



Appendix 6

Response Plan for Shoreline Protection & Clean Up

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 vessel Southern Mist, grounded off 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 it is inevitable that oil is likely to come ashore at some stage during the spill response.

Objectives

The purpose of this plan is to outline the requirements for the protection of sensitive areas, including wildlife habitat, feeding areas and the protection of wildlife located in the area. 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 the oil will initially be wind driven and then current driven with currents predominantly moving north, at around one to two (1 to 2) knots. It is also assumed that predominant winds will be from the southwest at around 10 knots.

Based on trajectory modelling undertaken by the AMSA using OSSM, it is predicted that oil will impact the shore in the area from Outer Harbour to Semaphore Jetty. Oil entering the Harbour has the potential to impact mangroves to the north of the river.

It is expected that in the proceeding days oil will move to the north.

Based on the amount of oil released (500 tonnes) and that this is not dispersed or recovered, that in excess of eight (8) times this amount may be recovered as oily waste, requiring

temporary storage and disposed. Temporary storage and eventually disposal of approximately 10,000 cubic metres of waste may be required.

Response Considerations

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:

- Reducing the amount of oil that may impact the shoreline.
- Decrease the impact of oil on wildlife.
- Reducing oil adhering to solid surfaces.
- Reducing the formation of water in oil emulsions.

Additionally, the control and recovery of oil at sea using boom and oil recovery vessels and skimmers will be undertaken. However it is inevitable that some oil will come ashore.

In planning for shoreline protection, strategies will need to be put in place for the protection of environmentally sensitive areas, including mangrove stands, bird species and other wildlife in the area. Most of the area consists of sandy shores and some vegetated sandbanks.

Protection Priorities

In the initial stages of the spill (first day) it is likely that there will be a requirement to protect sensitive areas utilising boom where possible. This includes protection of the following areas in order of importance:

Outer Harbour Inlet - This area contains significant stands of mangroves.

The area from the Outer Harbour to Semaphore Jetty is predominantly low energy, flat sandy beaches with significant amenity value, even at this time of year. It is unlikely that all of this area can be protected with boom and therefore a shoreline clean up is likely.

An ongoing assessment of others areas that may be impacted by oil should be undertaken, using both modelling (OSSM) and information obtained from continuing surveillance flights.

General Shoreline Protection Measures

The use of boom can be used to not only protect environmentally sensitive resources, but also to deflect any oil into pockets for ease of recovery.

Methods to be employed in a shoreline clean-up operation include:

- Removal of floating or pooled oil by shoreline flushing and recovery with the use of skimmers;
- Removal of oiled material and vegetation;
- Use of sorbent materials;
- Low pressure flushing;
- Mechanical collection and removal of oiled material;
- Manual collection and removal of oiled material;
- Use of dispersant to disperse oil or reduce adhesion.

As part of an assessment of the foreshore likely to be oiled (Outer Harbour to Semaphore Jetty) it is intended to divide this into five (5) discreet areas for the purpose of foreshore clean-up operations.

Clean-up methods to be employed include:

- grader to be used to move oiled sea grass and sand above the high water tide mark (minimum scrape);
- vacuum truck to remove the free floating oil in pools along the beach length (subject to beach supporting weight);
- front end loader to assist grader and load into trucks for transportation to temporary or permanent disposal site;
- working in crews of ten (10) with supervisor rake "spots" into plastic bags;

Decontamination areas to be identified to set-up for clean transfer from shore to public areas (i.e. Largs Jetty car park).

Police/Security to monitor public access to oiled areas.

The area will be inspected/re-assessed at dawn for ongoing clean-up requirements.

Storage and Disposal of Waste

As outlined above, storage of up to 10000 cubic metres of an oil-in-water emulsion or oiled debris may be required. As all waste will be required to be removed from the area at the end of the response operation, storage will be of a temporary nature. It is unlikely that sufficient

capacity of portable storage will be available. Thus it may be required that either of the following options be explored to fulfil this role:

1. Bunded Open Storage Pits.
2. Use of barges.
3. Use of skips.

Storage by use of storage pits with adequate lining, to prevent the leaching of oil into the surrounding environment may need to be considered.

This will require significant planning, including consultation with the local and environmental authorities. Additionally there will be the requirement for earth moving equipment and bund lining.

At all times the utmost care will need to be taken in transferring oil and oily waste, so as to minimise any contamination of the surrounding area. Local contingency plans will need to address:

- Removal of oiled material and vegetation;
- Use of sorbent materials;
- Low pressure flushing;
- Mechanical collection and removal of oiled material;
- Manual collection and removal of oiled material;
- Use of dispersant to disperse oil or reduce adhesion.

Equipment and Resource Requirements

Back-up pollution response personnel required to relieve existing personnel will need to be considered as the response operation continues. Additionally a foreshore response team will be required for manual foreshore clean up. Consideration should also be given to the use of mechanical response operations, including small earth moving equipment etc.

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.

On-site co-ordination and control will be the responsibility of designated supervisors. OH&S issues should be addressed within an appropriate plan.

Approved Deputy On Scene Co-ordinator (Foreshore)