DISPERSANT SYSTEM - WSL		NT	GOVE	AMSA	Steve Roberts	08 89875362	100.00	30.00	115.00	35.00
PAL-4334	PUMP - DISPERSANT SYSTEM - WSL		NT	GOVE	AMSA	Steve Roberts	08 89875362	100.00	30.00	115.00	35.00
PDF-4296	BOOM - SELF BUOYANT - PACIFIC GP 800	300 m	NT	GROOTE EYLANDT	AMSA	David Murgatroy	08 89874251	125.00	38.00	145.00	44.00
MOD-0396	DISPERSANT BP A-B	5 t	NT	GROOTE EYLANDT	AMSA	David Murgatroy	08 89874251				
PAL-4911	PUMP - DISPERSANT SYSTEM - WSL		NT	GROOTE EYLANDT	AMSA	David Murgatroy	08 89874251	100.00	30.00	115.00	35.00
NEW-0018	BOOM - SELF BUOYANT - STRUCTURFLEX GP	300 m	NT	GROOTE EYLANDT	AMSA	David Murgatroy	08 89874251				
PBD11966	TANK - RECOVERED OIL FLEXIDAM 10000 LT		NT	GROOTE EYLANDT	AMSA	David Murgatroy	08 89874251	100.00	30.00	115.00	35.00
PBD11965	TANK - RECOVERED OIL FLEXIDAM 10000 LT		NT	GROOTE EYLANDT	AMSA	David Murgatroy	08 89874251	100.00	30.00	115.00	35.00
MOD-A328	Dispersion - Ardrex 6120	7 t	NT	Offshore - BHPP Cha	BHP Petrc	Mark Paton	08 89221100				
MOD-A329	Dispersion - Corexit 9527	7 t	NT	Offshore - BHPP Mae	BHP Petrc	Mark Paton	08 89221100				
PDK-A218	Spray Bucket Dispersion Helicopter Simplex 6810		NT	Offshore - BHPP Mae	BHP Petrc	Mark Paton	08 89221100				
MOD-A334	Dispersion - Shell VDC	4 t	NT	Darwin - Port Authority	BP	Larry Neelands	08 89468901				
PAL-A017	Spray Unit Vessel Mounted Vikospray		NT	Darwin - Port Authority	BP	Larry Neelands	08 89468901				
PDI-A205	Boom Beach Austpol Beach Boom	62 m	NT	Gove - Nabalco	Nabalco	Steve Roberts	08 89875362/211				
PDG-A174	Boom Inflatable Ro-Boom (Beach)	60 m	NT	Gove - Nabalco	Nabalco	Steve Roberts	08 89875362/211				

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**Marine Oil Spill Equipment System (MOSES)**

MOSES ID	DESCRIPTION	QTY	STATE	LOCATION	OWNER	CONTACT	PHONE	LEVY		NON LEVY	
								IN USE	STANDBY	IN USE	STANDBY
PDF-A152	Boom Self Buoyant Austpol Cube	400 m	NT	Gove - Nabalco	Nabalco	Steve Roberts	08 89875362/211				
PDF-A153	Boom Self Buoyant Austpol D2	200 m	NT	Gove - Nabalco	Nabalco	Steve Roberts	08 89875362/211				
MOD-A368	Dispersant - BP AB	5 t	NT	Gove - Nabalco	Nabalco	Steve Roberts	08 89875362/211				
PDA-A095	Skimmer - Weir Desmi 250		NT	Gove - Nabalco	Nabalco	Steve Roberts	08 89875362/211				
PBD-A068	Tank - Oil Collapsible Recovery (CORT)		NT	Gove - Nabalco	Nabalco	Steve Roberts	08 89875362/211				
MOD-A371	Dispersant - BP AB	1 t	NT	Darwin - Port Authority	Shell	Peter Anderson	08 89461223				
VCA-A272	Trailer - Oil Spill		NT	Darwin - Port Authority	Shell	Peter Anderson	08 89461223				

### 003. AMOSC

As an Associate Member of AMOSC, *GLOBEX Far East* has preferred access, along with other member companies, to equipment, personnel and training facilities based in Geelong, Victoria. The equipment includes booms, skimmers, vacuum units, storage systems, aerial spray systems for both fixed-wing and helicopters, and a large quantity of dispersant. The equipment is designed to handle spills of up to about 11,000 cubic metres and is transportable, mostly by air, to any part of Australia. The equipment is only available in response to an oil spill incident and not normally accessible for routine exploration and production activities.

#### Fixed Wing Aerial Dispersant Capability

AMSA, and AIP through AMOSC, have in place a 'Fixed Wing Aerial Dispersant Capability' (FWADC) for the spraying of oil spill dispersant. Based on the concept of utilising large agricultural aircraft, the FWADC is designed to complement existing informal dispersant spraying arrangements using helicopters, which are confined to close inshore work. The aircraft have a dispersant capacity of between 1890 - 3100 litres.

The FWADC contractor is required to have available on any one day, at least two aircraft. These aircraft are to be located at Tintinara (SA) or Adelaide (SA) and either Emerald (Qld) or St George (Qld). Additionally, aircraft will also be available for approximately 275 days per year each at Scone (NSW), Ballarat (Vic) and St George/Emerald. Aircraft activation is on the basis of a four hour response time, ie available to fly within four hours of being requested to respond to an incident.

Activation of the FWADC is through DELM, TMR or through AMSA's duty officer, who can be contacted via the Authority's MRCC. The AMSA duty officer will make an assessment of the requirement and then contact the contractor, who within 30 minutes will advise AMSA of the nominated aircraft and its ETA.

AMOSC's permanent staff are supplemented by member company employees who constitute a Core Group. Activation of AMOSC equipment, personnel or Core Group is through the AMOSC duty officer (See Section 080. - Emergency and Specialists Contact Directory).

#### 003.1 AMOSC Callout

AMOSC has 3 levels of advice for a call-out or potential callout:-

- |                    |   |
|--------------------|---|
| 1. Forward Notice: | <ul style="list-style-type: none"> <li>• Advice of a potential problem;</li> <li>• Provide or update information on AMOSC Incident Report Form. Update Sheet and advise 4 hourly.</li> </ul>                                  |
| 2. Standby:        | <ul style="list-style-type: none"> <li>• AMOSC equipment may be required;</li> <li>• An assessment of equipment/location required is being made;</li> <li>• Update AMOSC Incident Report Form and advise 2 hourly.</li> </ul> |
| 3. Callout:        | <ul style="list-style-type: none"> <li>• AMOSC equipment and/or personnel is required;</li> <li>• Time, amount and location stipulated.</li> </ul>  |

**Note:** Only authorised personnel can activate AMOSC at any advice level. Advice levels 2 and 3 initiate mobilisation costs.

The Duty Officer will require as much of the information on the AMOSC Incident Report Form as is available at the time. A copy of this form is included in the following pages.

**003.2 AMOSC Callout Authorities**

AMOSC holds a list of pre-identified *GLOBEX Far East* personnel who are authorised to mobilise resources (See Section 080. - Contact Directory). AMOSC will respond to a confirmed, approved callout authority's verbal instructions, however, response specific appendices to the pre-signed agreements concerning levels of equipment, personnel and insurance may need to be signed. These documents may be faxed from and to AMOSC.

**003.3 AMOSC Equipment**

The following is a summary of the major items of equipment, and consumables (dispersants and sorbents) available through AMOSC. Shipping, transport and deployment details are also included in the following pages.

Description	Quantity	Application
Ro Boom 1500 Bay Model	3,000m	Open Sea
Ro-Skim Weir boom	2 units	General Use
Versatech Self Inflation (Zoom) Boom	3,000m	Harbour
Beach Guardian Boom	2,000 m	Calm Water
GT185 Skimmer	2 units	General Use
Desmi Skimmer	1 unit	Calm Water
30K Komara Disc Skimmer	2 units	Harbour
12K Komara Disc Skimmer	2 units	Calm Water
6" Oil Mop	2 units	General Use
4" Oil Mop	2 units	Harbour
Egmopol Skimmer Barge <sup>1</sup>	1 unit	General Use
Ro Vac Units	4 units	Beaches / Rocky Shores
Vikospray Boat Spray System	1 Unit	General Use
Simplex 6810 Helicopter Bucket	2 units	Aerial Use
Portable Tanks 9m <sup>3</sup>	6 units	General Use
Portable Tanks 13m <sup>3</sup>	2 units	General Use
Lancer Inflatable Storage Barge	3 units	General Use
Dispersant Dasic Slickgone NS	100 x 1000 l	
Dispersant Dasic Slickgone NS	250 x 200 l	
Absorbents (booms, pads and rolls)	Large stock	
Steam generator	4 units	General use
Radio/Satellite Comms. Equip <sup>2</sup>	Various	Communications.

- Note:**
1. A purpose built, self-propelled oil spill recovery vessel designed for recovery of oil from harbours, coastal areas, rivers and lakes. It can be used in conjunction with a boom system to concentrate oil.
  2. Inmarsat satellite telephone carried in a suitcase and offering international communication by telephone and facsimile. GPS navigation instruments, VHF/UHF base station, hand held radios, and airband radio.

## AMOSC - MAJOR ITEMS OF EQUIPMENT

**Egmopol Barge** : (1) a purpose built, self-propelled oil spill recovery vessel designed for recovery of oil from harbours, coastal areas, rivers and lakes. It can be used in conjunction with a boom system to concentrate the oil.

**Ro-Boom** : (3k in 15 x 200m sections) a multi-purpose, heavy duty neoprene fabric, weather resistant and segmented boom. Once deployed it can be moored and left unattended. Widely used because of its simplicity and low maintenance.

**Ro-Skim** : (2) heavy duty offshore weir skimmer systems used in conjunction with the Ro-Boom.

**Desmi 250 Skimmer** : (1) a light/medium viscous oil weir skimmer which recovers oil at 40-70 cubic metres an hour depending on viscosity, oil layer thickness and sea conditions.

**GT 185 Skimmer** : (2) a weir skimmer applicable for light to heavy oils. Has a pump capacity of 43 cubic metres per hour.

**Beach Guardian Boom** : (2000m in 80 x 25m sections) made of polyurethane coated nylon fabric and designed for forming surface seals on intertidal zones, river banks and mud flats.

**Zoom Boom** : (3000m in 120 x 25m sections) made of vinyl coated nylon fabric, this is a medium duty rapid deployment, self inflating boom for inshore waters.

**Oil Mop** : (2 by OM240 type; 2 by OM260 type) four trailer mounted pieces of equipment used for collecting a wide range of oils where access might be a problem for conventional skimmers. Mop itself is 30m-90m long and made of polypropylene fibres interwoven through a central rope core. Gathered oil is squeezed out through a mangle into a sump.

**Simplex Spray Equipment** : (2) aerial (helicopter) dispersant bucket spray systems suitable for spot slick treatment offshore. Uses latest generation of dispersant suitable for airborne techniques.

**Ro-Vac Vacuum System** : (4) mobile vacuum systems for use on all but heaviest oils.

**Komara Disc Skimmer** : (2 by 12K type; 2 by 30K type) useful for light to medium crudes and some light fuel oils. This apparatus has plastic discs driven hydraulically from a remote diesel hydraulic power pack. Oil collected in the sump is discharged by hose to storage.

**Dispersant** : (150 tonnes) Dasic Slickgone NS in 1000 litre and 200 litre containers, suitable for ship-board or aerial spray application.

**Other Consumable Items** : 3M absorbent pads and booms.

**Steam and Electric Generation** : (4) trailer mounted, steam cleaning/pressure washing systems used for cleaning beaches and equipment.

**Temporary Storage :** (6) portable temporary storage tanks of tough PVC coated polyester (which is UV resistant). Four are the easy-to-erect aluminium framed type, each with a capacity of 9,000 l of recovered oil and two are the self supporting type with a capacity of 13,000 l each.

**Inmarsat Satellite Telephone :** transportable communications system carried in suitcase and offering world-wide communication by telephone and facsimile.

**Other Communication Equipment :** two GPS navigation instruments, VHF/UHF base station, plus TX/RX UHF and VHF hand held radios and airband radio.

**Oiled Fauna Kit :** Kit to be used by the appropriate authorities to treat fauna, particularly birds, that may be affected by oil.

**AMOSC EQUIPMENT : INVENTORY, SHIPPING, AND TRANSPORT DETAILS**

Item	Markings		Pack Size		AMOSC Inventory	Overseas Pack	Notes
	AMOSC No	Case No	WxDxH (mm)	Mass (kg)			
Vikospray Boat Unit - Arms	G-030	1	3100x500x500	150	1		
Vikospray Boat Unit - Pump	G-030	2	1200x1700x1200	350	1		
Helibucket	G-031		1900x1500x2300	420	2	1	
Dispersant pump	G-032		1200x1200x100	200	2	1	
Disk skimmer 30K head	G-050	1	1600x1600x1100	340	2	1	
Disk skimmer 30K power pack	G-050	2	1800x1200x1100	570	2	1	
Disk skimmer 12K head	G-051	1	1300x1300x900	210	2	1	
Disk skimmer 12K power pack	G-051	2	1200x1200x950	300	2	1	
Ro-Vac	G-070		2400x1200x1300	780	4	1	
Desmi skimmer system-complete	G-080	1-3	3000x2400x2400	3600	1		
Desmi skimmer head	G-080	1	1800x1200x1400	300			
Desmi power pack	G-080	2	1600x1080x1200	850			
Desmi hose reel	G-080	3	1750x1050x1550	390			
GT 185 skimmer head	G-081	1	1500x1200x1200	430	2	1	
GT 185 power pack	G-081	2	1200x1000x1200	760	2	1	
GT 185 hose reel	G-081	3	1200x1200x1400	510	2	1	
Ro-skim system-complete	G-082	1-4	3000x2500x2600	4500	2		
Ro-skim pump/skimmer	G-082	1	1200x600x1500	300			
Ro-skim power pack	G-082	2	1800x1300x1700	1400			
Ro-skim hose reel	G-082	3	1700x900x1700	550			
Ro-skim aux equip	G-082	4	1200x900x1200	300			
Ro-skim boom (72m) & winder	G-091		2200x2000x1800	1750	1		
Ro-boom (200m) & winder	G-091		2200x2000x1800	3500	15	5	3000m total
Ro-boom power pack	G-040		1200x900x1500	570	5	1	
Beach Guardian Boom (4x25m/pack)	G-110		1200x1200x1100	380	20	500m	2000m total
Beach guardian deployment kit	G-130		1200x1200x700	140	4	1	
Beach guardian shore kit	G-132		1700x800x600	80	5	1	1 per 400m
Zoom boom (4x25m/pack)	G-111		2400x1200x1000	410	34	1000m	3400m total
Boom anchor kit	G-131		1500x1200x1100	1000	6	2	12x30kg anchors
GP transfer pump	G-120		1200x1200x1000	250	3	1	

AMOSC EQUIPMENT : INVENTORY, SHIPPING, AND TRANSPORT DETAILS

Item	Markings		Pack Size		AMOSC Inventory	Overseas Pack	Notes
	AMOSC No	Case No	WxDxH (mm)	Mass (kg)			
Fastank	G-140		1700x500x600	90	4	2	
Vikoma tank	G-141		1500x700x600	70	2	1	
Lancer Barge	G-142		1200x1200x1300	470	3		
Sorbent boom (20x3m lengths/cage)	G-150		1300x1150x1170	150	23		
Sorbent pads (12x100 sht bales/cage)	G-151		1300x1150x1170	170	7		
Snares (33 bags of 30/cage)	G-152		1300x1150x1170	240	3		
Ro-mop 240 winder and pump	G-160	1	1300x800x1300	350	2	1	
Ro-mop 240 accessories	G-160	2	2000x400x400	100	2	1	in trailer
Ro-mop 260 winder and pump	G-161	1	1800x900x1400	600	2	1	
Ro-mop 260 accessories	G-161	2	2000x400x400	100	2	1	in trailer
Egmopol barge complete	G-162			9800	1		
Egmopol port side pontoon	G-162	1	10250x1200x1200	2500			
Egmopol starboard side pontoon	G-162	2	10250x1200x1200	2500			
Egmopol centre tank	G-162	3	10250x2400x2200	4800			
Egmopol pontoons joined	G-162		10250x2400x1200	5000			
Site Kit Trailer	G-183		1700x1900x1450	500	1		
Electric/steam generator	G-260		3900x2000x1600	1100	4		
Beach Wash-down Kit	G-261	1	1300x1150x1170	250	1		
Beach Wash-down Kit	G-261	2	1300x1150x1170	250	1		
Decontamination Kit	G-262		1500x1200x1200	320 (est)	1		
VHF/UHF Base Station	G-290		600x 600x700	65	1		
VHF/UHF Base Stn. support equip	G-290		3000x500x700	210	1		
UHF Portable Radios (3 per box)	G-292		680x550x180	23	2		
VHF Portable Radios(3 per box)	G-293		620x680x180	23	2		
VHF Portable radio airband	G-294		55x30x22	5	1		
Satellite Comms. Equipment	G-300		300x 40x300	35	1		
Satellite Support Equipment	G-300		840x550x480	41	1		
Oiled fauna kit	G-330		1500x1200x1100	320	1		
Dispersant-200l drums (4/pallet)	G-600		1200x1200x1050	800	50t	50t	
Dispersant-1000l containers	G-601		1200x1000x1150	1000	100t		

## INCIDENT REPORT FORM

GENERAL	AMOSC Duty Officer: Date/Time: Callout Status: <span style="float: right;">Forward Notice/Standby/Callout</span>
CALLER	Company: Name: Position: Contact Nos - Office/Home/Mobile/Fax:  Callout authority:
INCIDENT	Time: Location, including lat/long: Crude or product type: SG/viscosity(cS)/pour pt(deg C): Spill source/size: Spill nature: <span style="float: right;">instantaneous/continuing</span> Continuing flow rate(if applicable): Slick size/location/movement: Fire: <span style="float: right;">yes/no</span> Maximum spill potential:
WEATHER	Wind speed/direction: Air temperature: Precipitation: <span style="float: right;">none/showers/rain</span> Visibility <span style="float: right;">good/fair/poor</span>
WATER	Sea state/current speed/direction: Water temperature: Tide times - high/low:
EQUIPMENT	Requirements (use shipping list) Where/when:
SITE CONTACTS	Name: Location: Contact Nos - Office/Home/Mobile/Fax:
OTHER INFO	

## **004. EARL Equipment (Singapore)**

*GLOBEX Far East* has third party access to East Asia Response Pte Ltd (Earl) in Singapore. EARL can provide equipment and personnel. Equipment available includes booms, skimmers, vacuum units, storage systems, bulk aerial spray systems and dispersant. EARL also has a C-130 aircraft at its disposal to assist with rapid air transport of equipment.

Approximate response times to the Southeast area of Australia are as follows:

- Equipment mobilisation time in Singapore (aircraft in the air) - 6 to 8 hours
- ADDS pack deployment (bulk dispersant spraying equipment) - 4 to 6 hours
- Flight time to Melbourne - 12 hours

### **004.1 EARL Callout**

Activation of EARL equipment and personnel is through the EARL duty manager.\*

The EARL emergency number is manned on a 24 hour basis (See Section 080. - Contact Directory). The caller will be asked to provide:

1. Name of caller
2. Name of company
3. Country location of caller
4. Telephone number including country prefixes
5. Brief details of the incident

The duty manager will then be contacted and will make contact with the requesting party. Once contact has been made, EARL will fax an "Activation Procedure" questionnaire to the caller to assist in the determining the appropriate response.

Prior to the major commitment of equipment and personnel, authorisation must be obtained in writing from *GLOBEX Far East*. This authorisation is necessary to protect *GLOBEX Far East*' and EARL's interest.

A copy of the EARL Activation Procedure, Equipment and Manpower listing and rates can be found in the following pages.



# **EAST ASIA RESPONSE PTE LTD**

## **SCHEDULE A**

### **EQUIPMENT – HIRE RATES 1997**

#### **THIRD PARTY AGREEMENT**

East Asia Response Private Limited  
2 Jalan Samulun,  
Singapore 629120  
Tel : +65 266 1566  
Fax : +65 266 2312

Revision : Nov 97

Description	Quantity	Hire Rates/Per Unit/Per Day	
	Available	(US\$)	
		In Transit	In Use/Hire
<b>CONTAINMENT BOOM</b>			
<b>OFFSHORE BOOMS</b>			
<b>Ro-Boom Model 1500</b> 200m containment boom on reel complete with towing equipment and inflation unit (without power pack)	10	1,000	2,000
<b>Hi Sprint 950 Rapid Boom</b> 250m on reel c/w towing equipment and air fan (5 sections of 50m each; without power pack)	3	1,200	2,400
<b>NEARSHORE BOOMS</b>			
<b>Troll Boom</b> Model 1500 HD boom system (each unit has 4 segments of 15m each)	16	500	1,000
<b>Sea Curtain Coastal Boom</b> Foam Filled in 50m segments	40	180	360
<b>Seasentinel Inshore Boom</b> Air inflatable boom on reels c/w powerpack (2 segments x 100m each)	3	300	1,600
<b>Seasentinel Inshore Boom</b> Air inflatable curtain booms - packed loose in a cage Contents per cage :  - Segment length 20m x 8  - Segment length 10m x 4	3 cages	1000	2000
<b>Shoreguardian Beach Sealing Boom</b> Air and water tube booms - for use in intertidal areas and packed loose in a cage Contents per cage :  - Segment length 25m x 4  - Segment length 20m x 1  - Segment length 10m x 4	5 cages	1000	2000

Description	Quantity	Hire Rates/Per Unit/Per Day (US\$)	
	Available	In Transit	In Use/Hire
<b>BOOM ANCILLARY EQUIPMENT</b>			
<b>Boom Deployment Boxes for SS/SG booms</b>	8 boxes	80	160
<b>Contents per box :</b>			
1 x ECHO air blower model PB4500			
1 x air blower hose - length 3m with Monsun valve adapter			
1 x Honda water pump model WB 20X			
1 x water pump suction hose - length 5m with strainer			
1 x water pump discharge hose - length 20m with Monsun valve adapter			
4 x Air hose interconnectors x 3m			
1 x SST monsun valve tools			
<b>Boom Ancillary Cage for SS/SG/Sea Curtain &amp; Troil Boom (Per set in cage)</b>	10 cages	50	100
<b>Contents per cage:</b>			
6 x Anchors			
9 x Chains			
10 x Buoys			
1 x 3/4" Ropes			
1 x 1/2" Ropes			
8 x Tow bridles			
3 x Wooden stakes			
3 x Metal stakes			
<b>Troil Boom Recovery Machine</b>	1 unit	20	40
<b>200m Ro-Boom Combi system c/w Trawl Net, and 15m Side Sweep Arm</b>	2 systems	1,490	2,980
c/w airfan, towing bridles, ropes, buoys, etc.			
* (Nets to be replaced at cost - capacity per net. = 10 tonnes without power pack)			

Description	Quantity	Hire Rates/Per Unit/Per Day (US\$)	
	Available	In Transit	In Use/Hire
<b><u>OIL RECOVERY DEVICES</u></b>			
<b>Ro-Skim Unit</b> Weir Type skimmer for Offshore use For use with Ro-Boom. Capacity 100t/hr. (without power pack)	2	240	480
<b>Marflex Sweep Arms for Port and Stb'd fixture.</b> Weir Type skimmer for Offshore use Capacity 450t/hr. (without power pack)	2	130	260
<b>GT185 Weir Skimmer for Offshore/Nearshore use</b> Complete with discharge and hydraulic hoses. (without power pack)	5	440	880
<b>Vikoma Seawoolf Unit c/w hydraulic hoses.</b>  Heavy oil mechanical skimmer for Offshore use. Capacity 30t/hr. (without power pack)	2	430	860
<b>Vikoma Seadevil Skimmer</b> Heavy oil mechanical skimmer for Offshore use c/w hydraulic and discharge hose -capacity 70t/hr. (without power pack)	1	350	700
<b>ORS AB WP 1-30</b> Heavy oil drum skimmer for Offshore use, complete with hydraulic and discharge hose-capacity 70t/hr. (without power pack)	1	730	1560
<b>Seaskimmer 50</b> Oleophilic Disc skimmer for Offshore use. Capacity 50t/hr. (without power pack)	2	550	1100
<b>T18 Oleophilic Disc Skimmer for Offshore/Nearshore use</b> Complete with power pack. Capacity 18t/hr.	4	180	360
<b>T12 Oleophilic Disc Skimmer for Nearshore use</b> Complete with power pack. Capacity 12t/hr.	8	140	280
<b>Delta Skimmer</b> Weir Type Nearshore skimmer Complete with power pack. Capacity 12t/hr.	6	60	120
<b>Power Vac Vacuum Unit for Shoreline cleanup Use</b> Complete with hopper unit and power pack	10	120	240
<b>Oil Mop Unit for Nearshore use</b> Rope mop (length 50m x 23cm) c/w power pack. Capacity approx. 10t/hr. (*Rope mop to be replace after use)	2	210	420

Description	Quantity	Hire Rates/Per Unit/Per Day (US\$)	
	Available	In Transit	In Use/Hire
<b><u>POWER PACKS</u></b>			
<b>Pharos Marine Diesel/Hydraulic power packs-35kw</b> For use with Ro-boom, Hi-Sprint boom and Skimmer systems	6	160	320
<b>Desmi Diesel Hydraulic Multi purpose power pack - 50 kw.</b> For use with Ro-boom, Hi-Sprint boom and Skimmer systems	4	300	600
<b><u>PUMPS</u></b>			
<b>Framo Offloading Systems</b> c/w pump, power pack, hose systems. TK7-Capacity 500t/hr and TK5-Capacity 180t/hr.	2	250	500
<b>Desmi DOP250</b> Screw pump unit complete with hoses. Capacity 100t/hr.	2	170	340
<b>Peristaltic Pump Units</b> c/w powerpack and hose systems. Capacity 12t/hr.	6	50	100
<b>Spate Pump 75C</b> Diaphragm c/w powerpack and hose systems. Capacity 30t/hr.	3	40	30
<b><u>ANCILLARY EQUIPMENT</u></b>			
<b>High Pressure Washers - c/w powerpack, hoses and jet sprays</b> (Skid mounted - able to produce hot water washing)	4	70	140

Description	Quantity	Hire Rates/Per Unit/Per Day (US\$)	
	Available	In Transit	In Use/Hire
<b><u>DISPERSANT DELIVERY SYSTEM</u></b>			
<b>Airborne Dispersant Delivery System (ADDS Pack)</b>	1	2,450	4,900
<b>Simplex Helicopter Spray Buckets</b> Simplex 6860 - 240 US Gal.	7 Buckets	100	200
<b>Transland Helicopter Spray Buckets</b> Model No. - 21130 - 150 US Gal. Model No. - 21451 - 250 US Gal.	2 buckets 1 bucket	100	200
<b>Frank Ayles Spillspray</b> Vessel mounted seaborne dispersant application system.	6 units	70	140
<b><u>DISPERSANTS</u></b>			
<b>Bulk Storage Tank on low bed trailer (for ADDS PACK dispersant storage)</b>	1 tank	150	300
<b>*Dispersants in bulk storage tank</b>	19500 litres	At replacement cost + 20%	
<b>Dispersants in drums</b>	200 drums	At replacement cost + 20%	
<b>Dispersants onboard tanks on EARL vessels</b> (Each vessel has 4 tanks x 2400 litres each)	144 drums	At replacement cost + 20%	

Description	Quantity	Hire Rates/Per Unit/Per Day (US\$)	
	Available	In Transit	In Use/Hire
<b><u>STORAGE SYSTEMS</u></b>			
Unitor Oil Bag (capacity 500m3) Floating storage system	1	4,760	9,520
Unitor Oil Bag (capacity 200m3) Floating storage system	2	3,410	6,820
Unitor Oil Bag (capacity 100m3) Floating storage system	3	2,600	5,200
Ro-Tank Storage System (Capacity 10m3) Floating storage system	6	290	580
Pillow Tanks Floating Storage Bags Capacity 500 gal/2.5 m3	12	30	60
Fastanks (portable storage system) Capacity 2000 Gal/10 m3	12	90	180
Porta Berm (Containment System) Capacity 10 m3	2	300	600
<b><u>ABSORBENTS</u></b>			
Sorbent Pads (1 bale x 100 sheets)	100 bales	At replacement cost + 20%	
Sorbent Booms (4 booms x 1 bale)	100 bales	At replacement cost + 20%	
Sorbent Rolls (44m x 1 roll)	150 rolls	At replacement cost + 20%	
Pompom Oil Snare Sorbents (1Carton x 30 pcs)	200 ctns	At replacement cost + 20%	
Lori Brooms & Mops with Wringers (20 sets per cage)	1 cage	At replacement cost + 20%	

Description	Quantity	Hire Rates/Per Unit/Per Day	
	Available	(US\$) In Transit	In Use/Hire
<b><u>COMMUNICATIONS EQUIPMENT</u></b>			
<b>Satellite Communications System</b> Sends faxes & telephone calls	1	280	560
<b>Sailor RT2048 VHF Base Station</b> (25w transceiver with scanning monitor)	4	20	40
<b>VHF Repeater Station</b> (For MX1000 Handsets)	1	70	140
<b>MX1000 Handsets (5 Handsets per box)</b> Complete with batteries and chargers.	3 boxes	110	220
<b>Hilomast Telescopic Aerial</b>	4	40	30
<b>Photophone Unit - PC 70</b> Image DATA's video and telecommunications system. Photophone transmit images to other Photophone	1	200	400
<b>G.P.S. Ensign Navigator</b> Portable Hand-held	1	20	40
<b><u>MISCELLANEOUS ITEMS</u></b>			
<b>Emulsion Break Metering Pump</b>	4	40	30

Description	Quantity	Hire Rates/Per Unit/Per Day	
	Available	(US\$)	
		In Transit	In Use/Hire
<b><u>VESSELS</u></b>			
20m Oil Spill Response Vessel - 8 tons Dispersant + Application System * - 7.5m tender - GPS Navigator * Dispersant consumed charged under consumables. Hire rate is for an 8 hour day calculated from time vessel leaves and returns to base	3	-	12,000
Inflatable Boaf with Outboard (40HP)	1	250	500
7.5m Utility boat (120HP)	3	N.A.	1,000
<b><u>TRANSPORT</u></b>			
Local Transport (Singapore)	-	At Cost	+20%
<b><u>Aircraft</u></b>			
Hercules L-100	1	Comercial rate based on destination, period and use	
<b><u>MOBILISATION AND DEMOBILISATION COSTS *</u></b>			
Actual manhours (including overtime)		At Cost	X 2
Ancillary charges		At Cost	+20%
- Taxi			
- Meals			
- Leave reimbursement			
- ETC.....			
* At the Centre			

546202



**EAST ASIA RESPONSE PTE LTD**

**SCHEDULE B**

**MANPOWER RATES**

**THIRD PARTY AGREEMENT**

East Asia Response Private Limited  
2 Jalan Samulun,  
Singapore 629120  
Tel : +65 266 1566  
Fax : +65 266 2312

Revision : Nov 97

# MANPOWER RATES

<u>PERSONNEL</u>	<u>DAILY RATE</u>
Task Force Leader	USD 1600.00
Operator	USD 1200.00

All personnel charges are for an 8 hour day or part thereof.

546204

## EARL CONTACT NUMBER

In order to access EARL services in the event of an oil spill incident it is necessary to call:-

**Tel : + (65) 266-1566 (Office)**

This telephone will be manned on a 24 hour basis. The caller will be asked to provide:-

- 1) Name of Caller
- 2) Name of Company
- 3) Country Location of Caller
- 4) Telephone Number including country prefixes
- 5) Brief details of the incident

The duty manager will then be contacted and will make contact with the requesting party. Once contact has been made further details will be collected to enable a response strategy to be determined.

**A FAXED LETTER AUTHORISING THE RESPONSE WILL BE REQUIRED FROM ONE OF THE NOMINATED REPRESENTATIVES OF THE COMPANY.**

**Fax : + (65) 266-2312**



546205

2 Jalan Samudra Singapore 629120 Telephone: (65) 266 1566 Facsimile: (65) 266 2312

EARL ACTIVATION PROCEDURE

To: ..... Date .....
Attn: ..... cc: .....
Fax No.: ..... cc: .....
From: ..... Our Ref: .....

Your notification to EARL on the ..... incident has been received at: .....

In order to enable us plan a response with appropriate equipment, please fax to us urgently the following details:

- 1. Date and time of observation (specify local or GMT).
2. Location of Spill. (e.g. Latitude/Longitude)
3. Source and cause of pollution (e.g., name and type of vessel, collision or grounding).
4. Estimate amount of oil spilled and whether spillage has stopped or otherwise.
5. Type of oil spilled and its characteristics (e.g., SG, viscosity and pour point).
6. Description of oil slicks including direction, length, breadth and appearance.
7. Weather and sea conditions.
8. Action taken to combat pollution.
9. Contact name, telephone and fax number of person in charge of the incident.
10. Customer reference number or purchase order number for invoicing purposes.

Please note that we must receive a faxed copy of written authorisation from your company's nominated representative prior to our commitment of personnel and equipment to the incident.

Signature \_\_\_\_\_

Designation \_\_\_\_\_

**005. OSRL Equipment (Southampton UK)**

*GLOBEX Far East* has third party access to Oil Spill Response Ltd (OSRL). OSRL can provide equipment and personnel based at the Oil Spill Service Centre (OSSC) in Southampton, UK. The equipment includes booms, skimmers, vacuum units, storage systems, bulk aerial spray systems and dispersant. OSRL has a C-130 and an Ilyushin Il76 aircraft at its disposal to assist with rapid air transit of equipment.

A copy of the OSRL Equipment List and Scale of Fees including details of pre-loaded semi-trailer packages is included in the following pages.

**005.1 OSRL Callout**

Activation of OSRL equipment and personnel is through the OSRL duty manager (See Section 080. - Contact Directory).

The OSRL emergency number is manned on a 24 hour basis (See Section 080. - Contact Directory). The caller will be required to give basic contact information and brief spill details to the operator. The duty manager will contact the caller and require as much of the information on the OSRL Initial Notification Proforma (PROF1) as is available at the time (a copy of this form is included in the following pages).

# OIL SPILL RESPONSE LIMITED



## EQUIPMENT LIST AND SCALE OF FEES 1998

The hire rates are for the year of 1998 and are quoted in Pounds Sterling.

**N.B.** The Weekly Support option is only applicable to pre-approved long term hire agreements for such activities as well exploration contingency plans, where there is a mandatory need to have oil pollution equipment available for the Licence terms and conditions. This option is only available to OSRL Members.

OIL SPILL RESPONSE LIMITED  
1 Great Cumberland Place  
London  
W1H 7AL  
England

Tel : + 44 171 724 0102

Fax : + 44 171 724 0103

OIL SPILL RESPONSE LIMITED  
Lower William Street  
Northam  
Southampton  
SO14 5QE  
England

Tel : + 44 1703 331551

Fax : + 44 1703 331972

## OSRL Scale of Fees

EQUIPMENT GROUP	QUANT	INSUR VALUE GB POUNDS	PARTICIPANT			NON-PARTICIPANT	
			DAILY IN USE GB POUNDS	DAILY STAND BY GB POUNDS	WEEKLY SUPPORT GB POUNDS	DAILY IN USE GB POUNDS	DAILY STAND BY GB POUNDS
<b>RECOVERY BOOM</b>							
Roskim system 150 metres Bay boom c/w integral 60 tph skimmer and power systems	1	£130,900	£1,080	£540	£3,345	£2,160	£1,080
Roskim system 350 metres Bay boom c/w integral 60 tph skimmer and power systems	1	£181,000	£1,500	£750	£4,630	£3,000	£1,500
Vikoma 3 pump weirboom c/w 370 metres boom 180 tph pumps and all support systems	2	£292,000	£2,400	£1,200	£7,465	£4,800	£2,400
<b>OFFSHORE BOOM</b>							
Roboom Bay 200 m, on reel c/w power systems	7	£85,200	£820	£410	£2,180	£1,640	£820
Roboom Bay 200m in container c/w power systems	4	£85,200	£820	£410	£2,180	£1,640	£820
Roboom Ocean 200 m, on reel c/w power systems	4	£92,900	£890	£445	£2,375	£1,781	£890
Vikoma Ocean 500m boom c/w power system	4	£125,800	£1,210	£605	£3,215	£2,420	£1,210
<b>Offshore Drilling Support</b>							
RoBoom Bay 400 metres c/w skimming system	1	<i>on request</i>	****	****	£5,000	***	***
Vikoma Ocean 500m boom c/w skimming system	1	<i>on request</i>	****	****	£5,000	***	***
Expandi fast deployment boom (lightweight boom) 2x 250m c/w skimming system	1	<i>on request</i>	****	****	£5,000	***	***

## OSRL Scale of Fees

EQUIPMENT GROUP	QUANT	INSUR VALUE GB POUNDS	PARTICIPANT			NON-PARTICIPANT	
			DAILY IN USE GB POUNDS	DAILY STAND BY GB POUNDS	WEEKLY SUPPORT GB POUNDS	DAILY IN USE GB POUNDS	DAILY STAND BY GB POUNDS
<b>INSHORE BOOM</b>							
Seasentinel boom 10m air/skirt for coastal areas	104	£807	£30	£15	£60	£60	£30
Seasentinel boom 20m air/skirt for coastal areas	226	£1,219	£50	£25	£90	£100	£50
Shoreguardian boom 10 metre for beach sealing capability	104	£1,258	£50	£25	£95	£100	£50
Shoreguardian boom 20 metre for beach sealing capability	151	£2,007	£80	£40	£150	£160	£80
Expandi Boom Quick deployment boom 2X250 metre rotopack c/w power units	1	£148,500	£1,430	£715	£5,700	£2,860	£1,430
Tripping buoys(40 total)	10	£400	£10	£5	£10	£20	£10
Boom stakes support stillage	8	£500	£10	£5	£10	£20	£10
Boom support cage (ends,rope etc)	2	£1,200	£10	£5	£20	£20	£10
Air & water pump support box	20	£1,700	£20	£10	£35	£40	£20
Anchor support stillage (10 X 30kg)	40	£2,600	£20	£10	£50	£40	£20
Anchor chain stillage	8	£1,000	£10	£5	£20	£20	£10
<b>EQUIPMENT GROUP</b>							
<b>VESSELS UK ONLY **      ** CREW &amp; HARBOUR DUES EXTRA</b>							
Zodiac 4.7m + outboard	1	£5,200	£40	£20	£150	£80	£40
Avon searider + outboard	1	£6,500	£50	£25	£185	£100	£50
5.2m semi rigid + outboard	1	£6,500	£50	£25	£185	£100	£50
Rotork landing craft 13m	1	£100,000	£230	£115	N/A	£460	£230
Workboat	1	£100,000	£230	£115	N/A	£460	£230

## OSRL Scale of Fees

EQUIPMENT GROUP DISPERSANT APPLICATION	QUANT	INSUR VALUE GB POUNDS	PARTICIPANT			NON-PARTICIPANT	
			DAILY IN USE GB POUNDS	DAILY STAND BY GB POUNDS	WEEKLY SUPPORT GB POUNDS	DAILY IN USE GB POUNDS	DAILY STAND BY GB POUNDS
<i>For non-participants: dispersant used ex stock will be at replacement cost plus 25% surcharge, Direct issue dispersant will be at replacement cost plus 15% surcharge.</i>							
Ar 19 Beach spray set	10	£600	£10	£5	£15	£20	£10
AR 30 Beach spray set	10	£1,000	£10	£5	£20	£20	£10
Back pack sprayers (6 off at 5 gal)	3	£600	£10	£5	£15	£20	£10
Frank Ayles Sea Spray sets for use as vessel mounted Type 3 dispersant application system	4	£8,000	£50	£25	£155	£100	£50
See also "Aircraft Systems"							
EQUIPMENT GROUP RECOVERY SKIMMERS							
Jaws air driven unit with mop and pulleys (air supply not inc)	2	£2,000	£10	£5	£40	£20	£10
Diesel drive oil mop system inc mop and pulleys . 4 tph	2	£11,500	£80	£40	£220	£160	£80
Diesel drive oil mop system inc mop and pulleys . 12 tph	2	£17,000	£110	£55	£325	£220	£110
Vikoma Powervac portable vacuum unit c/w recovery hopper 2 tph	20	£17,400	£120	£60	£335	£240	£120
Molex skid mounted vacuum system capacity 4000 litres inc pressure discharge at 1 bar	2	£25,000	£160	£80	£480	£319	£160
Transvac 500D skid mounted vacuum/ pump system	4	£57,000	£370	£185	£1,100	£740	£370
Scavenger light oil skimmer	2	£6,000	£40	£20	£115	£80	£40
Vikoma Kebab 12v 600 litres/hour	1	£2,000	£20	£10	£40	£40	£20
Komara 12 K disc skimmer c/w power pack and hoses	26	£15,000	£100	£50	£290	£200	£100

## OSRL Scale of Fees

	QUANT	INSUR VALUE GB POUNDS	PARTICIPANT			NON-PARTICIPANT		
			DAILY IN USE GB POUNDS	DAILY STAND BY GB POUNDS	WEEKLY SUPPORT GB POUNDS	DAILY IN USE GB POUNDS	DAILY STAND BY GB POUNDS	
Vikoma Seaskimmer 50 c/w p/pack	8	£62,000	£400	£200	£1,190	£800	£400	
SLURP weir skimmer	1	£2,000	£20	£10	£40	£40	£20	
Walosep W4 weir skimmer c/w power system	2	£97,000	£620	£310	£1,860	£1,239	£620	
Desmi DS 250 skimmer c/w power system	6	£56,000	£380	£190	£1,075	£760	£380	
GT 185 weir skimmer c/w power system	6	£42,000	£270	£135	£805	£540	£270	
<b>EQUIPMENT GROUP HEAVY OIL RECOVERY</b>								
Egmopol belt skimmer c/w power system (requires working platform)	1	£20,000	£130	£65	£380	£260	£130	
Egmopol belt skimming barge system c/w propulsion for sheltered waters	1	£157,000	£1,000	£500	£3,010	£2,000	£1,000	
WP 130 drum skimmer c/w power system	2	£93,000	£600	£300	£1,780	£1,200	£600	
Sea Devil skimmer requires power system	3	£45,000	£290	£145	£870	£580	£290	
<b>EQUIPMENT GROUP AIRCRAFT SYSTEMS</b>								
			<i>For non-participants: dispersant used ex stock will be at replacement cost plus 25% surcharge, Direct issue dispersant will be at replacement cost plus 15% surcharge.</i>					
ADD's Pack dispersant spray system for use with L-382 Hercules (a/c not included)	1	£334,000	£2,150	£1,075	£9,600	£4,300	£2,150	
Rotortech TC3 helicopter * mounted spray system (150 gallons) (Helicopter not included)	2	£13,000	£90	£45	£380	£180	£90	
Simplex Model 5400 Hell-Torch * Aerial Ignitor for oil burning (Helicopter not included)	1	£6,000	£40	£20	£174	£80	£40	
* This equipment must not be deployed until fully inspected by the operator. Oil Spill Response Limited accepts no liability whatsoever in respect of the condition of this equipment or its operation.								

## OSRL Scale of Fees

	QUANT	INSUR VALUE GB POUNDS	PARTICIPANT			NON-PARTICIPANT	
			DAILY IN USE GB POUNDS	DAILY STAND BY GB POUNDS	WEEKLY SUPPORT GB POUNDS	DAILY IN USE GB POUNDS	DAILY STAND BY GB POUNDS
<b>EQUIPMENT GROUP</b>							
<b>TRANSFER PUMPS</b>							
Peristaltic pump 20 tph	6	£4,000	£30	£15	£100	£60	£30
Spate diaphragm pump 10 tph	13	£5,000	£30	£15	£125	£60	£30
Desmi DOP 250 pump c/w power pack	2	£45,000	£290	£145	£1,120	£580	£290
Putzmeister concrete pump diesel/ hydraulic powered for HFO & sludge	1	£90,000	£580	£290	£2,250	£1,160	£580
<b>EQUIPMENT GROUP</b>							
<b>STORAGE EQUIPMENT</b>							
Lancer Barge 25000 litres	4	£18,000	£350	£175	£450	£700	£350
Lancer Barge 50000 litres	2	£23,500	£450	£225	£590	£901	£450
Dunlop dracone 30000 litres	1	£36,000	£690	£345	£900	£1,380	£690
Dunlop dracone 100000 litres	1	£75,000	£1,440	£720	£1,875	£2,880	£1,440
Fastank 2000gallons	32	£1,500	£30	£15	£40	£60	£30
Pillow tank 25000l capacity	3	£1,000	£20	£10	£25	£40	£20
Pillow tank 13000l capacity	2	£450	£10	£5	£15	£20	£10
Pillow tank 500 gallon capacity	3	£1,000	£30	£15	£25	£60	£30
<b>EQUIPMENT GROUP</b>							
<b>COMMUNICATIONS EQUIPMENT</b>							
Single VHF handset	30	£1,200	£10	£5	£30	£20	£10
or Set of 5 VHF handsets c/w charger	5	£7,000	£50	£25	£175	£100	£50
VHF Base Station	6	£3,600	£30	£15	£90	£60	£30
VHF Repeater Station	3	£5,600	£40	£20	£140	£80	£40
Photophone system	1	£20,000	£130	£65	£500	£260	£130

## OSRL Scale of Fees

	QUANT	PARTICIPANT				NON-PARTICIPANT	
		INSUR VALUE GB	DAILY IN USE GB	DAILY STAND BY GB	WEEKLY SUPPORT GB	DAILY IN USE GB	DAILY STAND BY GB
		POUNDS	POUNDS	POUNDS	POUNDS	POUNDS	POUNDS
Inmarsat M Sat. Comms (phone only)	1	£6,500	£50	£25	£160	£100	£50
Inmarsat M Sat. Comms (phone & fax)	1	£12,000	£80	£40	£300	£160	£80
Sat comm system(fax phone telex)	1	£35,000	£230	£115	£880	£460	£230
<b>EQUIPMENT GROUP</b>							
<b>ANCILLIARY ITEMS</b>							
Multi purpose power pack 46hp twin hydraulic main pumps	22	£30,000	£200	£100	£860	£400	£200
500w Generator	2	£600	£10	£5	£20	£20	£10
3000w Generator	6	£900	£10	£5	£30	£20	£10
Powered floodlights	2	£2,500	£20	£10	£80	£40	£20
Mobile welding equipment	1	£5,000	£30	£15	£145	£60	£30
Chemical emulsion breaker injection unit (without chemical)	4	£3,000	£20	£10	£85	£40	£20
Mobile diesel drive high pressure and temperature washer for sea water use (trailer mounted)	4	£6,500	£40	£20	£185	£80	£40
Diesel drive high pressure and temperature washer for sea water use (skid mounted)	4	£6,500	£40	£20	£185	£80	£40
Diesel drive Hiab crane unit	3	£26,400	£170	£85	£760	£340	£170
Fassi lightweight crane unit (requires power pack)	2	£26,400	£170	£85	£760	£340	£170
Yokohama fender	6	£6,400	£40	£20	£185	£80	£40
Low pressure inflatable fender	2	£7,000	£270	£135	£500	£540	£270
All terrain vehicle for difficult access areas 2 tonne load bay	1	£50,000	£320	£160	£1,400	£640	£320
Portable inflatable shelter	6	£2,500	£40	£20	£100	£80	£40

## OSRL Scale of Fees

	QUANT	INSUR VALUE GB POUNDS	PARTICIPANT			NON-PARTICIPANT	
			DAILY IN USE GB POUNDS	DAILY STAND BY GB POUNDS	WEEKLY SUPPORT GB POUNDS	DAILY IN USE GB POUNDS	DAILY STAND BY GB POUNDS
Rollalong mobile command centre	1	£4,000	£30	£15	£115	£60	£30

## OSRL Scale of Fees

QUANT	PARTICIPANT				NON-PARTICIPANT	
	INSUR	DAILY	DAILY	WEEKLY	DAILY	DAILY
	VALUE	IN USE	STAND BY	SUPPORT	IN USE	STAND BY
	GB	GB	GB	GB	GB	GB
	POUNDS	POUNDS	POUNDS	POUNDS	POUNDS	POUNDS

## PERSONNEL CHARGES

	PARTICIPANT	NON-PARTICIPANT
	DAILY RATE	DAILY RATE
<b>Spill Response/Operational Services</b>		
Manager	£360	£600
Technician	£300	£500
<b>Consultancy Services</b>		
Senior Consultant	£460	£575
Technical/Staff Consultant	£360	£450

All personnel charges are for an 8 hour day or part thereof. An administration charge of 15% will be incurred on all expenses for non-participants.

**Notes****Equipment Purchases**

In certain circumstances, OSRL may offer equipment for purchase. This will be at the prevailing cost + 15%. Any hire charges incurred cannot be offset against the purchase.

**Consumables**

For Non-participants : All consumables will be at replacement cost plus 15% surcharge, with exception of dispersant (see page 3 - Dispersant Application and page 4 - Aircraft Systems)

**Rehabilitation**

Unless otherwise stated, rehabilitation costs are included in the daily hire rates.

Exceptional repair items or replacement due to total loss will be charged at cost to participants and at cost + 15% for non-participants.

**OSRL Aircraft (L-382 Hercules) Costs****Training / Demonstration flights**

At direct cost to OSRL

**Response flights**

Participants - Block hour rate of USD 5000 per hour plus direct operating costs

Non Participants - Block hour rate of USD 10000 per hour plus direct operating costs



**OSRL INITIAL NOTIFICATION PROFORMA (PROF 1)**

Additional Information required	Complete Information Details, if known
Nearest airport if known, Runway length Handling facilities Customs Handling agent	
Vessel availability Equipment deployment  Recovered oil storage	
Equipment forwarding logistics Transport Secure storage Port of embarkation	
Location of command centre	
On-Scene Commander Other Designated contacts	
Special requirements of country Security Visa Medical advise Vaccinations	
Climate information Personnel clothing  Equipment requirements	



# Globex Far East CONTACT DIRECTORY

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3.2 AMOSC	
3.3 AMOSPlan	
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# Globex Far East CONTACT DIRECTORY

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4.3 Hospitals	
4.4 Doctors	
4.5 Counselling	
5. Contractors & Service Companies	
5.1 Drilling Contractors - Offshore	
5.2 Third Party Services	

**Note:** This contact directory will be updated as required and on a regular basis. Please notify any changes to the details herein to QEST Consulting Group. Tel: (03) 9614 4133, Email: qest@qest.com.au, or fill in and facsimile to QEST the following form Fax: (03) 9614 5133.



**Globex Far East**  
**CONTACT DIRECTORY**

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**CHANGE OF DETAILS FORM**

**FACSIMILE**

**TO** : QEST CONSULTING GROUP **DATE** :  
**NUMBER** : (03) 9614 5133  
**FROM** : ..... (Name) ..... (Company) .....(Ph.)  
**Contact Directory section to be changed:** (eg sect. 2.1) .....

**Replace**  **Add**  **Delete**

**Old Details:** Name: ..... Title: .....  
(as applicable)  
Organisation: .....  
Address:.....  
City:..... State: .....  
Country:.....  
**Contact phone numbers:**  
Work: ..... After hours: .....  
Facsimile: ..... Mobile: .....  
Emergency/Pager: .....  
Email: .....

**New Details:** Name: ..... Title: .....  
(as applicable)  
Organisation: .....  
Address:.....  
City:..... State: .....  
Country:.....  
**Contact phone numbers:**  
Work:..... After hours:.....  
Facsimile:..... Mobile:.....  
Emergency/Pager: .....  
Email: .....

**Qest Consulting, 325 Flinders Lane, Melbourne, VIC, 3000, Australia**  
**Ph. ++ 61 (0)3 9614 4133 Fx. ++ 61 (0)3 9614 5133 E-Mail: qest@qest.com.au**  
Perth - Level 7, 251 Adelaide Terrace, Perth, WA., 6000. Ph. ++ 61 (0)8 9325 3399 Fax. ++ 61 (0)8 9325 3335



GLOBEX Far East

Globex Far East

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0. Government Notification Matrix

EMERGENCY: ORGANISATION	Evacuation General	Oil Spill	POB & Missing	Unknown Vessel Approach	Marine Incident	SAR Vessel	SAR Aircraft	Aviation Incident	Fatality	Unauthor- ised &/or Criminal Act	If ongoing Gov't Assistance is required	Title	Contact Numbers	Time of Contact	Reply Received	Response Action/ Notification
AIRSERVICES AUSTRALIA							✓	✓				Adelaide Duty Officer: Facsimile: Melbourne Air Traffic Control:	(08) 8238 7838 (24hr) (08) 8234 4174 (03) 9339 2666			
AUSTRALIAN MARITIME SAFETY AUTHORITY (AMSA) Marine RCC	✓1	✓1	✓1	✓1	✓1	✓1	✓1	✓1		✓1		Canberra RCC - Maritime Facsimile:	1800 641 792 (24hr) 1800 622 153			
AusSAR AUSTRALIAN SEARCH & RESCUE							✓	✓				Canberra RCC - Aviation Facsimile:	1800 815 257 (24hr) 1800 622 153			
BUREAU OF AIR SAFETY INVESTIGATION (BASII)							✓					Melbourne Air Safety Investigator Switchboard: Mobile: Facsimile:	(03) 9285 6676 1800 011 034 (24hr) 0417 667 993 (03) 9285 6674			
DEPARTMENT OF NATURAL RESOURCES & ENVIRONMENT - Minerals & Petroleum Division												Melbourne Principle Drilling Engineer- Ahmed Nadji Mobile: After hours: Facsimile:	(03) 9412 4011 (03) 9412 5089 0412 110 997 (03) 9848 2935 (03) 9412 5152			
MARINE BOARD OF VICTORIA		✓1										Melbourne Manager, Marine Environment & Pollution Response - Lynn McIlwain Pager: Mobile: Facsimile:	(03) 9655 3399 (03) 9655 9783 (03) 9883 3362 0409 958 090 (03) 9655 6611			
DEPARTMENT OF PRIMARY INDUSTRIES, WATER & ENVIRONMENT		✓1										Hobart State Marine Pollution Control Officer - John Dobson Mobile: Facsimile:	1800 005 171 (03) 6233 8127 0418 125 859 (03) 6233 3800			
DEPARTMENT OF MINERAL RESOURCES TASMANIA		✓1										Hobart Managing Geologist - Carol Bacon After hours: Facsimile:	(03) 6233 8333 (03) 6233 8326 (03) 6239 1409 (03) 6233 8338			
DEPARTMENT OF INDUSTRY, SCIENCE & RESOURCES - Petroleum Industry Branch (Canberra)		✓										Manager Environment Section GM, Petroleum Industry Branch Mobile: Facsimile:	(02) 6213 7935 (02) 6213 7926 (02) 6227 2803 (02) 6213 7950			
STATE EMERGENCY SERVICES											✓	Hobart Switchboard: Emergency: Melbourne Switchboard: Emergency:	(03) 6230 2700 (03) 6230 2733 (03) 9684 6666 (03) 9696 6111			
POLICE COMMUNICATIONS CENTRE									✓	✓2		Hobart Switchboard: Facsimile: Melbourne Switchboard:	(03) 6230 2111 (03) 6230 2414 11 444 or 000			
PORT AUTHORITIES		✓1			✓3							Burnie Switchboard: Facsimile: Port Control(24hr) - Bell Bay Geelong Marine Controllers Switchboard: Mobile:	(03) 6434 7300 (03) 6434 7373 (03) 6434 7353 (03) 5226 6200 (03) 5226 6300 0418 394 045			
STATE CORONER									✓			Hobart Switchboard: Melbourne Switchboard: Facsimile: Melbourne Switchboard:	(03) 6233 3257 (03) 6233 6125 (03) 9684 4444 (03) 9682 1206 (03) 9276 2065 (03) 9267 2001			
HOSPITAL ALFRED TRAUMA CENTRE												Melbourne Switchboard:	(03) 9276 2065 (03) 9267 2001			

Note:

1. Required to contact for Class 2, 3 or Tier 1, 2 or 3 incidents.
2. Notify Police, if warranted.
3. When within port limits.



GLOBEX Far East

# Globex Far East CONTACT DIRECTORY

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## 1 Globex Far East Offices & Personnel

	Work	After Hours	Emergency / Pager	Mobile	Facsimile
<b>1.1 Emergency Response Group</b>					
<b>Kelly Down Consultants Sydney (IDD ++ 61 2)</b>					
ERG Room	(02) 9901 3422				(02) 9901 3635
<b>ERG Leader</b>					
Slater, Jim	(02) 9901 3422	(02) 9452 2780		0412 446 440	(02) 9901 3635
<b>Materials &amp; Logistics Coordinator</b>					
Johnson, Chris	(03) 9697 1225	(03) 9866 8175		0418 951 189 018 875 248 (car)	(03) 9690 0309 (03) 9866 8175 (a/h)
<b>Technical Coordinator</b>					
Stuart, Colin	(02) 9901 3422	(02) 9948 0670		0419 493 598	(02) 9901 3635
<b>Support Coordinator</b>					
Reeks, Kerri (Qest Consulting)	(03) 9614 4133	(03) 9639 4243		0411 471 805	(03) 9614 5133 (03) 9663 6046 (a/h)
<b>Information Coordinator</b>					
McCulloch, Pat	(02) 9901 3422				(02) 9901 3635
<b>Piper Alderman Sydney (IDD ++ 61 2)</b>					
<b>Legal Advisor</b>					
Dauth, Tal	(02) 9253 9999				(02) 9253 9900
<b>Hill &amp; Knowlton Melbourne (IDD ++ 61 3)</b>					
<b>Public Affairs Advisor</b>					
Masters, Rob	(03) 9211 2444	(03) 9571 4602	016 030 # 344 555	0419 332 140	(03) 9211 2450 (03) 9517 4602 (a/h)
<b>1.2 Kelly Down Consultants</b>					
<b>Kelly Down Consultants Sydney (IDD ++ 61 2)</b>					
<b>Drilling Manager</b>					
Slater, Jim	(02) 9901 3422	(02) 9452 2780		0412 446 440	(02) 9901 3635
<b>Project Manager</b>					
Rowlands, Geoff	(02) 9901 3422	(02) 9906 4725		0417 682 839	(02) 9901 3635
<b>Senior Drilling Engineer</b>					
Stuart, Colin	(02) 9901 3422	(02) 9948 0670		0419 493 598	(02) 9901 3635
<b>Exploration Manager</b>					
Burgett, Thomas	(02) 9901 3422	(02) 9430 1400			(02) 9901 3635 (02) 9436 2556 (a/h)



# Globex Far East CONTACT DIRECTORY

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GLOBEX Far East

## 1 Globex Far East Offices & Personnel

	Work	After Hours	Emergency / Pager	Mobile	Facsimile
<b>1.3 Houston</b>					
<b>Globex Far East Houston (IDD ++ 1 713)</b>					
<b>President &amp; CEO</b>					
Tomich, John	(713) 463 7710	(281) 558 9525	jztomich@aol.com	(281) 685 7619	(713) 463 7722 (281) 558 5344 (a/h)
<b>Vice President, Exploration</b>					
Crist, Richard	(713) 463 7710	(409) 321 1475			(713) 463 7722
<b>Vice President, Contracts &amp; Negotiations</b>					
Kornegay, Gene	(713) 463 7710	(409) 774 9804	lgkornegay@aol.com	(409) 229 1547	(713) 463 7722 (409) 774 5845 (a/h)
<b>1.4 Melbourne</b>					
<b>Globex Far East (IDD ++ 61 3)</b>					
<b>Materials &amp; Logistics Superintendent</b>					
Johnson, Chris	(03) 9697 1225	(03) 9866 8175		0418 951 189 018 875 248 (car)	(03) 9690 0309 (03) 9866 8175 (a/h)
<b>1.5 Sedco Forex Australia Pty Ltd</b>					
<b>Sedco Forex Australia Pty Ltd Melbourne (IDD ++ 61 3)</b>					
Switchboard	(03) 9696 6266				
<b>Rig Manager (Sedco 702)</b>					
Wright, David	(03) 9697 1210			0417 930 098	(03) 9690 0309
<b>Perth (IDD ++ 61 8)</b>					
Switchboard	(08) 9420 4800 (24hr)				(08) 9322 3110
<b>Manager - Australasia Division</b>					
Stibbs, Bill	(08) 9420 4831			0412 126 458	(08) 9322 3110
<b>Rig Manager (Sedco 703)</b>					
Civiello, Tom	(08) 9420 4829			0412 245 517	(08) 9322 3110
<b>Materials Supervisor</b>					
Pereira, Joseph	(08) 9420 4837			0407 329 639	(08) 9322 3110
<b>Sedco 702 (IDD ++ 61)</b>					
Well Site Geologist	0145 115 507		glogeo@ozemail.com		0145 215 507
Drilling Supervisor	0145 199 900		glodrill@ozemail.com		0145 299 900
Mobile				018 903 278	
<b>Sedco 702, Inmarsat (IDD ++)</b>					
Inmarsat	873 1244 323				873 1244 365



GLOBEX Far East

# Globex Far East CONTACT DIRECTORY

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## 2 Government Authorities, Australia

	Work	After Hours	Emergency / Pager	Mobile	Facsimile
<b>2.1 Federal Authorities</b>					
<b>Australian Customs Service Coast Watch</b> Operations Room	1800 061 800 (02) 6275 6000 (24 hrs)				(02) 6275 6275
<b>Airservices Australia - Flight Services</b> <b>Adelaide (IDD ++ 61 8)</b> Switchboard	(08) 8238 7838 (24 hrs)				(08) 8234 4174
<b>Canberra (IDD ++ 61 2)</b> Switchboard	1300 301 120				(02) 6268 5683
<b>Melbourne (IDD ++ 61 3)</b> Air Traffic Services	(03) 9339 2666				



# Globex Far East CONTACT DIRECTORY

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GLOBEX Far East

## 2 Government Authorities, Australia

	Work	After Hours	Emergency / Pager	Mobile	Facsimile
<b>2.1 Federal Authorities</b>					
<b>Australian Maritime Safety Authority</b>					
<b>Australian Search &amp; Rescue (AusSAR) (IDD ++ 61 2)</b>					
RCC - Aviation	(02) 6230 6899 (24 hrs)		1800 815 257 1800 624 077 1800 640 507 (24 hrs)		(02) 6230 6868 1800 622 153 1800 643 586
RCC - Maritime	(02) 6230 6811 (24 hrs)		1800 641 792 (24 hrs)		(02) 6230 6868 1800 622 153 1800 643 586
<b>Operations Manager</b> Neale, Bob	(02) 6279 5710				(02) 6279 5757 (02) 6230 6868
<b>Devonport (IDD ++ 61 3)</b>					
Schwartz, Alan	(03) 6424 1597	(03) 6427 0430		0408 144 635	(03) 6424 8009
Fitzpatrick, Mike	(03) 6424 1597	(03) 6424 6864		0408 144 634	(03) 6424 8009
<b>Marine Environment Protection Unit - Canberra (IDD ++ 61 2)</b>					
Switchboard	(02) 6279 5000		1800 641 792 (24 hrs)		(02) 6279 5021
<b>General Manager</b> Baird, David	(02) 6279 5935		(02) 6269 0843	0418 622 824	(02) 6279 5076
<b>Manager Operations</b> Lipscombe, Ray	(02) 6279 5929		(02) 6269 0800	0418 633 107	(02) 6279 5076
<b>Operations Coordinator</b> Beck, Greg	(02) 6279 5868		(02) 6269 0799	0418 623 353	(02) 6279 5076
<b>Admin Clerk/PA</b> Stiller, Cheryl	(02) 6279 5069			017 970 343	(02) 6279 5076
<b>Senior Project &amp; Environmental Officer</b> Wilde, Shayne	(02) 6279 5873		(02) 6269 0832	0419 484 446	(02) 6279 5076
<b>Melbourne (IDD ++ 61 3)</b>					
<b>Area Manager Vic/Tas</b> MacKay, Bob	(03) 9685 5757	(03) 9872 5347	1300 555 555 # 171 373	015 553 546	(03) 9674 3003
<b>Bureau of Air Safety Investigation (BASI) Melbourne (IDD ++ 61 3)</b>					
<b>Air Safety Investigator</b> Sonneveld, John	(03) 9285 6676		1800 011 034 (24 hrs)	0417 667 993	(03) 9285 6674
<b>CSIRO - Division of Wildlife &amp; Ecology Canberra (IDD ++ 61 2)</b>					
Switchboard	(02) 6242 1600				(02) 6242 1555



GLOBEX Far East

# Globex Far East CONTACT DIRECTORY

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## 2 Government Authorities, Australia

	Work	After Hours	Emergency / Pager	Mobile	Facsimile
<b>2.1 Federal Authorities</b>					
<b>Department of Agriculture, Fisheries &amp; Forestry</b> <b>Canberra (IDD ++ 61 2)</b>					
Switchboard	(02) 6272 3933				
<b>Minister for Agriculture, Fisheries &amp; Forestry</b> Truss, Hon. Warren	(02) 6277 7520				(02) 6273 4120
<b>Director Exploration Petroleum &amp; Fisheries Div.</b> Furnell, Geoff	(02) 6272 4695				(02) 6272 4137
<b>Department Secretary</b> Matthews, Ken	(02) 6272 4180				(02) 6272 4906
<b>Special Advisor</b> Murray, Gardner	(02) 6272 5848				(02) 6272 5697
<b>Department of Employment, Workplace Relations &amp; Small Business</b> <b>Canberra (IDD ++ 61 2)</b>					
Switchboard	(02) 6121 7333				(02) 6121 7508
<b>Minister of Employment &amp; Workplace Relations</b> Reith MP, Mr. Peter	(02) 6277 7320				(02) 6273 4115
<b>Department Secretary</b> Shergold, Dr Peter	(02) 6121 7500				(02) 6121 7508
<b>Department of Environment &amp; Heritage</b> <b>Canberra (IDD ++ 61 2)</b>					
Switchboard	(02) 6274 1111				(02) 6274 2095
<b>Executive of the Heritage Commission</b> Leaver, Bruce	(02) 6274 2121				(02) 6274 2095
<b>Minister for the Environment &amp; Heritage</b> Hill, Hon. Senator Mr. Robert	(02) 6277 7640				(02) 6273 6101
<b>Department of Industry, Science &amp; Resources</b> <b>Canberra (IDD ++ 61 2)</b>					
Switchboard	(02) 6213 6000				
<b>General Manager Petroleum Industry Branch</b> Pickering, Rick	(02) 6213 7926	(02) 6227 2803			(02) 6213 7950
<b>Manager Offshore Safety &amp; Environment Section</b> Butler, Paul	(02) 6213 7960	(02) 6262 6862		0419 260 241	(02) 6213 7950
<b>Manager Environment Section</b> TBA	(02) 6213 7935				(02) 6213 7950



# Globex Far East CONTACT DIRECTORY

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GLOBEX Far East

## 2 Government Authorities, Australia

	Work	After Hours	Emergency / Pager	Mobile	Facsimile
<b>2.2 Tasmanian State Authorities</b>					
<b>Department of Primary Industries, Water &amp; Environment</b>					
<b>Hobart (IDD ++ 61 3)</b>					
Environmental Pollution Incidents & Complaints Switchboard	1800 005 171 (24hrs)				
State Oil Pollution Control Officer					
Dobson, John	(03) 6233 6127	1800 005 171 (24hrs)		0418 125 859	(03) 6233 3800
<b>North West (IDD ++ 61 3)</b>					
Switchboard	(03) 6458 1100 (03) 6458 1415			Duty Officer 24hrs 0418 363 468	(03) 6458 1420
<b>Prospect (IDD ++ 61 3)</b>					
<b>Northern Regional Manager Parks &amp; Wildlife</b>					
Sallans, Steve	(03) 6336 5328			0418 129 468	(03) 6344 8109
<b>Fire Department</b>					
<b>Burnie (IDD ++ 61 3)</b>					
Switchboard	(03) 6434 6700		000 (24hrs)		(03) 6431 5264
<b>Mineral Resources Tasmania</b>					
<b>Tasmania (IDD ++ 61 3)</b>					
Switchboard	(03) 6233 8333				(03) 6233 8338
Managing Geologist					
Bacon, Carol	(03) 6233 8326	(03) 6239 1409			(03) 6233 8338
Director of Mines					
Brown, Tony	(03) 6233 8365			0419 343 114	(03) 6233 8338
<b>Police Headquarters</b>					
<b>Burnie (IDD ++ 61 3)</b>					
Switchboard	(03) 6434 5211				(03) 6434 5250
<b>Hobart (IDD ++ 61 3)</b>					
Switchboard	(03) 6230 2111				(03) 6230 2448



GLOBEX Far East

# Globex Far East CONTACT DIRECTORY

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## 2 Government Authorities, Australia

	Work	After Hours	Emergency / Pager	Mobile	Facsimile
<b>2.2 Tasmanian State Authorities</b>					
<b>Port Authorities</b>					
<b>Burnie (IDD ++ 61 3)</b>					
Switchboard	(03) 6434 7300 (24hr)				(03) 6434 7373
Port Control - Bell Bay	(03) 6434 7353 (24hr)				
<b>Devonport (IDD ++ 61 3)</b>					
Switchboard	(03) 6424 0911		(03) 6424 0911		(03) 6424 6418
<b>King Island (IDD ++ 61 3)</b>					
Switchboard	(03) 6461 1155				
Radio Room 24hrs	(03) 6382 0175 (03) 6382 0144				(03) 6382 0143
<b>Launceston (IDD ++ 61 3)</b>					
Switchboard	(03) 6382 0111				
<b>State Coroner's Office</b>					
<b>Hobart (IDD ++ 61 3)</b>					
Switchboard	(03) 6233 3257				(03) 6233 6125
<b>State Security Service</b>					
<b>Tasmania (IDD ++ 61 3)</b>					
Switchboard	(03) 6437 1274			0418 303 447	
<b>State Emergency Service</b>					
<b>Burnie (IDD ++ 61 3)</b>					
Operations Centre	(03) 6434 5333				(03) 6431 6538
<b>Hobart (IDD ++ 61 3)</b>					
Switchboard	(03) 6230 2700		(03) 6230 2733		
<b>Workplace Standards Authority</b>					
<b>Hobart (IDD ++ 61 3)</b>					
Switchboard	1300 366 322 (03) 6233 7657 (outside Tas)				(03) 6233 8338
<b>2.3 Tasmanian Local Authorities (Police &amp; Shire Councils)</b>					
<b>Council</b>					
<b>Burnie (IDD ++ 61 3)</b>					
Switchboard	(03) 6431 1033	(03) 6430 5799			(03) 6431 3896
<b>Police Headquarters</b>					
<b>Burnie (IDD ++ 61 3)</b>					
Switchboard	(03) 6434 5211				(03) 6434 5250
<b>Hobart (IDD ++ 61 3)</b>					
Communications Centre	(03) 6230 2111 (24hr)				(03) 6230 2414



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**2 Government Authorities, Australia**

	Work	After Hours	Emergency / Pager	Mobile	Facsimile
<b>2.4 Victorian State Authorities</b>					
<b>Bureau of Meteorology Melbourne (IDD ++ 61 3)</b>					
Forecasts General 24hr	(03) 9669 4916				
Duty Forecaster	(03) 9662 1650				(03) 9663 2059 (03) 9663 4934
<b>Country Fire Authority (CFA) Melbourne (IDD ++ 61 3)</b>					
Switchboard	(03) 9262 8444		000 (24hr)		(03) 9264 6200
<b>Department of Natural Resources &amp; Environment Melbourne (IDD ++ 61 3)</b>					
Switchboard	(03) 9637 8000				(03) 9603 8339
<b>Portland (IDD ++ 61 3)</b>					
Switchboard	(03) 5523 3232			Fisheries & Wildlife 0418 312 007 0418 527 267	(03) 5523 5312
<b>Department of Natural Resources &amp; Environment: Minerals &amp; Petroleum Division Melbourne (IDD ++ 61 3)</b>					
Minerals Business Centre	(03) 9412 5103				(03) 9412 5157
Reference Centre	(03) 9412 5145				
<b>Manager, Minerals &amp; Petroleum Operations</b>					
King, Robert	(03) 9412 5069	(03) 9375 2986		0419 135 264	(03) 9412 5152
<b>Principal Drilling Engineer</b>					
Nadji, Ahmed	(03) 9412 5089	(03) 9848 2935		0412 110 997	(03) 9412 5152 (03) 9848 8905 (a/h)
<b>Petroleum &amp; Pipeline Engineer</b>					
Roberts, Barry	(03) 9412 5104	(03) 9885 2432		0417 516 288	(03) 9412 5152
<b>Petroleum Engineer</b>					
Balendran, K (Bala)	(03) 9412 5014	(03) 9841 0561		0407 313 997	(03) 9412 5152
<b>Environment Protection Authority Geelong (IDD ++ 61 3)</b>					
Switchboard	(03) 5226 4825	(03) 9695 2777			(03) 5226 4632
<b>Melbourne (IDD ++ 61 3)</b>					
Duty Officer	(03) 9695 2777				
Information Centre	(03) 9695 2722				
<b>Fire Department Melbourne (IDD ++ 61 3)</b>					
Switchboard	(03) 9662 2311		000 (24hrs)		(03) 9665 4244



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# Globex Far East CONTACT DIRECTORY

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## 2 Government Authorities, Australia

	Work	After Hours	Emergency / Pager	Mobile	Facsimile
<b>2.4 Victorian State Authorities</b>					
<b>Geelong Port</b>					
<b>Geelong (IDD ++ 61 3)</b>					
Marine Controllers			(03) 5226 6300 (24hrs)	0418 394 045	
Switchboard	(03) 5226 6200				(03) 5221 6883
<b>Human Resources &amp; Shipping Services Manager</b>					
Trezise, Ian	(03) 5226 6220			0417 391 794	(03) 5221 6883
<b>Marine Board of Victoria</b>					
<b>Melbourne (IDD ++ 61 3)</b>					
<b>Manager, Marine Operations</b>					
Baron, Steve	(03) 9655 3399			0408 215 614	(03) 9655 6611
<b>Manager, Marine Environment &amp; Pollution Response</b>					
McIlwain, Lynn	(03) 9655 9783	(03) 9537 1353	(03) 9883 3362	0409 958 090	(03) 9655 6611
<b>Police Headquarters</b>					
<b>Melbourne (IDD ++ 61 3)</b>					
Emergency	11 444		000 (24hrs)		
<b>Skilled Maritime Services</b>					
<b>Melbourne (IDD ++ 61 3)</b>					
Switchboard	(03) 9629 5821		(03) 9629 5825		(03) 9629 1816
<b>Port Protective Services</b>					
Cropley, Ben	(03) 9629 5821	(03) 9614 2861		0413 273 872	
<b>State Coroner's Office</b>					
<b>Melbourne (IDD ++ 61 3)</b>					
Switchboard	(03) 9684 4444 (24hr)				(03) 9682 1206
<b>State Emergency Service</b>					
<b>Geelong (IDD ++ 61 3)</b>					
Switchboard	(03) 5226 4771		(03) 9696 6111		(03) 5229 2090
<b>Melbourne (IDD ++ 61 3)</b>					
State Headquarters	(03) 9684 6666		(03) 9696 6111		(03) 9684 6659
<b>Victorian Channels Authority</b>					
<b>Melbourne (IDD ++ 61 3)</b>					
Emergency/ Oil Pollution 24hrs	(03) 9614 2861 (03) 9614 2862				
Head Office	(03) 9612 3512				(03) 9612 3599
<b>Navigation Services Manager</b>					
Muir, Capt. Tim	(03) 9612 3540	(03) 9808 5105	016 030 # 372 881	018 385 301	(03) 9612 3599
Paulusz, Charles	(03) 9612 3542	(03) 9580 5082		0418 345 496	(03) 9612 3550



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## 2 Government Authorities, Australia

	Work	After Hours	Emergency / Pager	Mobile	Facsimile
<b>2.4 Victorian State Authorities</b>					
<b>Victorian WorkCover Authority</b>					
<b>Melbourne (IDD ++ 61 3)</b>					
Switchboard	(03) 9641 1555			018 312 534	
Workcover emergency contact - 24 hours					
<b>2.5 Victorian Local Authorities (Police &amp; Shire Councils)</b>					
<b>City of Greater Geelong (IDD ++ 61 3)</b>					
Switchboard	(03) 5227 0270				(03) 5222 0374
<b>Police Headquarters Geelong (IDD ++ 61 3)</b>					
District Office	(03) 5225 3245		000 or 11 444		(03) 5225 3243
<b>Melbourne (IDD ++ 61 3)</b>					
Switchboard	(03) 9247 6666		000 (24hrs)		(03) 9247 5338
<b>Surfcoast Council Torquay (IDD ++ 61 3)</b>					
Switchboard	(03) 5261 0600				(03) 5261 4527



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# Globex Far East CONTACT DIRECTORY

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## 3 Oil Spill Agencies & Specialists

	Work	After Hours	Emergency / Pager	Mobile	Facsimile
<b>3.1 National Plan / State Combat Committee</b>					
<b><u>Australian Maritime Safety Authority</u></b>					
<b><u>Australian Search &amp; Rescue (AusSAR) (IDD ++ 61 2)</u></b>					
RCC - Aviation	(02) 6230 6899 (24 hrs)		1800 815 257 1800 624 077 1800 640 507 (24 hrs)		(02) 6230 6868 1800 622 153 1800 643 586
RCC - Maritime	(02) 6230 6811 (24 hrs)		1800 641 792 (24 hrs)		(02) 6230 6868 1800 622 153 1800 643 586
<b><u>Marine Environment Protection Unit - Canberra (IDD ++ 61 2)</u></b>					
Switchboard	(02) 6279 5000		1800 641 792 (24 hrs)		(02) 6279 5021
<b>General Manager</b>					
Baird, David	(02) 6279 5935		(02) 6269 0843	0418 622 824	(02) 6279 5076
<b>Operations Coordinator</b>					
Beck, Greg	(02) 6279 5868		(02) 6269 0799	0418 623 353	(02) 6279 5076
<b>Manager Operations</b>					
Lipscombe, Ray	(02) 6279 5929		(02) 6269 0800	0418 633 107	(02) 6279 5076
<b>Admin Clerk/PA</b>					
Stiller, Cheryl	(02) 6279 5069			017 970 343	(02) 6279 5076
<b>Senior Project &amp; Environmental Officer</b>					
Wilde, Shayne	(02) 6279 5873		(02) 6269 0832	0419 484 446	(02) 6279 5076
<b><u>Melbourne (IDD ++ 61 3)</u></b>					
<b>Area Manager Vic/Tas</b>					
MackKay, Bob	(03) 9685 5757	(03) 9872 5347	1300 555 555 # 171 373	015 553 546	(03) 9674 3003
<b><u>Geelong Port</u></b>					
<b><u>Geelong (IDD ++ 61 3)</u></b>					
Switchboard	(03) 5226 6200				(03) 5221 6883
Marine Controllers			(03) 5226 6300 (24hrs)	0418 394 045	
<b>Human Resources &amp; Shipping Services Manager</b>					
Treize, Ian	(03) 5226 6220			0417 391 794	(03) 5221 6883



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## 3 Oil Spill Agencies & Specialists

	Work	After Hours	Emergency / Pager	Mobile	Facsimile
<b>3.2 AMOSC</b>					
<b>AMOSC (Australian Marine Oil Spill Centre)</b>					
<b>Geelong (IDD ++ 61 3)</b>					
Switchboard	(03) 5272 1555 (24hr)				(03) 5272 1839
Duty Officer	(03) 5272 1555		016 379 328 (24 hr)		(03) 5272 1839
<b>Manager / Overall Industry Coordinator</b>					
Blackmore, Don	(03) 5272 1555			0418 398 363	(03) 5272 1839
<b>3.3 AMOSPlan</b>					
<b>BP</b>					
<b>Burnie (IDD ++ 61 3)</b>					
Loosmore, Stephen	(03) 6431 4744			0418 120 446	(03) 6431 6866
<b>Hobart (IDD ++ 61 3)</b>					
Lovell, Tom	(03) 6278 1310	(03) 6266 4327		0418 525 720	(03) 6278 2205
<b>Caltex Australia Limited</b>					
<b>Hobart (IDD ++ 61 3)</b>					
Aylett, Brad	(03) 6278 1345		(03) 9625 5000 # 300 509	0407 125 752	(03) 6278 1975
<b>Melbourne (IDD ++ 61 3)</b>					
Kumar, Hems	(03) 9287 9620	(03) 9883 4596		018 325 961	(03) 9287 9605
<b>Esso Australia Ltd (EAL)</b>					
<b>(IDD ++ 61 3)</b>					
Akin, Mike	(03) 5970 7521	(03) 5978 8776	016 030 # 581 897	0418 514 858	(03) 5970 7570
<b>Melbourne (IDD ++ 61 3)</b>					
Grundy, Stu	(03) 9270 3623	(03) 9702 1554	016 030 # 581 895	0418 514 857	(03) 9270 3972
<b>Mobil Oil Australia</b>					
<b>Bell Bay (IDD ++ 61 3)</b>					
Goss, Wayne	(03) 6382 1131		(03) 9483 4444 # 171 962	018 131 115	(03) 6382 1244
<b>King Island (IDD ++ 61 3)</b>					
Bayne, Janine	(03) 6462 1461	(03) 6462 1116			(03) 6462 1639
<b>Melbourne (IDD ++ 61 3)</b>					
Bannister, Kate	(03) 9286 5520	(03) 9826 5666			(03) 9286 5577



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## 3 Oil Spill Agencies & Specialists

	Work	After Hours	Emergency / Pager	Mobile	Facsimile
<b>3.3 AMOSPlan</b>					
<b>Shell Company of Australia Ltd Devonport (IDD ++ 61 3)</b> Wroblewski, John	(03) 6424 5924			018 777 128	(03) 6423 3194
<b>Geelong (IDD ++ 61 3)</b> Muller, Fred	(03) 5273 8337	(03) 5273 8333		0419 533 624	(03) 5221 6917
<b>Melbourne (IDD ++ 61 3)</b> Van der Zaag, Rob	(03) 9392 1215			0419 602 044	(03) 9392 1341
<b>3.4 Oilmap Spill Trajectory Model</b>					
<b>Australian Marine &amp; Offshore Group Melbourne (IDD ++ 61 3)</b> Principal Environmental Scientist Greilach, Peter	(03) 9558 9077	(03) 9848 7873			(03) 9558 9880
<b>Asia Pacific Applied Science Association Surfers Paradise (IDD ++ 61 7)</b> Company Director King, Dr. Brian	(07) 5592 5331			0419 763 060	(07) 5592 5331
<b>Australian Institute of Marine Science (AIMS) Townsville (IDD ++ 61 7)</b> Experimental Scientist McAllister, Felicity	(07) 4753 4381			0417 624 570	(07) 4772 5852
<b>BHP Petroleum Melbourne (IDD ++ 61 3)</b> Environmental Officer Wilson, Darren	(03) 9652 7323	(03) 9531 7743			(03) 9652 6723
<b>BHP Transport Melbourne (IDD ++ 61 3)</b> Principal Environmental Officer Wilson, Lynda	(03) 9609 2989	(03) 9337 6635	132 222 # 373 000	0419 363 549	(03) 9609 2268
<b>GEMS Melbourne (IDD ++ 61 3)</b> Oil Spill Trajectory Modelling Consultant Hubbert, Dr. Graeme	(03) 9712 0016			0418 366 336 (24 hrs)	(03) 9712 0017



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## 3 Oil Spill Agencies & Specialists

	Work	After Hours	Emergency / Pager	Mobile	Facsimile
<b>3.4 Oilmap Spill Trajectory Model</b>					
<b>GEMS Perth</b> (IDD ++ 61 8) <b>Oil Spill Trajectory Modelling Consultant</b> Langtry, Scott	(08) 9378 3136			0418 827 754 (24hrs)	(08) 9378 3136
<b>3.5 Oil Spill Operations &amp; Management Specialists</b>					
<b>Altona Marine</b> <b>Melbourne (IDD ++ 61 3)</b> <b>Manager</b> Pelns, Alf	(03) 9398 2026			0419 566 250 (24hrs)	(03) 9398 2026
<b>Capricorn Environmental Consultants</b> <b>Yeppoon (IDD ++ 61 7)</b> Switchboard <b>Principal Consultant</b> Hayes, Terry	(07) 4939 4711 (24hrs)		faydee@cqnet.com.au		(07) 4939 4769  (07) 4939 4769
<b>Esso Australia Ltd (EAL)</b> <b>Offshore (IDD ++ 61 3)</b> <b>Relief Supervisor Southbank</b> Chable, Lou	(03) 5142 2705 (offshore)	(03) 9840 1419	016 030 # 581 890	0411 489 272	
<b>Oops Inc</b> <b>Louisiana USA (IDD ++ 1 504)</b> Switchboard <b>Managing Director</b> O'Brien, Jim	(504) 781 0804  (504) 781 0804 (24 hrs)		oops-usa@oopsusa.com  jim.obrien@oopsusa.com		(504) 781 0580  (504) 781 0580
<b>Qest Consulting Group</b> <b>Melbourne (IDD ++ 61 3)</b> Switchboard <b>Director</b> Rigby, Gary  <b>Senior Consultant</b> Reeks, Kerri	(03) 9614 4133  (03) 9614 4133	(03) 5278 3121		0417 313 610  0411 471 805	(03) 9614 5133 (03) 5277 2303 (a/h)  (03) 9614 5133 (03) 9663 6046 (a/h) (03) 5798 5379 (w/e)



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## 3 Oil Spill Agencies & Specialists

	Work	After Hours	Emergency / Pager	Mobile	Facsimile
<b>3.6 Oil Spill Environment &amp; Cleanup Specialists</b>					
<b>Dames &amp; Moore</b> <b>Melbourne (IDD ++ 61 3)</b> Ecology Adviser Gwyther, David	(03) 9510 5050	(03) 5250 1070		0414 454 656	(03) 9510 5850
<b>Esso Australia Ltd (EAL)</b> <b>Melbourne (IDD ++ 61 3)</b> Switchboard	(03) 9270 3333				(03) 9270 3995 (mail room)
Environmental Advisor Terrens, Greg	(03) 9270 3509	(03) 9584 5550	016 030 # 312 023		(03) 9270 3590
<b>Polaris Applied Sciences, Inc.</b> <b>Bainbridge Island, Washington</b> <b>(IDD ++ 1 206)</b> Principal Owens, Ed	(206) 842 2951	(206) 842 6255			(206) 842 2861
<b>Kirkland, Washington</b> <b>USA (IDD ++ 1 425)</b> Switchboard	(425) 823 4841 (24hr)				(425) 823 3805
<b>Wardrop Consulting</b> <b>Melbourne (IDD ++ 61 3)</b> Wardrop, John	(03) 5282 3075	(03) 5282 4074		0417 536 162	(03) 5282 5076
<b>3.7 Other Agencies</b>					
<b>EARL (East Asia Response Ltd)</b> <b>Singapore (IDD ++ 65)</b> 2 Jalan Samulum Singapore 2262 Switchboard / Duty Officer	266 1566 (24hrs)				266 2312
<b>Oil Spill Response (OSR) Ltd</b> <b>Southampton UK</b> <b>(IDD ++ 44 1703)</b> Lower William Street Southampton SO14 5 QE England Switchboard	(1703) 331 551 (24hrs)				(1703) 331 972 (24hrs)



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## 3 Oil Spill Agencies & Specialists

	Work	After Hours	Emergency / Pager	Mobile	Facsimile
<b>3.8 Bird Rehabilitation</b>					
<b>Fauna Rehabilitation Foundation</b> Perth (IDD ++ 61 8) Switchboard	(08) 9249 3434 (24hrs)				
<b>Penguin Parade</b> Phillip Island (IDD ++ 61 3) Switchboard	(03) 5956 8300				(03) 5956 8394
<b>Torong Park Zoo</b> Sydney (IDD ++ 61 2) Switchboard	(02) 9969 2777		Security 132 222 # 299 011		(02) 9969 7515
<b>Senior Curator</b> Walraven, Erna	(02) 9978 4609	(02) 9807 3558		019 129 956	(02) 9978 4613
<b>Alternate</b> Hall, Libbi	(02) 9978 4751	(02) 9907 9496			(02) 9978 4516



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## 4 Medical Services

	Work	After Hours	Emergency / Pager	Mobile	Facsimile
<b>4.1 Ambulances</b>					
<b>Ambulance</b> <b>Melbourne (IDD ++ 61 3)</b> Emergency			000 (24hrs)		
<b>4.2 Aerial Medical Services</b>					
<b>Lloyd Helicopters Group</b> <b>Traralgon (IDD ++ 61 3)</b> Helimed 1	(03) 5176 1265 (03) 5176 1288			019 382 007 (on aircraft)	(03) 5174 4403
<b>4.3 Hospitals</b>					
<b>Hospital</b> <b>Alfred Hospital (IDD ++ 61 3)</b> Switchboard Admitting Officer <b>Melbourne Coordinator</b> Trauma Centre	(03) 9276 2000 (03) 9276 2960 (03) 9276 2065 (03) 9276 2001		(03) 9276 2101		(03) 9276 2905
<b>Epworth, Melbourne</b> <b>(IDD ++ 61 3)</b> Switchboard	(03) 9426 6666		(03) 9426 6302		(03) 9428 0620 (emergency)
<b>Geelong (IDD ++ 61 3)</b> Switchboard	(03) 5226 7111		(03) 5226 7564		(03) 5229 9972 (emergency)
<b>Launceston General</b> <b>(IDD ++ 61 3)</b> Switchboard	(03) 6332 7111		(03) 6332 7405 (casualty)		(03) 6332 7382
<b>North West Regional, Burnie</b> <b>(IDD ++ 61 3)</b> Switchboard	(03) 6430 6666		(03) 6430 6633		(03) 6430 6691 (emergency)
<b>St John of God Hospital,</b> <b>Geelong (IDD ++ 61 3)</b> Switchboard	(03) 5226 8888				(03) 5221 8807



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**4 Medical Services**

	Work	After Hours	Emergency / Pager	Mobile	Facsimile
<b>4.4 Doctors</b>					
<b>Doctors</b>					
<b>Melbourne (IDD ++ 61 3)</b>					
73 Erin St, Richmond, VIC. 3121 Freeman, Dr. Bella	(03) 9428 1645	(03) 9853 2269		0418 548 914	(03) 9428 1645 (03) 9853 2501 (a/h)
<b>Health Centre</b>					
<b>Wynyard (IDD ++ 61 3)</b>					
Switchboard	(03) 6442 2282			0418 397 276 (24hr)	(03) 6442 1677
<b>4.5 Counselling</b>					
<b>Care Ring</b>					
<b>Melbourne (IDD ++ 61 3)</b>					
Switchboard	No charge for assistance 13 6169 (24hr)				
<b>Griefline</b>					
<b>Melbourne (IDD + 61 3)</b>					
Switchboard	No charge for assistance (03) 9596 7799 (12pm to 12am)				
<b>Lifeline</b>					
<b>Melbourne (IDD ++ 61 3)</b>					
Switchboard Administration	No charge for assistance 13 1114 (24hr) (03) 9662 1677				
<b>Australian Foundation for Aftermath Reactions (AFAR)</b>					
<b>Melbourne (IDD ++ 61 3)</b>					
Centre Coordinator Kirby, Libby	(03) 9804 0527 (03) 9813 3400			0417 564 526 (24hr)	
<b>ITIM Counselling Services</b>					
<b>Melbourne (IDD ++ 61 3)</b>					
Switchboard	(03) 9816 9522				(03) 9816 9617



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## 5 Contractor & Service Companies

	Work	After Hours	Emergency / Pager	Mobile	Facsimile
<b>5.1 Drilling Contractors - Offshore</b>					
<b>Atwood Oceanics Australia Pty Ltd</b>					
<b>Perth (IDD ++ 61 8)</b>					
Switchboard	(08) 9331 2099				(08) 9337 1383
<b>Manager</b>					
Vinton, Terry	(08) 9331 2099	(08) 9284 4848		0418 948 120	(08) 9337 1383 (08) 9284 4849 (a/h)
<b>Diamond Offshore General Company Pty Ltd</b>					
<b>Darwin (IDD ++ 61 8)</b>					
<b>Warehouse Manager</b>					
Mouton, Avery	(08) 8984 3313	TBA		0418 942 331	(08) 8984 3958
<b>Perth (IDD ++ 61 8)</b>					
Switchboard	(08) 9481 8333				(08) 9481 8103
<b>Area Manager</b>					
Owens, Jerry	(08) 9481 8333	(08) 9332 5257		0411 600 443	(08) 9481 8103 (08) 9332 5135 (a/h)
<b>Rig Manager (Ocean Bounty)</b>					
O'Neill, Tom	(08) 9481 8333	(08) 9383 9909		0411 600 431	(08) 9481 8103
<b>Operations Manager (Ocean Epoch)</b>					
Tobey, Phillip	(08) 9481 8333	(08) 9354 9420		0419 851 143	(08) 9481 8103
<b>Acting Operations Manager for Ocean General</b>					
Watson, Jim	(08) 9426 9146	(08) 9331 5816		0411 600 436	(08) 9481 8103
<b>Occupational Health &amp; Safety Coordinator</b>					
Webster, Nick	(08) 9481 8333	(08) 9371 3734		0417 901 116	(08) 9481 8103
<b>Marine Drilling</b>					
<b>Houston, USA (IDD ++ 1 713)</b>					
<b>Manager</b>					
Monroe, Mark	(713) 496 8928				(713) 531 1260
<b>R &amp; B (A) Falcon Pty Ltd</b>					
<b>Perth (IDD ++ 61 8)</b>					
Switchboard	(08) 9481 7233				(08) 9481 7244
<b>Drilling Superintendent</b>					
O'Shea, Blue	(08) 9481 7233	(08) 9401 1244		0413 619 501	(08) 9481 7244



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# Globex Far East CONTACT DIRECTORY

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## 5 Contractor & Service Companies

	Work	After Hours	Emergency / Pager	Mobile	Facsimile
<b>5.2 Third Party Contractors</b>					
<b>ABB Vetco Gray Australia Pty Ltd</b>					
<b>Perth (IDD ++ 61 8)</b>					
Switchboard	(08) 9248 6801				(08) 9248 6805
<b>Director</b>					
Kunath, Don	(08) 9248 6802			0417 948 937	(08) 9248 6805
<b>Baker Hughes</b>					
<b>Inteq, Belmont (IDD ++ 61 8)</b>					
<b>Area Manager Surface Logging</b>					
Ryan, John	(08) 9478 0503	(08) 9450 1329		0419 574 308	(08) 9478 6155
<b>Baroid Australia Pty Ltd</b>					
<b>Melbourne (IDD ++ 61 3)</b>					
<b>Manager</b>					
Schleifer, Ed	(03) 9581 7541		ed.schleifer@haliiburton.com	0417 593 062	(03) 9585 4723
<b>D.Q. Holdings</b>					
<b>WA (IDD ++ 61 8)</b>					
<b>Director/Projects-Sales</b>					
Maitland, Brian	(08) 9322 8600	(08) 9457 6503		0418 940 353	(08) 9322 8500
<b>Dril-Quip Asia Pacific</b>					
<b>Singapore (IDD ++ 65)</b>					
<b>Manager</b>					
Kunath, Don	(65) 861 0600				(65) 861 5700
<b>FMC (Australia) Ltd</b>					
<b>Perth (IDD ++ 61 8)</b>					
<b>General Manager</b>					
Petley, Keith	(08) 9226 1288				(08) 9226 1388
<b>Area Technical Support Engineer</b>					
Quinn, John	(08) 9226 1288				(08) 9226 1388
<b>Fugro Survey</b>					
<b>Perth (IDD ++ 61 8)</b>					
<b>Project Manager, Marine Division</b>					
Malcolm, Peter	(08) 9322 4955			0407 682 191	(08) 9322 1775
<b>Operations Manager</b>					
Scott, Dave	(08) 9322 4955	(08) 9446 1495		0408 926 857	(08) 9322 1775
<b>Geoservices Overseas S.A.</b>					
<b>Perth (IDD ++ 61 8)</b>					
<b>Manager</b>					
Angus, David	(08) 9250 2010			0419 854 950 (Duty Officer)	(08) 9250 2715



GLOBEX Far East

# Globex Far East CONTACT DIRECTORY

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## 5 Contractor & Service Companies

	Work	After Hours	Emergency / Pager	Mobile	Facsimile
<b>5.2 Third Party Contractors</b>					
<b>Halliburton Australia</b>					
<b>Darwin (IDD ++ 61 8)</b>					
Switchboard	(08) 8947 2142				(08) 8984 3897
<b>Melbourne (IDD ++ 61 3)</b>					
<b>Base Manager</b>					
Vennes, Mike	(03) 9583 7522	(03) 9499 5135	M.V@halliburton.com	0417 569 392	(03) 9583 7588
<b>Perth (IDD ++ 61 8)</b>					
Switchboard	(08) 9455 8300				(08) 9455 5300
<b>FBM Manager for Delivery</b>					
Parson, Mark	(08) 9278 4401	(08) 9339 0192		0418 815 936	(08) 9278 4400
<b>Business Development Manager for TT, TCP &amp; CPS</b>					
Smith, Dan	(08) 9278 4402	(08) 9354 9709		0407 784 405	(08) 9278 4400
<b>Schlumberger Oilfield Australia</b>					
<b>Morwell (IDD ++ 61 3)</b>					
<b>Location Manager</b>					
Robertson, Jack (Anadril)	(03) 5143 2242			0412 251 395	(03) 5143 2450
<b>Perth (IDD ++ 61 8)</b>					
<b>Field Services Manager</b>					
Hore, Jeremy	(08) 9353 1144				(08) 9353 3450
<b>Operations Manager</b>					
Michel, Alain	(08) 9420 4800				(08) 9322 3080
<b>Testing Manager</b>					
Rithie, Willie	(08) 9321 5477				(08) 9322 3080
<b>Shell Company of Australia Ltd</b>					
<b>Melbourne (IDD ++ 61 3)</b>					
<b>Operations</b>					
Markogiannakis, Pelagia	(03) 9666 8136				9666 5880
<b>Smith International Australia</b>					
<b>Perth (IDD ++ 61 8)</b>					
<b>Area Manager</b>					
Hankinson, Colin	(08) 9455 5311			0419 044 850	(08) 9455 5322
<b>Marketing &amp; Administration Coordinator</b>					
Phelan, Kate	(08) 9455 5311			0412 003 844	(08) 9455 5322
<b>Sonsub Services</b>					
<b>KL, Malaysia (IDD ++ 60 3)</b>					
<b>General Manager</b>					
Kally, Mike	(3) 264 2466				(3) 262 5657
<b>Singapore (IDD ++ 65)</b>					
<b>Operations Manager</b>					
Bernier, Ronald	545 0477 545 0378			9784 8770	545 0377



# Globex Far East CONTACT DIRECTORY

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## 5 Contractor & Service Companies

	Work	After Hours	Emergency / Pager	Mobile	Facsimile
<b>5.2 Third Party Contractors</b>					
<b>Sperry-Sun Drilling Services</b> Perth (IDD ++ 61 8)					
<b>PSL Manager</b> Cunnington, Mike	(08) 9278 4100			0418 913 267	(08) 9278 4400
<b>MWD Operations Manager</b> Murray, Martin	(08) 9278 4100			0418 903 003	(08) 9278 4400
<b>Surtron Technologies</b> Fremantle (IDD ++ 61 8)					
<b>Business Development Manager</b> Molliner, Martin	(08) 9455 8000			0417 841 357	(08) 9455 8080
<b>Tasman Oil Tools</b> Perth (IDD ++ 61 8)					
<b>Managing Director</b> Luck, Ross	(08) 9330 6155	(08) 9272 8494		0419 900 296	(08) 9330 1502
<b>Tamboritha Consultants</b> Perth (IDD ++ 61 8)					
Switchboard	(08) 9322 1252				(08) 9322 1352
<b>Toll Energy</b> Melbourne (IDD ++ 61 3)					
<b>Managing Director</b> Dent, Phil	(03) 9396 7604	(03) 9890 3294		0418 359 526	(03) 9396 7606
<b>Weatherford</b> Sale (IDD ++ 61 3)					
<b>Base Manager</b> Winter, Bill	(03) 5143 2772		billyw@netspac e.net.au	0419 447 565	(03) 5143 2770
<b>Operations</b> Watts, John	(03) 5143 2772		jwatts@weather ford.com.au		(03) 5143 2770
<b>WA (IDD ++ 61 8)</b>					
<b>Tubular Running Services</b> Manager					
Hendry, Stuart	(08) 9249 7900			0418 902 336	(08) 9249 8200
<b>Regional Sales</b>					
McGowan, Tom	(08) 9249 7900	(08) 9332 1548	tmcgowan@we atherford.com.a u	0419 102 942	(08) 9249 8188
<b>General Manager</b>					
Sharpe, Andrew	(08) 9249 7900				(08) 9249 8200



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## 5 Contractor & Service Companies

Facsimile	Mobile	Work	After Hours	Emergency / Pager	Mobile	Facsimile
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### 5.2 Third Party Contractors

<b>Weathernews Pty Ltd</b>						
<b>Melbourne (IDD ++ 61 3)</b>						
		Switchboard	(03) 9899 3140 (24 hrs)			(03) 9899 3141
<b>Perth (IDD ++ 61 8)</b>						
		Switchboard	(08) 9387 7955			(08) 9387 6686
		Senior Meteorologist Duncaif, David	(08) 9387 7955	(08) 9385 8384		(08) 9387 6686



# Globex Far East CONTACT DIRECTORY

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## 6 Aircraft Services

	Work	After Hours	Emergency / Pager	Mobile	Facsimile
<b>6.1 Helicopters</b>					
<b>Lloyd Helicopters Group</b>					
<b>Adelaide Head Office (IDD ++ 61 8)</b>					
Switchboard	(08) 8372 7700				(08) 8372 3366
<b>Operations Logistics Manager</b>					
Martin, Doug	(08) 8372 7700	(08) 8270 5381		0418 855 195	(08) 8272 3399
<b>Melbourne (IDD ++ 61 3)</b>					
Base	(03) 9351 0796				(03) 9351 0796
Captain				0419 847 579	
Co-Pilot				0418 815 368	
<b>Traralgon (IDD ++ 61 3)</b>					
Helimed 1	(03) 5176 1265 (03) 5176 1288			019 382 007 (on aircraft)	(03) 5174 4403
<b>Helicopter Resources</b>					
<b>Pyap, VIC (IDD ++ 61 3)</b>					
Switchboard	(03) 5977 4506 (24 hrs)				(03) 5977 4491
<b>6.2 Fixed Wing Aircraft</b>					
<b>TNT Air Charter</b>					
Freight only					
Switchboard	1800 023 661 (24 hrs)				(02) 9313 2088
<b>6.3 Airports / Air Traffic</b>					
<b>Airservices Australia - Flight Services</b>					
<b>Adelaide (IDD ++ 61 8)</b>					
Switchboard	(08) 8238 7838 (24 hrs)				(08) 8234 4174
<b>Melbourne (IDD ++ 61 3)</b>					
Air Traffic Services	(03) 9339 2666				
<b>Essendon Airport</b>					
<b>Melbourne (IDD ++ 61 3)</b>					
Switchboard	(03) 9379 9077				(03) 9379 7867
<b>Acting Operations &amp; Technical Manager</b>					
Pearce, Russel	(03) 9379 9077			0419 872 985	(03) 9379 7867
<b>Flinders Island Aerodrome</b>					
<b>Flinders Island (IDD ++ 61 3)</b>					
<b>Aerodrome Manager</b>					
Barnewall, Brian	(03) 6359 2144	(03) 6359 2312	016 181 582 (24hrs)		(03) 6359 2145



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# Globex Far East CONTACT DIRECTORY

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## 6 Aircraft Services

	Work	After Hours	Emergency / Pager	Mobile	Facsimile
<b>6.3 Airports / Air Traffic</b>					
<b>King Island Airport</b> <b>King Island (IDD ++ 61 3)</b> <b>Manager</b> Robins, Alan	(03) 6462 1509	(03) 6462 1354			
<b>Launceston Airport</b> <b>Launceston (IDD ++ 61 3)</b> Switchboard	(03) 6391 6996		(03) 6391 6992 (Control Tower)		(03) 6391 6994



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# Globex Far East CONTACT DIRECTORY

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## 7 Marine Services

	Work	After Hours	Emergency / Pager	Mobile	Facsimile
<b>Swire Pacific Offshore Pty Ltd</b>					
<b>Inmarsat, Satcom C (IDD ++)</b>					
Pacific Challenger	435 354 510 435 354 520		Call sign: HP 7670	014 461 569	
Pacific Shogun	435 438 010 435 438 020		Call sign: HO 6577	014 461 570	
<b>Perth (IDD ++ 61 8)</b>					
<b>General Manager</b>					
Pullan, Sam	(08) 9430 5434	(08) 9339 8148		0411 430 669	(08) 9430 7849 (08) 9339 8158 (a/h)
Switchboard	(08) 9430 5434				(08) 9430 7849
<b>Technical Manager</b>					
Marren, David	(08) 9430 5434	(08) 9339 2319		0412 923 509	(08) 9430 7849 (08) 9339 2417 (a/h)
<b>Operations Manager</b>					
Del Rosso, Ian	(08) 9430 5434	(08) 9337 8906		0412 928 275	(08) 9430 7849 (08) 9337 6357 (a/h)
<b>Personnel Manager</b>					
Hearnden, Mal	(08) 9430 5434	(08) 9383 2331		0412 505 434	(08) 9430 7849
<b>Australian Offshore Services</b>					
<b>Melbourne (IDD ++ 61 3)</b>					
Switchboard	(03) 9254 1666		016 376 434 (a/h Duty Manager)		(03) 9686 9279 (Operations)
<b>General Manager Operations</b>					
Hall, Richard	(03) 9254 1666	(03) 9844 1857		0412 568 780	(03) 9686 9279
<b>Ship Manager</b>					
Butt, Neil	(03) 9254 1547	(03) 9859 5474		0412 569 787	(03) 9686 9279
<b>Director</b>					
Homsey, Joe	(03) 9254 1666	(03) 9458 4237		0412 458 423	(03) 9686 9268
<b>Adsteam Agency</b>					
<b>Darwin (IDD ++ 61 8)</b>					
Switchboard	(08) 8981 2901				(08) 8941 1987
<b>Darwin Manager</b>					
Beagley, Ron	(08) 8981 2901	(08) 8927 3569		0418 895 872	(08) 8941 1987
<b>Lewmarine Geelong</b>					
<b>(IDD ++ 61 3)</b>					
Switchboard	(03) 5221 1577				(03) 5221 3251
<b>Mermaid Marine</b>					
<b>Dampier (IDD ++ 61 8)</b>					
Switchboard	(08) 9144 4099				(08) 9144 4088
<b>Acting General Manager</b>					
Graham-Nersol, Roy	(08) 9144 4099	(08) 9185 6584		0419 311 258	(08) 9144 4088



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# Globex Far East CONTACT DIRECTORY

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## 7 Marine Services

	Work	After Hours	Emergency / Pager	Mobile	Facsimile
<b>Northern Territory Shipping Darwin (IDD ++ 61 8)</b>					
Switchboard	(08) 8981 2541				(08) 8941 1670
<b>Managing Director</b> Mules, Peter	(08) 8981 2541			0418 895 410 (24hr)	(08) 8941 1670
<b>Perkins Shipping Darwin (IDD ++ 61 8)</b>					
Switchboard	(08) 8982 2000				(08) 8941 0412
<b>Marine Superintendent</b> Gratz, Capt. Wolf	(08) 8982 2080			0419 858 514	(08) 8941 0412
<b>Coastal Manager</b> Helms, Klaus	(08) 8982 2020			0419 847 985	(08) 8941 3355
<b>Sterling Marine Fremantle (IDD ++ 61 8)</b>					
Switchboard	(08) 9335 8444				
<b>General Manager</b> Sheerer, Graeme	(08) 9335 8444		(08) 9357 5519	0417 954 073	(08) 9335 3286
<b>Port Hedland (IDD ++ 61 8)</b>					
Switchboard	(08) 9173 1651				
<b>Supervisor</b> Telfer, John	(08) 9173 1651	(08) 9173 1150		0412 650 455	(08) 9173 1343
<b>Tidewater Port Jackson Perth (IDD ++ 61 8)</b>					
Switchboard	(08) 9221 2822				(08) 9221 3865
<b>Financial Controller</b> Bloch, Harry	(08) 9221 2822	(08) 9275 4272		0419 424 272	(08) 9221 3865
<b>Operations, Safety &amp; Quality Assurance Manager</b> Johnson, Sean	(08) 9221 2822	(08) 9370 5513		0417 939 731	(08) 9221 3865
<b>Technical Administrator</b> Lovi, Nick	(08) 9221 2822	(08) 9247 5658		0419 637 061	(08) 9221 3443
<b>Personnel Manager</b> Pleass, Alan	(08) 9221 2822	(08) 9382 4184		0419 192 011	(08) 9221 3865
<b>Managing Director</b> Seay, Austin	(08) 9221 2822	(08) 9385 7161		0418 335 242	(08) 9221 3510 (08) 9385 7161(a/h)
<b>Toll Energy Melbourne (IDD ++ 61 3)</b>					
Switchboard	(03) 9396 7604				(03) 9396 7606
<b>Managing Director</b> Dent, Phil	(03) 9396 7604	(03) 9890 3294		0418 359 526	(03) 9396 7606





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# East Globex Far East CONTACT DIRECTORY

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## 8 Petroleum Exploration, Production Companies & Associations

	Work	After Hours	Emergency / Pager	Mobile	Facsimile
<b>AIP</b> <b>Melbourne (IDD ++ 61 3)</b> <b>Executive Director</b> Starkey, Jim (03) 9614 1466 (03) 9614 1127					
<b>Apache Energy Ltd</b> <b>Onslow Supply Base (IDD ++ 61 8)</b> <b>Agent</b> Bradley, Lorry (08) 9184 6092 0417 185 063 (08) 9184 6092 <b>Perth (IDD ++ 61 8)</b> Level 3, 256 St. Georges Terrace Perth WA 6000 Switchboard (08) 9422 7222 (08) 9422 7444 <b>Operations Manager</b> Lake, Bruce (08) 9422 7206 (08) 9480 9999 0419 936 527 (08) 9422 7445 #62 296					
<b>APPEA</b> <b>Canberra (IDD ++ 61 2)</b> <b>Deputy Executive Director</b> Cochrane, Peter (02) 6247 0960 041 221 5100 (02) 6247 0548 <b>Assistant Director - Public Affairs</b> Gordon, Linda (02) 6247 0960 (02) 6247 0548 <b>Executive Director</b> Jones, Barry (02) 6247 0960 041 221 5099 (02) 6247 0548					
<b>BHP Petroleum</b> <b>Melbourne (IDD ++ 61 3)</b> 120 Collins Street, Melbourne, Vic. 3000 Switchboard (03) 9652 6666 <b>Drilling Manager</b> Berean, Doug (03) 9652 6322 (03) 9439 2603 132 222 0419 523 208 (03) 9652 6124 # 254 133 (03) 9431 3902 (a/h) <b>Drilling Superintendent</b> Oliver, Rob (03) 9652 7035 (03) 9888 6130 132 222 0419 346 550 (03) 9652 6124 # 253 695 (03) 9888 6126 (a/h)					



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**8 Petroleum Exploration, Production Companies & Associations**

	Work	After Hours	Emergency / Pager	Mobile	Facsimile
<b>Boral Energy Resources Ltd</b>					
<b>Adelaide (IDD ++ 61 8)</b>					
3rd Floor, Hospitality House 60 Hindmarsh Square Adelaide SA 5000					
Switchboard	(08) 8235 3737				(08) 8223 1851
<b>Manager for Exploration NWS Offshore</b>					
Bauer, Jennie	(08) 8235 3828				(08) 8223 1851
<b>Manager for Exploration Onshore</b>					
Lovibond, Rod	(08) 8235 3737				(08) 8223 1851
<b>Manager Seismic Operations &amp; Data Management</b>					
Roberts, Doug	(08) 8235 3737				(08) 8223 1851
<b>Manager of Oil &amp; Gas Production</b>					
Wearne, Geoff	(08) 8235 3737				(08) 8223 1851
<b>BP</b>					
<b>Kwinana (IDD ++ 61 8)</b>					
BP Refinery Mason Road, Kwinana, WA 6167					
<b>Fire &amp; Safety Officer</b>					
Lothian, Tommy	(08) 9419 0437			0418 903 906	(08) 9439 2003 (mail room)
<b>Melbourne (IDD ++ 61 3)</b>					
360 Elizabeth Street Melbourne VIC 3000					
<b>Logistics &amp; Facilities Manager</b>					
Lumb, Adrian	(03) 9268 4964			0419 754 055	(03) 9268 3524
<b>Terminals &amp; Distribution Manager</b>					
Watton, Mike	(03) 9268 3858				(03) 9268 3587
<b>Esso Australia Ltd (EAL)</b>					
<b>Melbourne (IDD ++ 61 3)</b>					
12 Riverside Quay Melbourne Vic 3006					
Switchboard	(03) 9270 3333				(03) 9270 3995 (mail room)
<b>Area Drilling Manager</b>					
Jenkins, Bob	(03) 9270 3422	(03) 9889 7443	016 030 # 312 607	0417 347 499	(03) 9270 3593



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# Globex Far East CONTACT DIRECTORY

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## 8 Petroleum Exploration, Production Companies & Associations

	Work	After Hours	Emergency / Pager	Mobile	Facsimile
<b>Mobil Exploration &amp; Producing Australia Pty Ltd</b> <b>Perth (IDD ++ 61 8)</b> 29th Floor, QV1 Building, 250 St. Georges Terrace Perth, WA, 6000 Switchboard (08) 9424 9200 <b>Producing Manager</b> Fitzpatrick, Ken (08) 9424 9200 (08) 9424 9214 <b>Drilling Superintendent</b> Heslin, Brian (08) 9424 9200 (08) 9424 9566					
<b>Novus West Australia Pty Ltd</b> <b>Onslow Supply Base (IDD ++ 61 8)</b> Switchboard (08) 9184 6092 (08) 9184 6092					
<b>Phillips Petroleum Company ZOC</b> <b>Melbourne (IDD ++ 61 3)</b> <b>Staff Drilling Director</b> Curry, Bill (03) 9652 6537 (08) 9873 5684 (03) 9652 6124 <b>West Perth (IDD ++ 61 8)</b> Level 1, HPPL House, 28 - 42 Ventnor Avenue West Perth, WA 6005 Switchboard (08) 9423 6666 (08) 9423 6677 <b>President</b> Brand, Dr. Steven (08) 9423 6650 (08) 9423 6677					
<b>Santos Ltd</b> <b>Adelaide (IDD ++ 61 8)</b> Santos House, 91 King William St, Adelaide, SA. 5001 <b>Acting Manager of Drilling Services Australasia</b> Beatty, Tim (08) 8224 7277 0418 804 287 (08) 8224 7141					
<b>Shell Company of Australia Ltd</b> <b>Melbourne (IDD ++ 61 3)</b> 1 Spring Street Melbourne Vic 3000 Switchboard (03) 9666 5444 (03) 9666 5008 <b>Perth (IDD ++ 61 8)</b> <b>Technical Manager</b> Strobl, Wolfgang (08) 9213 4647 0419 303 307 (08) 9213 4692 <b>Drilling Manager</b> Veenema, Jan (08) 9348 6789 (08) 9449 5489 0419 118 508 (08) 9348 4369					



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**Globex Far East  
CONTACT DIRECTORY**

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**8 Petroleum Exploration, Production Companies & Associations**

	Work	After Hours	Emergency / Pager	Mobile	Facsimile
<b>West Australian Petroleum Pty Ltd</b>					
<b>Perth (IDD ++ 61 8)</b>					
QV1, 24th Floor 250 St Georges Terrace Perth WA 6001					
Switchboard	(08) 9263 6000				(08) 9263 6699
<b>Woodside Offshore Petroleum Pty Ltd</b>					
<b>Darwin (IDD ++ 61 8)</b>					
Switchboard	(08) 8980 2700 (08) 8922 1700				(08) 8980 2710
<b>Darwin Area Manager</b> Aquino, Frank	(08) 8980 2701			0419 045 172	(08) 8980 2710
<b>Industry Liason Officer</b> Smith, Billy	(08) 8980 2707			0417 913 926	(08) 8980 2710
<b>Perth (IDD ++ 61 8)</b>					
1 Adelaide Terrace Perth WA 6000					
Switchboard	(08) 9348 4000 (24hrs)		1800 833 333 (24hr Emergency Number)		(08) 9325 8178
<b>Well Construction Manager</b> Hodson, Doug	(08) 9348 4398	(08) 9386 5596		0417 938 596	(08) 9348 4853 (08) 9389 7568 (a/h)



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# Globex Far East CONTACT DIRECTORY

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## 9 Well Control

	Work	After Hours	Emergency / Pager	Mobile	Facsimile
<b>Advanced Coiled Tubing Inc.</b> <b>Houston (IDD ++ 1 713)</b> <b>Executive Vice President</b> Kuhlman, Larry	(713) 937 6042 (24hr)		800 533 2529	(713) 252 0112	(713) 937 6503
<b>Boots &amp; Coots</b> <b>Houston, USA (IDD ++ 1 713)</b> Switchboard	(713) 621 7911				
<b>Cudd Well Control</b> <b>Houston (IDD ++ 1 713)</b> Saulnier, Paul	(713) 840 7636		cwinfo@cudd.com		(713) 877 8961
<b>Red Adair</b> <b>Houston, USA (IDD ++ 1 713)</b> <b>General Manager</b> Goodman, Eddie	(713) 462 6479				(713) 877 8961
<b>Wild Well Control</b> <b>Houston (IDD ++ 1 281)</b> Campbell, Pat	(281) 353 5481		wildwell@wildwell.com		(281) 353 5480