Appendix 5

Response Plan - Dispersant Application

Exercise "Barossa" - Adelaide
11 June 1998

Prepared by National Response Team

Background

This Response Plan forms part of the overall response strategy to deal with the discharge of oil from the tanker Southern Mist, grounded at Port Adelaide. Currently an estimated 500 tonnes of oil (Light Arabian Crude) has escaped from the vessel during the grounding.

As outlined in the general Response Plan, as part of the overall response operations dispersant spraying is considered to be an appropriate response option with the ability to effectively treat the oil with the effect of:

- enhancing natural dispersion,
- reducing the amount of oil that may impact the shoreline,
- decrease the impact of oil on wildlife,
- reducing oil adhering to solid surfaces, and
- reducing the formation of water in oil emulsions.

Objectives

The purpose of this plan is to outline the response operations for the application of dispersant to a spill as a protection strategy for the protection of environmentally sensitive areas.

The plan also details the recovery, storage and disposal of waste as a result of any shoreline clean-up operations that may be undertaken, so as to minimise residual oil left on shore.

Planning Assumptions

In developing this plan it is assumed that any oil on the water will initially be wind driven and then current driven with currents predominantly moving north, at around one (1) knot. It is

also assumed that predominant winds will be from the southwest at around 10 knots. Based on trajectory modelling undertaken by the AMSA it is predicted that the majority of oil will impact the shore in the area of south of the entrance to the Adelaide River/Outer Harbour. Depending on the wind speed, it is possible that a large amount of oil may move southeast before moving north under the influence of a northerly tidal set.

A westerly wind will drive oil into the Barker Harbour Inlet mangrove area.

Planning assumptions include current seawater temperature of around 13 C with model predictions (ADIOS) predicting effectiveness of dispersant of around 12 hours.

Response Considerations

Given the physical parameters affecting the weathering of the oil and thus the "Window of Opportunity" it is predicated that a total of 12 hour exists for the application of dispersant. Therefore it is most unlikely that dispersant application will be effective beyond 1500 hrs (CST), 11 June 1998. This is based on the assumption of no further release of oil.

It is recommended that any dispersant spraying operation be conducted be undertaken from a base located at Calvin Grove (North East of the incident site where 8 tonnes of Tergo R40 dispersant is stored. Additionally, this location can support either fixed wing or helicopter operations for application. An additional 9 tonnes of Ardrox 6120 suitable for aerial application is also available at Port Adelaide (Outer Harbour) which can be transported to Calvin Grove in support of the operation.

Australian Maritime Resources have available an Airtractor AT-802 with a dispersant capability of 3000 litres available as part of the Fixed Wing Aerial Dispersant Capability managed by AMSA. It is expected that the aircraft would be available around 0900 hrs (CST) 11 June 1998.

Additional aircraft are available ex Field Air Ballarat, Victoria and Pays, Scone NSW.

Oil inside the Harbour area can be dispersed using Warren Springs type equipment on a surface vessel for the application of BP-AB dispersant.

The State Environmental & Scientific Co-ordinator has given approval for the application of dispersant in certain areas. It should be noted that whilst some of the area is shallow (around 5 metres) it is believed that the benefit of the dispersant application out-weighs that of any

possible adverse effects. This is due to the area having a predominantly sandy substrate with little flora coverage.

Surveillance Operations

As part of the spray operations there will be a requirement for a support aircraft to monitor the spraying operations including the effectiveness of the application. This will include the requirement to undertake various surveillance flights on a daily basis. This will require the use of either fixed wing or rotary wing aircraft. Arrangements will be made for the provision of suitable aircraft for these operations. The use of all aircraft will be conducted in accordance with Civil Aviation Safety Authority (CASA) requirements for flight over water. This shall include the fitting of flotation devices to all rotary wing aircraft and the provision of a suitable numbers of life jackets.

Tests

Based on oil parameters it is more than likely that the oil will initially be amenable to dispersant. It is then likely that this will diminish as the oil weathers. Observations from support aircraft will need to be made to monitor the effectiveness of each spray run.

Co-ordination and Control

All operations will be required to be co-ordinated and controlled on-site by suitably experienced personnel. The Deputy On Scene Co-ordinator will have overall responsibility for the operations. Advice and support will be provided where required by the planning group and on-site environmental personnel.

The Australian Maritime Resources Air Base Manager will undertake on-site co-ordination and control of aircraft.

Approved Oil Spill Commander

Environmental & Scientific Co-ordinator

N.B. This Plan was not completed until after dispersant operations ceased as a result of potential legal injunction.