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# SANKO HARVEST



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DEBRIEF REPORT  
ESPERANCE 1991

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## FORWARD

Following the completion of the SANKO HARVEST clean up operation there was a need to have a debrief of the major participating agencies and interest groups to discuss their own and other agencies contributions. The Regional Counter Disaster Advisory Committee also made a similar request and following suggestion of Mr Denis Rayner it was agreed to conduct the debrief in this format.

The debrief was successful and gave organisations a chance to say their piece. It was disappointing that there was some selective reporting of comments in the media to give an impression that the overall tone was negative. Those who were there and who read this report will find that the debrief was in fact very positive and constructive.

There were many suggestions and ideas put forward which will be used to improve our response to future operations. Many of these have already been used to good effect in the subsequent KIRKI incident and much of the success of that incident can be put down to the experience gained from SANKO HARVEST.

I would like to thank everyone who contributed to the debrief and particularly to Superintendent Ron Webb who, as Chairman of the Regional Counter Disaster chaired the debrief and showed great humour and tact. Denis Rayner and his long suffering assistant Paula Power who put so much work into producing this report also deserve a special mention.



R S PURKISS  
Chairman, State Committee for  
Combating Marine Oil Pollution

29 August 1991

(1)

SANKO HARVEST

POST OPERATION: MULTI-AGENCY DEBRIEF MEETING

THURSDAY 13 JUNE 1991

DEBRIEF REPORT

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(i)

Copy of  
Invitation and Instructions

**SANKO HARVEST**

**POST OPERATION:**

**MULTI - AGENCY**

**DEBRIEF MEETING**

**THURSDAY 13 JUNE 1991**

**RECEPTION ROOM, CIVIC CENTRE  
ESPERANCE**

SANKO HARVEST

POST OPERATION: MULTI-AGENCY DEBRIEF MEETING

1. References

Each organisation/agency is requested to refer to the actual events that occurred after the grounding of the "Sanko Harvest". All involved are asked to base their summary, questions, answers and statements on facts as opposed to suppositions or innuendo and rumours.

2. Introduction

At 0320 hours, Thursday 14 February, 1991 the "Sanko Harvest" struck an unnamed reef in the outer Recherche Archipelago, some seven (7) nautical miles south of Cape Le Grand and seventeen (17) nautical miles south east of Esperance. The ship was fully loaded with a cargo of 31,000 tonnes of soluble fertilizer and had some seven hundred (700) tonnes of Bunker fuel oil. None of the twenty two crew were injured.

The circumstances of the grounding are subject to an independent inquiry by the Department of Transport and Communications, which is yet to release its findings. As this is the case, it is intended that the multi-agency debrief meeting will confine its discussion only to the events that occurred after the grounding of the "Sanko Harvest", its eventual sinking and associated pollution problems.

The multi-agency debrief meeting will be conducted jointly under the auspices of both the Goldfields Regional Counter Disaster Advisory Committee and the Esperance Local Counter Disaster Advisory Committee.



3. Aim

The aim of the post operation multi-agency debrief meeting is to provide a forum for all organisations/agencies involved after the Sanko Harvest grounding and eventual sinking and subsequent pollution, to mutually discuss their own and other agencies' participation during the response, recovery and clean-up operations, with a view to provide information for planning amendments to such or similar events that may occur in the future, effecting Western Australia.

4. Objectives

Participating organisations/agencies will:

- \* have held their own internal "in house" debrief meeting prior to the multi-agency debrief meeting to discuss their own involvement.
- \* Prepare a summary of their involvement to be included in the debrief report, the summary could include;
  - an overview of the events as they occurred.
  - lessons learnt during the operation
  - their recommendations to assist with planning for the response and recovery operations to future similar events.
- \* Present a verbal submission on their summary at the multi-agency debrief within the allocated time.
- \* Objectively discuss specific issues as required during the "discussion periods" scheduled after the presentations at the multi-agency debrief.

5. Timing and Venue

The post operation: multi-agency debrief meeting is to be held in the Reception Room - Civic Centre, Esperance, Thursday 13 June 1991 from 1900 - 2200 hours inclusive.

6. Format

- 6.1 Personnel are to attend by invitation only eg. 2 or 3 persons representing each local organisation or agency. Invitations will also be extended to key personnel from areas outside of Esperance (representing various organisations, agencies, Government Departments) and to other members of the Esperance Local Counter Disaster Advisory Committee (not directly involved in the "Sanko Harvest" incident).
- 6.2 The debrief will commence with a introduction and briefing. This will be followed by an overview (summary) given by each involved organisation (the time frames allocated are deemed to be proportionate to the organisations'/agencies' input to the operation).
- 6.3 The presented summary will be followed by a discussion (question and answer/statement) period at the conclusion of each presentation or group of presentations.
- 6.4 Organisations/agencies are to appoint a spokesperson(s) to present their summary and to be prepared to discuss that summary with other participants at that time.
- 6.5 The debrief meeting will be Chaired by the Regional Police Superintendent, Kalgoorlie Police Region (who is also Chairman of the Goldfields Regional Counter Disaster Advisory Committee).
- 6.6 Each organisation/agency is asked to provide a written summary of their involvement during the operation (preferably under their own letterhead). A compilation of these summaries will be prepared and provided to all participating organisations/agencies in a multi-agency debrief report.
- 6.7 The multi-agency debrief report will also contain recommendations for future actions, planning, etc. put forward during the post operation: multi-agency debrief meeting.



7. Programme

1900 - 1910	Introduction and Briefing
1910 - 1925	Marine & Harbours Presentation
1925 - 1935	Discussion on Presentation
1935 - 1950	Conservation and Land Management presentation
1950 - 2000	Discussion on Presentation
2000 - 2005	Australian Customs Services presentation
2005 - 2010	Discussion on Presentation
2010 - 2015	Esperance Port Authority Presentation
2015 - 2020	Discussion on Presentation
2020 - 2025	Esperance Shire Council Presentation
2025 - 2030	Discussion on Presentation
2030 - 2045	Coffee Break
2045 - 2050	Police Presentation
2050 - 2055	Discussion on Presentation
2055 - 2100	Local Environmental Action Forum Presentation
2100 - 2105	Discussion on Presentation
2105 - 2110	Environmental Protection Authority Presentation
2110 - 2115	Discussion on Presentation
2115 - 2120	Fisheries Department Presentation
2120 - 2125	Fisheries Association Presentation
2125 - 2130	Discussion on Joint Fishing Interests Presentation
2130 - 2135	CR Cox & Assoc(Aust) - (Insurers of Sanko Harvest) - Presentation
2135 - 2140	Discussion on Presentation
2140 - 2145	Australian Maritime Safety Authority Presentation
2145 - 2150	Discussion on Presentation
2150 - 2200	Recommendations and Summary
2200	Close

8. Public Relations

Captain David OLIVER, Department of Marine & Harbours (telephone 09 335 0870) and Mr Michael WAITE, Conservation and Land Management (telephone 09 367 0371) will handle all enquiries relating to the multi-agency debrief meeting.

9. Administration

Administration support will be provided by the WA Police Department and the WA State Emergency Service. All necessary lecture aids will be made available - eg. overhead projectors, VHS video recorder and monitor.

10. Contact Advice

Information concerning the multi-agency debrief meeting should be directed to either:

Supt. Ron WEBB  
Regional Officer  
Kalgoorlie Police Region  
(telephone 090 219 730)

or

Captain David OLIVER  
Manager Marine Operations  
Dept on Marine & Harbours  
(telephone 09 335 0870)

11. Participants

Each organisation is asked to supply a spokesperson and up to two support staff to give their presentation. The names of the personnel attending are to be forwarded in writing to the

Regional Police Office  
Kalgoorlie Police Region  
PO Box 136  
KALGOORLIE WA 6430

To be received seven (7) days prior to the date of the debrief meeting (06 June 1991).



11. Distribution List

Department of Marine and Harbours	5
WA Police Department	5
Conservation and Land Management	5
Department of Fisheries	5
Australian Customs Services	5
Esperance Shire Council	5
Esperance Port Authority	3
Mackenzies Tug services	3
Local Environmental Action Forum	5
C.R. Cox & Associates	3
Australian Maritime Safety Authority	3
Fisheries Association	5
Environmental Protection Authority	3
Esperance Local Counter Disaster Advisory Committee Members	15
Goldfields Regional Counter Disaster Advisory Committee Members	15
Spares	5



Denis RAYNER  
EXECUTIVE OFFICER  
GOLDFIELDS REGIONAL COUNTER DISASTER ADVISORY COMMITTEE

26 April 1991

ATTENDEES LIST

<u>Name</u>	<u>Position</u>	<u>Organisation</u>
Ron WEBB	Superintendent Chairman	WA Police & Goldfields RCDAC
Denis RAYNER	Regional Co-ordinator Executive Officer	WASES & Goldfields RCDAC
David OLIVER	Captain, Manager Marine Operations	Department of Marine & Harbours
Richard PURKISS	Captain, Director Marine	Department of Marine & Harbours
Con SAPPELLI	Marine Pollutions & Investigations Officer	Department of Marine & Harbours
Ian HARROD	Captain, Esperance Harbour Master	Department of Marine & Harbours
Barry HAMILTON	Regional Co-ordinator Great Southern Region	WASES
Paul IGGLESDEN	Member, Esperance (Sound Recorder for debrief meeting)	WASES
David CLARKE	Captain, Manager Western Region	Aust. Maritime Safety Authority
Stephen SCRIVEN	Captain, Principal Marine Surveyor	Aust. Maritime Safety Authority
Colin STEWART	General Manager	Esperance Port Authority
Ralph BOWER	Chairman	Esperance Port Authority
John WINTON	Forester	CALM
Chris COLYER	Shire Engineer	Esperance Shire Council
John COATES	Deputy Co-ordinator Esperance	WASES
Peter RUSHTON	2.I.C Telecom Esperance	Telecom Australia
Lance BLACK	Sub Collector of Customs, Esperance	Aust. Customs Service
Brian WARREN	Coastal Ranger	Esperance Shire Council
Ron TAYLOR	President	Local Environmental Action Forum
Nils BLUMANN	Councillor	Esperance Shire Council

<u>Name</u>	<u>Position</u>	<u>Organisation</u>
Gerry SEGERS	Fisheries Inspector	Fisheries Dept.
Sherryl BRADLEY	Member	Local Environmental Action Forum
Hugh MACKENZIE	Proprietor	Mackenzie's Tug Service
Malcolm MACKENZIE	Proprietor	Mackenzie's Tug Service
Ian CONNOR	Sergeant, Esperance	WA Police
Fred de ROOY	Surveyor	C.R. Cox & Assoc.
Klaus TIEDEMAN	District Manager Esperance	CALM
Dr. Chris SIMPSON	Manager, Marine Impacts Branch	Environmental Protection Authority
Bill TODD	Senior Sergeant, O.I.C, Esperance	WA Police
Phillip HUMBLE	Port Employee	Esperance Port Authority
Howard JONES	Research Scientist	Fisheries Department
Norm HEROLD	Local Co-ordinator Esperance	WASES
Frank MURRAY	Co-ordinator Esperance	St John Ambulance
Rob STEWART	Member	Local Environmental Action Forum
Greg POBAR	Marine Parks Manager	CALM
Mike WAITE	Environment Protection Manager	CALM
Ian HAY	Councillor	Esperance Shire Council
Sherryl WOLFENDEN	Director of Nursing	Esperance District Hospital
Don PATERSON	President	Esperance Shire Council
Grahame ARMSTRONG	Reporter	Kalgoorlie Miner
Denise MORTON	Journalist	Esperance Express

INTRODUCTION

Hello, my name is Denis RAYNER and I am the State Emergency Service Regional Co-ordinator for the Goldfields Region, based in Kalgoorlie. Part of my duties is to carry out the task of Executive Officer to the Regional Counter Disaster Advisory Committee. Its also to that committee that Supt. Ron WEBB is Chairman. I will introduce you to Mr WEBB later.

Welcome to the Sanko Harvest, Post Operational, Multi-agency debrief meeting. A special welcome is extended to you who are from areas other than Esperance.

I take the opportunity to extend a warm welcome to and introduce you to Captain David CLARKE, Manager, Western Region, Australian Maritime Safety Authority and to Captain Richard PURKISS, Director Marine from the Department of Marine and Harbours. Both gentlemen are members of the State Committee for Combating Marine Oil Pollution.

There is a list of apologies which includes:

Chief Superintendent Bob HAMILTON, Director WA State Emergency Service,  
Mr Tony BRIGHT, Projects Manager, Goldfields Esperance Development Authority,  
Mr Mike DUCKETT, Deputy Shire Clerk, Esperance Shire Council,  
Mr Colin SANDERS, Director, Environmental Investigations Divisions, Environmental Protection Authority,  
Mr Graham MARTINSON, Administrator, Esperance District Hospital,  
Senior Sergeant Bob COOPS, Emergency Operations Unit, WA Police,  
Mr Bill MCGILLIVRAY, Captain, Esperance Volunteer Fire Brigade,  
Mr Russell HAYES, District Officer, Bushfires Board and  
Mr John BURTON, Principal Environmental Health Officer, Esperance Shire Council.

Are there any other apologies, - being none I shall continue.

For persons who have not been in this venue before, the toilets are through the rear doors, turn right, along the passage - Ladies through the first door on the left, and the Gentlemen's is further along on the left.

The kitchen facilities are through this door on my right, we will stop for the scheduled coffee break and adjourn to the kitchen area for the break.

Please ensure that you have recorded your name, the position you hold and the organisation that you represent on the pad provided at the rear table, to enable it to be included in the debrief report.

The format for the debrief is as per the programme. As you can see, we have scheduled times for each of the organisations invited to speak tonight. We have allocated fifteen minutes for both the Department of Marine and Harbours and Conservation and Land Management as they are the key organisations involved in the operation. We have given five minutes to each of the other organisations.



This is because of the time constraints that we have to observe. The discussion periods for the first two organisations mentioned are for ten minutes and the remainder are restricted to five minutes each. If the time periods are not fully utilised then it is hoped that we can pick up a bit of time and finish that much earlier than scheduled.

In order to keep to the time frame restrictions I'll be ringing a bell one minute before each presentation is due to end and again at the expiry of the allocated time. The same will apply to the discussion periods, a warning bell one minute prior to the end of each period and at the end of the allotted time.

I ask that each person when speaking or asking a question, to give your name and that of the organisation that you represent for recording purposes - the tape will be edited, that is to take out the "urs and ums", etc, and the typed transcript along with the papers submitted shall be copied and distributed to you as a record of this debrief meeting so it can be further examined for future planning purposes. That is if David OLIVER wishes it to be so detailed as we are really more interested in getting the lessons learnt and subsequent recommendations from this debrief than examining what each organisation did in minute detail.

The tapes will eventually be given to David OLIVER for the Marine and Harbour's records. The sound recording is working okay from here, however to those of you in the rear seats, please stand when you are talking so the microphone has a chance to pick up your voices.

I will read the aim and outline the objectives of this debrief meeting. The aim is to provide a forum for all of you who were involved after the Sanko Harvest grounding and its sinking and subsequent pollution to mutually discuss your own and other agencies participation during the response, recovery and clean up operations with a view to provide information for planning amendments to existing plans to prepare for the response and recovery operations to such or similar events that may occur in the future and effect Western Australia.

The objectives to assist in reaching the aim, are that each of the organisations involved were asked to have held their own "in house" or internal debrief meeting to discuss their own involvement in the incident.

From the feedback received to date I'm confident that that objective has been met.

You were also asked to prepare a summary of your organisation's involvement to be included in the debrief report, this summary was to include an overview of events as they occurred, the lessons learnt during the operation and your recommendations to assist with planning for response and recovery operations to future similar events.

You are now asked to present a verbal submission on your organisation's summary at this debrief meeting and to objectively discuss specific issues as required during the discussion periods scheduled at the end of each verbal presentation.

Once again I ask that when speaking tonight please give your name and the organisation that you represent for recording purposes and please address your comments through the Chairman, Supt. Ron WEBB. Ladies and gentlemen I now introduce you to Mr WEBB who will briefly address you prior to the individual presentation. "Mr WEBB".

Supt. WEBB

Thank you Denis, you have outlined the format and aim, etc very well. I would like to make clear to you that all present, apart from thanking you for the effort that you have put into the operation and for preparing to be present here tonight for this debrief, that my purpose here tonight is to be the independant Chairman. As you know many times the Chairman at debrief meetings after operations has been heavily involved in that operation. In this case I was asked to Chair the meeting to enable all involved to be able to give their views without having the worry of trying to Chair a meeting as well.

I trust that the meeting can be pleasurable and beneficial to you all. With that in mind, I will reiterate a couple of points that are contained in the papers that were sent out to you all and that is to ask or make sure that in your addresses or questions, you refer to the events that occurred after the grounding of the Sanko Harvest and not to be , at this meeting concerned with why it grounded. The events leading up to and the grounding of the Sanko Harvest are subject to an official inquiry by the Department of Transport & Communications and rather than pre-empt any finding of that inquest it is better to deal only with the events after the grounding of the ship, at this stage.

I also ask that you deal only in facts and not suppositions or rumours and innuendoes when making comment tonight. I realize that some of you may have an axe to grind, but this is not the forum to do it. The forum here tonight is to purely and simply to learn from the events that have occurred and assist in planning for similar events in the future.

As Denis said the timings are critical and it is my aim to stick to the times as far as possible and the judges decision is final and no correspondence will be entered into, so to make the meeting flow on, please assist in keeping with the timings. If someone does have something to say, and is cut off please accept it in the right vein, its not meant to offend anyone. I would hope that in the organisations such as ours, that we are all working towards a common cause, that we have enough liason between each other to get together afterwards and address the problems identified and clarify any other points of concern.

I now take this opportunity to introduce the first speaker, Captain David OLIVER from the Department of Marine and Harbours, thank you David.

DEPARTMENT OF MARINE AND HARBOURS

Presented by Captain David OLIVER, Manager Marine Operations,  
Department of Marine & Harbours.

SUMMARY

At 0320 Thursday 14 February, the Japanese owned, Korean crewed vessel struck an un-named reef between Hastings and Hood Island in the Recherche Archipelago.

As soon as he was told the Esperance Harbour Master, Capt. Harrod who had been waiting to pilot the ship from the boarding ground into the harbour, informed Marine and Harbours Fremantle and then departed for the ship. The State Committee were informed at about 0600 and DMH members proceeded to the Marine Emergency Operations Centre where they commenced organising a response which included dispatch of equipment and personnel.

Throughout the first 24 hrs it appeared that the ship was salvageable and all endeavours were made to refloat the vessel so that it could be towed to Esperance for the removal of cargo and bunkers and for temporary repairs.

Early Friday morning it became obvious that the vessel was beyond salvage and the priority became the safety of the crew. Consideration was also given to the removal of the 700+ tonnes of bunker and fuel products onboard but in the time frame that the ship was expected to last and in the prevailing weather and effectively open sea conditions this was not considered feasible.

The ship was not expected to last Friday night and all personnel were evacuated.

The following morning, Saturday 16 February the ship was still there and during the day DMH Officers, at considerable risk boarded the ship and pumped dispersant into the hold where the bunker fuel was contained. The ship settled further during the day and once again the expected cold front did not develop overnight and Sunday morning found the ship still there.

Sunday proved too rough for the Tug to go out to the ship.

Sometime on Sunday night the ship broke in two and released the bunker fuel that had been trapped in the hold. Dispersant was applied to concentrated oil patches by the helicopter and the tug. The oil which was not treated fetched up on the beaches of Cape Le Grand National Park late Monday, 18 February forcing the closure of the Park.

During Monday a seal clean up operation was commenced on Hood Island, the details of which will be covered by CALM.

A beach clean up operation was planned over the next few days and the actual clean up commenced on Thursday, 21 February. This continued until the March long weekend when the park was partially re-opened.

The Shire and volunteers cleaned up small tar-balls which washed ashore on the town beaches.

A second seal rescue was mounted on Seal Rock on Thursday 21.

Meanwhile the after part of the ship was first thought to contain up to 60 tonnes of oil but salvors were unable to gain access to the wreck to confirm the situation. Detailed plans of the ship were obtained from Japan and after careful consideration it was estimated that at worst some 20 tonnes could remain in two ready use tanks in the engine room. Defence Force assistance was sought on 28 February to achieve a controlled release of this oil by severing the vent pipes to the tanks when conditions were favourable for the containment and recovery or dispersal of the oil.

The Defence Force declined to assist and suitable contractors were located for the operation but before the plan could be put into action the after section broke up in the constant swell and on 7 to 9 March the remaining oil was released. All this oil was treated with dispersant and dispersed and did not impact on the beaches or wildlife.

Divers have inspected the remains of the wreck and no oil is believed to remain.

The foreshore clean up continued throughout March and, with a short break for Easter when the park was re-opened, continued to 18 April.

The area was inspected at the end of April and will be inspected again in October to see if further clean-up work is required.

The owners and their insurers have met all costs of the Government and of the contractors employed.

#### LESSONS LEARNT

The oil combat organisation worked extremely well. Considering the size and complexity of the operation it swung into action quickly and smoothly. The liaison and co-operation between the departments both Federal and State was outstanding. With minimum direction the various groups initiated their part of the response within the overall framework.

As with any operation there were many practical lessons learnt. The low frequency of major oil pollution incidents in Western Australia makes it more important that these practical lessons are recorded and passed on and it is with this in mind that the following points are made.



## ORGANISATIONAL

### Media

At the beginning of the incident a decision was made to conduct all media liaison from Fremantle to take the media pressure off the OSC and allow him to get on with the incident management. This decision proved to be misjudged for the following reasons:

1. A very large contingent of media immediately went to Esperance and their presence placed demands on the OSC who was not in a position to do other than refer them to Fremantle. As information was not readily available some of these media turned to local community for their stories (ie. the use of fishing vessels to remove oil from the wreck).
2. By not feeding information to the local Esperance media and community, many in the community were not well informed of issues and progress that were of great concern to them and they found a ready audience to express their frustration to in the readily available media contingent looking for a story.

When media support was provided in Esperance in the later stages there was a much stronger, positive result achieved from the media.

While a good relationship was established with media in Fremantle it was not possible to counter negative comment coming from Esperance representatives. General comments received from media in Fremantle were quite complimentary on the way it was done.

For those involved, the lack of professional in-house media support and the need for development training in media management were obvious. The media management became the biggest single task and the largest stress factor in the operation management.

### Personnel

The initial team to handle the incident was the local DMH staff of Capt. Harrod, Marine Officer Tyrrel and the two man pilot boat crew. They were supplemented by Marine Pollution Officer, Mr Sappelli, and Relieving Harbour Master, Capt. Shuttleworth. Natural tendency was to work within these staffing levels and once the team had begun operating well together there was a reluctance to take on additional outside staff who were not part of the team and who may have required extensive briefing and supervision. This became more acute as the operation extended and all personnel began to show tiredness.

For similar future operations it would be better to commence overmanned and stand down people surplus to requirements.

At the senior management level there was also a need to provide support. For example the Director Marine, Manager Marine Operations, Harbour Master, Esperance and Marine Pollution Officer for over a month worked at least 12 hours a day sometimes 15 hours, seven days a week. Much of the time they were under great pressure from the media.

Only the strong support of the other members of the State Combat Committee, the Executive Directors of Marine and Harbours, CALM and EPA, the Minister for Transport and also the Minister for the Environment prevented a serious deterioration of the situation.

For any similar major operation to succeed it is essential that similar level of support (and preferable bi-partisan) is provided.

#### CALM Resources

CALM has an extensive emergency labour organisation catering for full-time, part-time and volunteers who can provide an effective well organised labour force. Other resources are communications, casual labour hire, surveillance aircraft, and supervisory staff.

#### Liaison With Community Leaders

While a very good liaison was achieved with the Esperance Shire Council, there would have been considerable value in bringing into the operation other key community leaders and influential organizations such as local and aspiring State and Federal Members of Parliament, volunteer organizations such as the SES, fisherman's associations, environmental groups and service clubs. A senior officer to liaise with and involve these groups would achieve better acceptance of the response within the local community.

#### Transport

FPA's in-house transport section was able to provide a vehicle at competitive rates at less than an hours notice throughout the operation. This valuable and convenient resource will be utilised in any further operations.

#### OPERATIONAL

##### Management of Spills

The authority which takes operational control of oil spill clean-ups inevitably is allocated much of the public blame for the incident. In addition the demand on resources is considerable and many other routine functions of the department suffer. An alternative approach where the responsible authority takes first-aid action and then hands the actual clean-up operation back to the polluter or his representatives would have substantial benefit. The responsible authority would then exercise supervision over the clean-up agency.

This approach to management of oil spills will be discussed with other State representatives and National Plan.



### Equipment Availability

While it would not have made a difference to the pollution from the "Sanko Harvest", the incident did highlight the lack of suitable receptacles for de-bunkering ships in distress in the W.A.

1. At present there are three fuel barges permanently available in Fremantle, none in the Southern Ports, and only occasionally suitable barges in the Off-shore Industry in the Northern Ports. There is a need for an air-freightable system that could be rapidly deployed anywhere in the State.
2. The clean-up operations extended over some 40 nautical miles of coast and National plan marine UHF band radios were not adequate over that range. A portable relay mounted on a hill in the national park would have greatly improved communications. Most clean-ups will stretch over an area greater than UHF coverage making such a system valuable in any coastal spill.

### Cleaning of Oiled Marine Mammals

CALM officers have had considerable success in cleaning oiled seal pups although follow-up action will be required to monitor results more accurately. Detail of lessons learnt will be published separately by CALM.

### Control of Resources

CALM arranged the use of media helicopters and the Westpac Police helicopter to provide specific support for the wildlife rescue. The OSC must be given overall control of all assets which are part of the operation to ensure optimum utilisation is achieved and priorities allocated.

### ADMINISTRATIVE

#### P & I Insurers Representative

The P & I Insurers of the "Sanko Harvest", once they had publicity accepted responsibility, agreed to meet all reasonable costs and offered to pay the accounts directly. This reduced the need to forward all accounts to the authority with prime responsibility (DMH), who would then have to pay them, seek funding coverage from the National Plan while seeking re-imburement from the polluter and his insurers if necessary going to law and eventually repaying the National Plan when and if settlement was achieved.

Direct payment of accounts by the responsible insurer greatly speeds the payment process and saves work and expense all round.

### Education

There remains a public perception that all oil spills can be prevented or that should an emergency occur then there is modern technical means of preventing all damage and instantly cleaning it up. There is therefore a need to carry out a public education programme to make the public more aware of the real situation, the limits of technology and, the level of preparedness Australia and WA can afford. Money in itself, no matter how much is spent on equipment and training will not guarantee that the all future incidents can be prevented.

This incident has cost the people of WA very little in real terms and there has been minimal, if any medium and long term damage. There is no doubt that with a small increase in funding and personnel we could greatly improve response but it has to be kept appropriate to the threat, the level of risk that is acceptable, and the nation's capability to pay.

### Legal Advice

During the course of the operation there were many times where expert advice was required on maritime and salvage law, international maritime and pollution conventions and their interaction with the law and, marine underwriting and insurance convention and practice. This is a very specialised area and generally beyond the competence of mariners and outside the experience of non-specialised solicitors. Access to expert advice in this area is necessary to protect the State's interest.

### Training

The level of training of the majority of the marine personnel was good with the exception of the previously identified media area. There is however the need for a greater training capacity than is currently available through the National Plan. More training could be developed within the State. Additional resources (\$20,000 and .5 FTE) would be required.

The level of previous practical experience was low as such incidents fortunately have a low occurrence. All those who participated benefited professionally from the experience and it is important that the lessons are passed on. Appropriate lecture packs will be made to allow for training presentations to be made on oil spill training courses. Copies of these packs will be given to the National Plan and the Australian Institute of Petroleum for inclusion in their training courses. These presentations can also be easily adapted for presentation at interest groups, service clubs or educational institutions.

To improve the experience level of key operators it is essential that they be given an opportunity to attend training whenever opportunities offer and to attend at major incidents when they occur elsewhere in Australia and overseas.

DISCUSSION ON MARINE AND HARBOURS PRESENTATION

Q. Cheryl BRADLEY - LEAF

The polluter obviously had a vested interest in carrying out such a clean-up operation as cheaply as possible. What mechanisms would you put in place in order to ensure that the clean-up was done effectively and to a satisfactory standard?

A. David OLIVER - Marine and Harbours

Are we talking about as of now or as on that recommendation I have just made?

A. Cheryl BRADLEY - LEAF

Yes, the recommendation.

A. David OLIVER - Marine and Harbours

Well, that is one of the problems that we would certainly look at, if we go that route. That is basically how the United States does it. The U.S Coastguard provides effectively, a monitoring service and what we would see is having something similar. We would have a few people in the field and a few people back here, basically riding a shotgun with the final decision to what is acceptable or what is not acceptable. That would obviously involve a number of departments with different interests. One thing you do want to avoid is the situation that we had at Exxon Valdez, where they were flying teams of eighteen plus around daily to inspect and to evaluate, because there were that many interested parties. So we do have to work together but we would have set a mechanism along those lines. As I have said, it is only a proposal at this stage.

Q. Malcolm MACKENZIE - MacKenzie's Tug Service

David, I was wondering about one of the questions that came up during the incident. It was about the Marine and Harbour's policy of how much or whether they let the oil go up on the beach or is it your department's policy to keep the oil at sea? Or is it satisfactory to allow the oil wash up on the beaches as it depends on the type of operation you want, whether you want a sea-bourne operation or do you prefer a land-bourne operation?

A. David OLIVER - Marine and Harbours

Firstly, it is never really acceptable for it to hit the shore. But the reality is that your limit to treating the oil in the water is fairly tight. I was reading some figures today I think the best spill recovery thats ever been achieved is something like 35 percent collection on water and so the best you will ever get will be about that percentage.

That was in ideal conditions, and I mean mill pond conditions right off Los Angeles, where they had enormous resources available. In an open ocean situation, once that oil gets into the ocean the best you can do is pray for an offshore breeze. Secondly if you don't have an off shore breeze it is going to come ashore and thats reality. The only real way you can make a major impact in cleaning it up is once it hits the shore. I'm afraid you do what you can and make every effort but really you are only nibbling at the problem. The main aim is to try to protect the most valuable resources that you might have on that shore. If they are wetlands or sheltered, very sensitive areas, then they are the areas that you do your best to protect.

Q. Ralph BOWER - Esperance Port Authority

What are the rules for the use of dispersants?

A. David OLIVER - Marine and Harbours

Well dispersants are controlled by a policy that has been issued by the Environmental Protection Authority. The policy says that dispersants cannot be used without E.P.A approval, within 5 miles of the shore and under 10 metres. Now thats a golden rule that we have. We are looking at incidents, where we can pre plan responses in certain fixed instances. This is in fixed facility type situation.

The policy is, if you are going to use dispersants then you have to use it in deep water where there is plenty of mixing so there isn't going to be impact from the dispersant itself. There is another important point, that is if you are going to use a dispersant then you don't use it on light stuff, you use it on the concentrated oil, at source itself, where you don't get excess application.

Q. Denis RAYNER - WASES

David, my question is about the types of dispersants that you used. I know that there are various types of dispersants on the market, and I know you experimented with them in the initial stages of the operation, have you with the benefit of comparison arrived at a best one?

A. David OLIVER - Marine and Harbours

Without doubt there is one called Concentrate which is the second and third generation dispersants. That's highly effective and is designed for helicopter application, it dosen't need agitation. But in the original English spill, the Torrey Canyon, they were basically using straight degreasers and now have developed dispersants which are 100 times less toxic. They are now on the second and third generations and of these and Concentrate is by far the most effective.

Q. Cheryl BRADLEY - LEAF

Where are the special protected localities in the Esperance waters, please?

A. David OLIVER - Marine and Harbours

I would need to have a chart to show you.

Q. Cheryl Bradley - LEAF

It seems that in the State plan that special reference is made to the avoidance of the use of dispersants in such zones and in the immediate buffer zones. I am curious to know exactly where that locality is in the Esperance waters, so that there is a bit more point of reference for the use of dispersants in this case.

A. David OLIVER - Marine and Harbours

If you give me some warning, between Chris from E.P.A and I, we can obtain for you a copy of the E.P.A Bulletin No. 184a. I think, from memory. It is out of print but I can get you a photocopy of it.

A. Chris SIMPSON - Environmental Protection Authority

It is actually being reprinted.

Q. Ron WEBB - Chairman

David, can you make that available to the group down here?

A. David OLIVER - Marine and Harbours

Yes, certainly.

DEPARTMENT OF CONSERVATION AND LAND MANAGEMENT

Presented by Klaus TIEDEMAN - District Manager, CALM, Esperance.

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CALM's INVOLVEMENT

The department of Conservation and Land Management's (CALM) major participating role, in the recent Sanko Harvest oil spill clean-up operation, can be attributed to the following factors.

1. Approximately 65% of the coastline in the Esperance Shire is found within National Parks and Nature Reserves which are vested in the National Parks and Nature Conservation Authority (NPNCA), and managed by CALM.  
  
The main parts of the CALM managed estate affected by the oil spill, included the Islands of the Recherche Archipelago, Cape Le Grand National Park and Stokes National Park. Reports of oil staining and debris coming ashore on beaches were also reported from Lake Shaster Nature Reserve and Cape Arid National Park.
2. CALM has statutory responsibility of administering regulations made under the Wildlife Conservation Act. Under section 6 of the Act, CALM is responsible for the conservation and protection of native flora and fauna on all land and waters within the State boundaries.
3. Two weeks before the Sanko Harvest incident CALM was appointed to the Technical Committee of the State Combat Committee. CALM's role in the State plan is currently being defined.



Prior to this, CALM's role was to (i) provide advice on areas under the Authority's jurisdiction and (ii) provide a Liaison Officer to the State Operations Centre when required (Extract from "Western Australian State Pollution of the Sea and Inland Waters Plan", October 1990).

#### CALM's OBJECTIVES

In any emergency situation, be it from natural or man-made causes, CALM's main objectives are as follows:

1. Preserve life.
2. Preserve property.
3. Preserve estate values.

In the case of the Sanko Harvest incident, neither of the first two objectives concerned CALM, as in this instance there was no threat to life or property on CALM estate. Thus CALM's principle objective in this operation became that of preserving estate values on CALM managed lands.

- As such, the following priorities were identified:
- Rescue and preservation of wildlife.
- Cleaning amenity beaches.
- Cleaning of balance of CALM managed coastline.

In fulfilling these individual priorities the following steps and actions were initiated.

#### Rescue and Preservation Of Wildlife

Areas containing wildlife, which were potentially at risk from the oil spill, were identified. Fauna in this category included a range of seabirds (including Little Shearwaters, Cormorants, Gulls, Cape Barren Geese and Little Penguins) and marine mammals (including New Zealand Fur-seals and Australian Sea-lions).

Aerial surveillance, using the Westcoast helicopter, of the islands in the immediate vicinity of the wreck site, commenced on February 16. Prior to this CALM had utilized a fixed wing aircraft to monitor the distribution of a light oil sheen seen drifting westwards and originating from oil leakage escaping from the stricken vessel.

Follow up ground inspections were instigated the following day.

On February 17, oil contaminated New Zealand Fur-seal pups and their nursery habitat covered in oil on Hood Island were discovered. By that evening, two CALM officers had been placed on the island to observe and monitor the pup population and to prepare for a rescue operation.

The decision taken to intervene was based on information gained by experts from the Exxon Valdez oil spill in Alaska. It was believed that the effect of the oil on the fur-seal pups was similar to that on sea otters, as they both had the same dense underfur and that this could cause the animal's metabolic rate to rise, making it difficult for the animals to regulate their body temperature. It should be noted that Australian Sea Lions do not possess this same dense underfur.

Overnight the ship split and partially sank. As a result the services of the Westcoast helicopter were temporarily lost to CALM.

On February 18, with the assistance of the S.E.S Rescue boat, additional CALM officers and volunteers from the Local Environment Action Forum (LEAF) were landed on the island to commence the clean-up operation.

On February 19, with the assistance of the Channel 7 Media Helicopter additional equipment was landed on Hood Island. A large population of oil affected New Zealand Fur-seal pups were also located on Seal Rock.

Preparations for a rescue operation were commenced. A portable VHF radio repeater was erected on Wireless Hill, in Esperance, providing CALM with a communication link with both Hood Island and Seal Rock. On February 21, CALM volunteers carried out a search of beaches, from Esperance west to Quagi Beach, in an operation designed to locate oil contaminated birdlife. A similar operation, from Esperance east to Wharton Beach was carried out the next day.

On February 20, Environment Minister, Bob Pearce and Executive Director, Dr Syd Shea flew to Esperance for a first hand look at the operation. As a result, the government made available the services of the Westpac Police Emergency Helicopter, which was thereafter continuously used to ferry CALM staff, volunteers and equipment to and from Hood island and Seal Rock. As the Westcoast Helicopter continued to be tied up with activity around the wreck site, the Westpac Police Helicopter was also used to survey wildlife on other islands and the mainland coastline as far west as Starvation Boat Harbour and east as Rossister Beach. It was during one of these inspections that a new major breeding colony of New Zealand Fur-seals was recorded on Libke Island.

By February 21, the condition of some of the deoiled New Zealand Fur-seal pups on Hood Island, had been assessed, measured and tagged by CALM marine mammal expert Dr Nick Gales. As their rookery site had also been cleaned it was possible to release them back into their natural environment.

A similar operation occurred on Seal Rock on February 24, after which time all personnel were withdrawn from the island.

#### Cleaning of Amenity Beaches

On February 18, as a result of the ship splitting open, oil from the Sanko Harvest began coming ashore in Cape Le Grand National Park. Initially no action was taken because oil continued to deposit itself along the coastline for several days.

As a consequence however, some of the main oil affected beaches within the park were closed to public access. This was done to ensure (i) public welfare and safety was maintained and (ii) to stop further unintentional spread of oil, affected soil material being transported on footwear.

On February 21, cleaning up operations utilizing Esperance Shire earthmoving equipment commenced at Lucky Bay. In the initial absence of an approved disposal site oil contaminated beach sand was permitted to be temporarily stockpiled in a gravel pit near Frenchman's Peak. This material was later removed for final disposal to a location outside the National Park.

On February 22, a meeting was held between CALM, Marine and Harbours and insurance representatives for the Sanko Harvest. At this meeting a priority list for cleaning beaches was established. The priority order was as follows:

- Lucky Bay
- Hellfire Bay
- Dunn Rock/Rossister Beaches
- Thistle Cove

At a further meeting on February 25, CALM insisted upon achieving a "clean wreck" and a "clean coastline".

From February 22 onwards until March 4, many volunteers assisted CALM in hand cleaning beaches within the park. Their efforts were so successful that most beaches were reopened to the public over the March long weekend.

However by the end of this time the enthusiasm of volunteers had begun to wane and as a result agreement was reached between CALM and the insurers to employ 24 casuals to finish the cleaning operations of beaches in Cape Le Grand.

A secondary beach pollution event occurred on March 9, when the stern of the vessel sank resulting in large patches of weathered oil re-affecting Hellfire Bay, Lucky Bay and Thistle Cove. This day also saw the temporary loss for four days of the Westcoast Helicopter when it was forced to make an emergency landing on Hastings Island, due to a mechanical failure during dispersant spraying operations.

Aerial inspection of the wreck and beaches continued on a regular basis utilizing the Westpac Police Emergency Helicopter which had returned to Esperance to assist in further island monitoring work.

Removal of oil contaminated sand, which had been shovelled into thousands of plastic bags by the volunteers and casual employees, from beaches that were inaccessible to vehicular transport were finally airlifted from the beaches into waiting trucks at Thistle Cove utilizing a Bristow 212 Helicopter on March 15. As a result by the following day all amenity beaches on the priority list were considered clean enough to reopen.

### Cleaning Balance of CALM Coastline

Although reports of oil coming ashore were received from as far afield as Yokinup Bay in Cape Arid National Park and Hamersley Inlet in the Fitzgerald National Park, the quantities involved did not merit initiating any clean-up action.

In Stokes National Park a clean-up operation was however required, not to deal with oil, but rather with large quantities of flotsam that had come ashore. After liaising with officers of the Customs Department the material was stockpiled and eventually burnt.

There remained two areas within Cape Le Grand National Park that were heavily oil contaminated. One of these sites was at Boulder Hill Cove, a small bay which proved to be the hardest to clean. The other site was at Mississippi Beach. Both sites required the use of a helicopter to airlift in personnel and equipment and airlift out contaminated material.

Although cleaning operations commenced from March 7, under the supervision of Marine and Harbours, in Boulder Hill Cove, it was not until CALM, on March 17, took over as the supervising agency at this location that problems associated with access, safety, communications and a plan of attack were resolved.

The clean up operation in this locality lasted until April 18. Initial access to this location was either on foot along the Coastal Walktrail or via sea on the Esperance Port Authority workboat. Eventually utilizing the skills for the Westcoast Helicopter pilots, CALM personnel were airlifted in on a daily basis onto a rock located above the cove. The cove itself, being very protected from any major wave action, had collected some very thick tarry sludge along its rocky shoreline.

Removal of this material was achieved by various methods of scooping the oil into 200 litre drums and then airlifting them off the Cove to the nearby Thistle Cove carpark which was being used as a helipad for the operation. From here the drums were removed by private contractor to a final approved disposal site outside the park. In all, over three hundred and fifty drums were airlifted out. .

The cleaning of the now drying pollutant, off the rocks was achieved using various high pressure units and degreasers. Access to collect some of the washed off material necessitated the use of a small flat dinghy, its movement being controlled through the use of guide ropes extended across the narrow cove.

Due to the length of time this operation took to complete, a temporary shelter for the workers welfare was erected on site and a walktrail detour established to guide trail users away from the oil contamination area. In addition a portable VHF radio repeater was established on Boulder Hill, just above the Cove. This provided radio communication with the CALM Esperance office and with the on-site controller at Thistle Cove carpark.

Mississippi Beach also proved to be difficult to clean due to the continual presence of oil, out in the surfline. As such, the beach would appear to be relatively clean at the end of each day, only to be recontaminated again the following day. The cleaning of this beach was completed on March 26, when the final bags containing oil contaminated sand were airlifted out, using the Westcoast Helicopter. Radio communication at this site was not available.

#### RESOURCES

In the very first days of this operation the decision was made locally, not to bring in too many CALM staff from outside the region, but rather to utilize as many local people who had volunteered their services. During the first week, over two hundred such people had rung the CALM office and given their names to be included on a volunteer registrar.

Nevertheless, due to other commitments, some additional wildlife officers and relieving staff from Albany were utilized.

A summary of manpower used the operation is as follows:

#### CALM MANPOWER UTILIZED

14	CALM staff Esperance based
11	*CALM staff Metropolitan area
7	CALM staff Albany based
1	CALM staff Narrogin based
28	Casuals employed by CALM
<u>61</u>	

\* This does not include Dr Syd Shea or other Head Office advisors.

In addition, approximately 80 volunteers including members from LEAF, Friends of Cape Le Grande and spouses of Esperance CALM staff, were utilized during the Sanko Harvest clean up operation.

Advice, assistance and co-operation was also willingly given by personnel from Marine and Harbours, Esperance Port Authority, Customs Department, Environmental Protection Authority, Esperance State Emergency Service, Esperance Shire Council, Police Department, Bush Fires Board, the media and pilots and crew of the Westcoast Helicopter, Channel 7 Media Helicopter, Westpac Police Emergency Helicopter, Bristow Helicopter and Goldfields Aviation Services aircraft.

CALM personnel are guided and operate under specific industrial agreements (e.g Guidelines for Extended Hours Worked by CALM Personnel in Emergency Situations). Similarly, guidelines exist for consideration by CALM Contollers for the utilization of volunteers (Policy on Volunteers and Operational Guidelines for Volunteer Activities). It is therefore important that these requirements/guidelines are also brought to the attention of the Local Combat Committee Controller, so that he is aware of CALM's obligation to its workforce.



It was also vitally important that an accurate Resource Recording System was maintained within the Esperance CALM office, to ensure that CALM personnel received adequate rest during the course provisions (e.g. briefings, accommodation, etc.) had to be made for relieving/incoming staff.

#### CALM OPERATIONAL CONSIDERATIONS

During the period of the Sanko Harvest operation, the following hazards and operational considerations were encountered:

- Accessibility to islands and isolated beaches.  
The use of helicopters in similar operations is considered essential. Access otherwise would have made operations on Seal Rock impossible and greatly extended the time frame of the clean up operations elsewhere. What was a five hour return boat trip to Hood Island became an eight minute return trip using helicopters.
- Terrain.  
Necessitated careful selection of helicopter landing sites, both on the islands and on the mainland at Boulder Hill Cove. In addition, workers were sometimes exposed to potential hazardous situations.

Surf affected rocky headlands both on the islands and mainland required constant due care.

- Safety.  
Prior to each individual operation commencing, all personnel involved had to be briefed on safety hazards, safety techniques to be implemented and provided with appropriate safety equipment. In the case of volunteers, their names were recorded on a register to ensure personal insurance protection was provided. Casual workers on the other hand were required to have a physical examination prior to employment. During the course of the seal rescue operation, several rescuers were bitten and as such were required to have tetanus shots for their own protection. Similarly, staff physically exposed, for extended periods, to either oil or chemicals were asked to have blood tests carried out. Safety of staff and volunteers was of paramount importance to CALM.

Similarly, the welfare of staff and of volunteers was generally taken into account during this operation.

However because of the emotional nature of some of the work, some improvement in this area, in relation to emotional and stress management for individuals, may need to be addressed in future operations.

- Communications.  
By using a portable VHF repeater station most locations where work was supervised by CALM had adequate communication. The exceptions being with operations on Mississippi Beach and on occasions with the Westcoast Helicopter. Communications between the Westpac Police Helicopter and CALM were excellent throughout the operation.



- Planning daily workforce requirements.  
On several occasions requests were made very late in the afternoon to organise a volunteer workforce for the next day.

This lack of warning made it unnecessarily difficult to organise personnel, transport, equipment and stores. This was particularly relevant for work proposed over the weekend. In future, such planning needs to be carried out at least one full day in advance.

- Briefings.  
During, the initial stages of the operation, CALM staff and volunteers were given twice daily briefings, on happenings in the district. As the operation continued to drag on, and the tasks became repetitive, these briefings were reduced to once daily.

These briefings however, were only held in the District Office and as such unintentionally neglected the information requirements of personnel who did not operate direct from the district office (eg. Cape Le Grand National Park resident staff). Therefore, these officers were not aware of what was happening elsewhere in the district. In future operations it is therefore essential to ensure that all staff are kept up to date with information on overall operations in the district so that they can appreciate why certain decisions and priorities are made.

- Equipment.  
The selection and success of much of the equipment used by CALM during the operation came about due to the ingenuity of individuals, donations from business houses and by way of trial and error. Only limited advice on availability and suitability of equipment was forthcoming from the Combat Committee. This needs to be rectified for future operations, by having available an inventory list of such equipment.

- Other Commitments.  
During the 1990/91 summer, the CALM Esperance District experienced its most hectic fire season on record. Local staff therefore had been exposed to considerable physical and mental pressure prior to the Sanko Harvest. At the time of the grounding CALM still had active wildfires burning in the Dundas and Esperance Shires. As such, some local CALM resources, including staff, had to be held back from the oil spill clean-up operation, to counter further wildfire threats. On the 4th of March, one of these fires (Fire No. 12 - in the Mt. Ragged area) alone, burnt out in excess of 70,000 ha. during the day. Regular aerial surveillance to gather intelligence, was therefore necessary.

## ROLE FUNCTIONS

From the very beginning of this incident, CALM set up an operational structure along the lines of a Large Fire Organisation (LFO), which it uses during large wildfire operations. The structure was amended on a daily basis and circulated to all CALM staff operating from the Esperance office. Where possible areas were sectorized and Field Bosses or Sector Bosses designated. A copy of a structure used during the operation is shown in attachment 1.

Two key roles which greatly assisted CALM in Esperance during the whole operation were the Interdepartmental Liaison Officer (in Esperance on February 14) and the CALM media officer (in Esperance February 17). In particular, the latter position relieved operational staff of otherwise time consuming work, in dealing with the media and other enquiries. It is essential that media liaison be done from the site of the incident.

Although this structure greatly assisted CALM in carrying out its functions during the operation, discussions amongst staff at CALM's internal debrief meeting did identify additional roles that needed to be established.

Key roles that need to be filled in a similar operation have been identified as follows:

- Departmental Controller
- District Controller
- District/Onsite Inter-agency Liaison Officer
- District/Onsite Environmental Officer
- Intelligence Officer
- Media Liaison
- Stores Supply Officer
- Load/Transport Co-ordinator
- Maintenance Officer
- Communication Officer
- Administration Officer
- Volunteer Co-ordinator
- Volunteer Supervisors
- Safety/Induction Officer
- Wildlife Rehabilitation Co-ordinator/Officer
- Sector Bosses - Land
  - Islands

It may be possible, depending upon the size of any future operation, that one person may be able to fulfil dual roles, or in the case of a larger operation a person may need an assistant (eg. Volunteer Co-ordinator may need a person to fulfil the functions of a Recorder). The use of volunteers to perform the functions of assistants, to key officers, should not be discounted.

It must also be remembered that the day to day running of the office still continues. As such, adequate staffing must be maintained for this function.

MONITORING

The first of the follow up monitoring surveys of the New Zealand fur pup seal populations on Hood Island and Seal Rock has already been carried out. A similar survey will be conducted in July. An evaluation of the cleanliness of the CALM beaches previously affected by oil pollution will be conducted in early spring thus allowing nature, through winter storms, to naturally help break down remaining oil. CALM however have indicated that, they reserve the right, in the event of unacceptable levels of oil remaining on any part of the CALM managed estate, to reactivate cleaning operations and to seek reimbursement of any costs incurred.

RECOMMENDATIONS

- \* It is recommended that more staff from government agencies involved in coastal management activities, be given appropriate training to improve future preparedness and co-operation between agencies.
- \* That the State Combat Committee and Marine and Harbours recognise the statutory responsibility of CALM, as required under the Wildlife Conservation Act.
- \* That the State Combat Committee and Marine and Harbours recognise CALM's legitimate right to collect independent intelligence during the course of an oil spill incident, and that where CALM values are threatened, accurate information must be provided to the designated District CALM Intelligence Officer.
- \* Where such intelligence gathering by CALM involves the need for aerial surveillance, appropriate resources should be approved and made available at an early stage, to allow for the fulfilment of this function.
- \* The accurate gathering of intelligence during the early stages of any oil spill incident is essential to CALM, particularly if CALM estate or values are threatened. As such, where approval, as outlined in the previous recommendation, is not forthcoming from the Local Combat Committee Controller, the Departmental Controller for CALM should, as a standard procedure, authorize the procurement of a suitable aircraft to enable this function to be fulfilled.
- \* That individual CALM Oil Spill Contingency Plans be written for each CALM district which is involved in coastal management activities. Copies of these documents should be distributed to the relevant local Marine and Harbours office. The document should include a chart of guidelines applicable to the utilization of CALM personnel.
- \* That an effective, complete and reliable communication network be established, as soon as possible, following the grounding of a vessel in similar circumstances. Such a network should include provisions for extra portable marine frequency radios and repeaters, extra VHF hand held radios and repeaters and hand held VHF aeroband radios.

\* That an appropriate site be selected and bitumenized at each major port where oil spill combat gear is stored, as an operational helipad, for use as a base from which equipment and manpower can be transported by helicopter. The main site used at Esperance was not bitumenized, and as such resulted in ground support personnel being unnecessarily exposed to dust and other disturbed ground material which was being blown about as a result of actions generated by the rotors of helicopters used.

\* That suitable E.P.A approved disposal sites be identified in advance, in the Esperance region (for future emergencies), for the future purpose of storing retrieved oil and oil contaminated material.

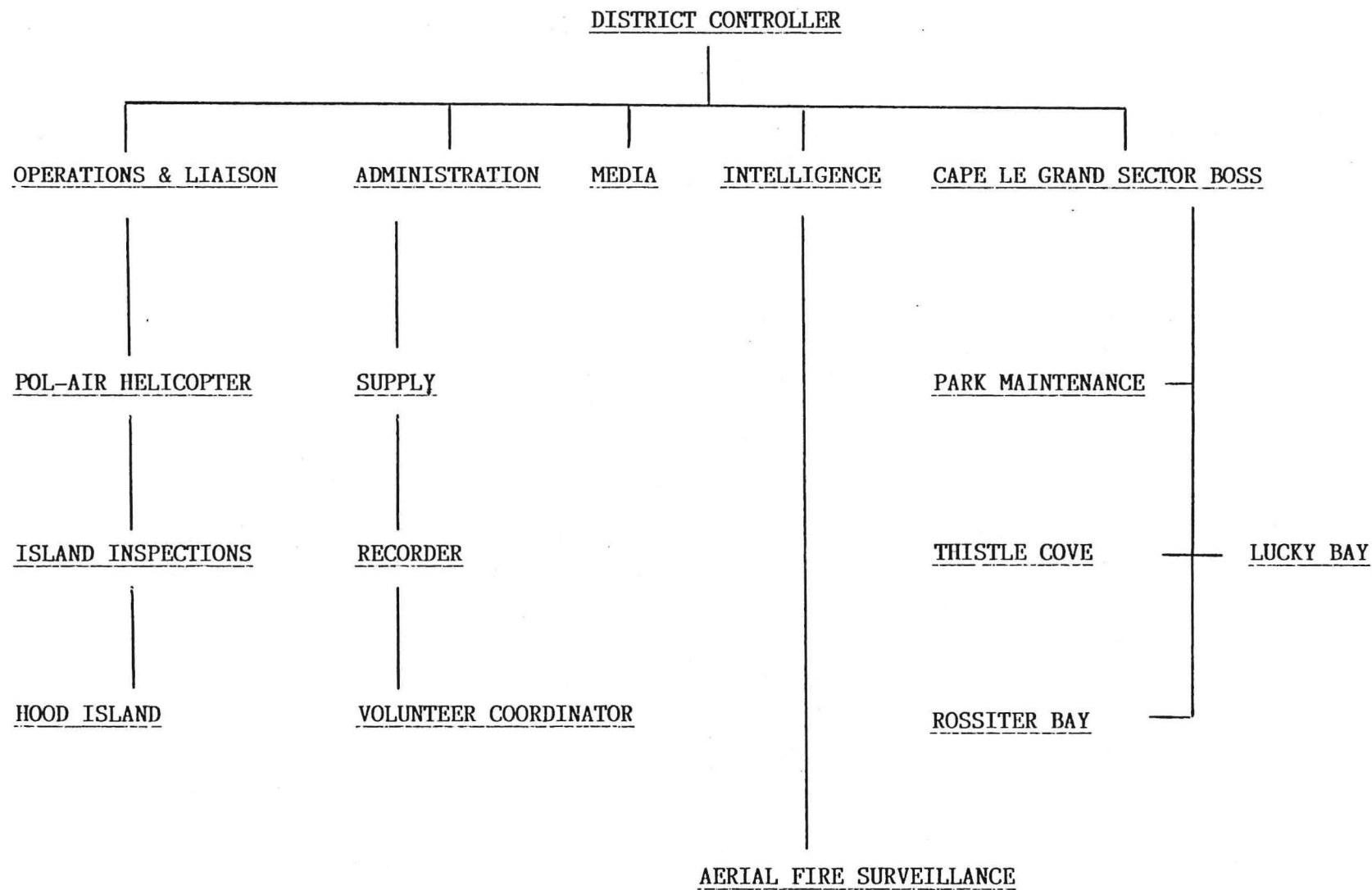
\* That adequate consideration be given, by all agencies, to the welfare and safety requirements of all personnel involved in a similar operation.

\* There may be a need in the future to screen seal handlers (in a similar operation) for tuberculosis after two sea lions (one at Busselton, the other at Albany) were found to have tuberculosis. This requirement needs to be further investigated.

\* All personnel directly involved in the handling or usage of chemicals in combatting an oil spill must be provided with suitable safety/ protective clothing. Furthermore, exposure to such chemicals should be recorded on a Chemical Exposure Record Sheet similar to that as used by CALM. Such a recording system should be adopted by the State Combat Committee for implementation in the field.

\* In future operations of this nature, the situation in regards to back-up support (eg. food, safety equipment, transportation, insurance cover, etc.) for all volunteers used, needs to be standardized amongst participating agencies. For the Sanko Harvest oil spill clean-up operation each agency involved, provided support to varying degrees. This resulted in some confusion by volunteers in regard to their support expectations. As such, the State Combat Committee should familiarize themselves with the requirements of each agency in regard to the use of volunteers and adopt suitable guidelines for use Statewide when using volunteers.

\* Onsite control for any specific clean-up operation should be delegated from the beginning by the Local Combat Committee Controller to the appropriate managing authority, whenever oil contamination has occurred at a site on land actively managed by a controlling agency (such as CALM or a Local Government Authority). The extensive resources available to these organisations allow for an immediate response capability not available to Marine and Harbours. An example of this occurred at Boulder Hill Cove, in Cape Le Grand National Park, where the initial response, supervision and communication was poor.



(27)

APPENDIX 2

\*TYPE OF OPERATION: BOOM SPRAY  
BACK PACK  
NOTCHING  
AERIAL SPRAY  
MIXING

DIVISION

CHEMICAL EXPOSURES

NAME	AGE	CHEMICAL USED	*TYPE OF OPERATION	DATE USED/ TOTAL TIME OF EXP. (HRS)	ENVIRONMENTAL CONDITIONS TEMPERATURE/WINDY	SIDE EFFECTS (COMPLINTS)



DISCUSSION ON CONSERVATION AND LAND MANAGEMENT PRESENTATION

Q. Chris SIMSPON - Environmental Protection Authority

Klaus, under the Wildlife and Conservation Act, what constitutes wildlife? How do you determine priorities to which ones you protect, is it marine mammals?

A. Klaus TIEDEMAN - CALM

Yes, it is all wildlife, land based animals and marine mammals, things like dolphins, seals and whales all come under protection of CALM's Wildlife and Conservation Act. In the instance like on Hood Island and in the Archipelago, the priority was to save the seals. Certainly, there was some bird life out there, however one of the fortunate things for CALM was that the Sea Warblers that breed on a lot of these Islands here, hadn't arrived as yet. So the only risk that we saw was to the New Zealand fur pup seals. There were some Australian sea lions also effected, but because of their size and that they weren't badly effected we opted not to do anything about them.

Q. Chris SIMPSON - Environmental Protection Authority

So what is exactly the definition of wildlife under your Act?.

A. Klaus TIEDEMAN - CALM

Well its marine mammals plus all land based fauna and birds which are protected except fish, which comes under the Fisheries Department.

Q. Cheryl BRADLEY - LEAF

Klaus, CALM has been funded to carry out a seal monitoring program subsequent to the pollution. Could you outline the objectives of the seal monitoring program and state whether the relative merits of intervention or non intervention are being investigated?

A. Klaus TIEDEMAN - CALM

I will call on Greg POBAR to answer that. I am not involved in that aspect of that program.

A. Greg POBAR - CALM

The first part of that question regarding the objectives of the monitoring program now centre on the population dynamics of the New Zealand fur seals in this area. During the operation we came upon a population of fur seals that was unknown, which was quite surprising considering that there have been many explorers and scientists that have travelled through this area. The ship's insurers are continuing to pay for the programs that we're doing at the moment.

We are still coming to these islands and we are still going out again in July and next February to look at the pups and in actual fact that is still being covered under the clean-up of the ship. The monies that we have received from the monitoring program is a completely separate project that will definately benefit the conservation and management of the New Zealand fur seals.

The second part of your question with regards to the intervention, that is an interesting question, we are considering it. Its a judgement of where do you draw the line, many pups and it's quite open that some pups would probably have died from our involvement on those islands. However keep in mind a lot more pups could die, if we weren't involved and didn't intervene. Where we draw the line is something we need to look at as we have seen instances on Hood Island where there is massive vegetation degregation because people have been walking up and down. Now do we do another trip there to check up on a few pups and totally destroy that slope and have a blow out or whatever, or do we leave the pups be knowing we have done the best we can. You know we have to balance things as far as possible. It's a question we are looking at and have become very conscious about in the last few weeks in our organisation.

A. Klaus TIEDEMAN - CALM

There has certainly been a lot of internal discussions and disagreements at the local level. With people like Nick GALES, Greg, Bernie HABLEY, Peter COLLINS and myself.

Q. Cheryl BRADLEY - LEAF

Have you done any studies on the toxicity levels on the chemicals used on the seals?

A. Klaus TIEDEMAN - CALM

Not at this stage, no.

Q. Stephen SCRIVEN - Australian Maritime Safety Authority

From previous experience from pollution incidents we have had, you mentioned that there were certain birds polluted and what have you. How many were endangered species and how many were common gulls?

A. Klaus TIEDEMAN

Of the ones that we retrieved they were all kinds of species.

Q. Cheryl BRADLEY - LEAF

The Department of Marine and Harbours have received a request from the Australian Martitime Safety Authority to provide them with information on the sensitivity of the area the Recherche Archipelago, has CALM been requested to provide such information.

A. Klaus TIEDEMAN - CALM

I believe that information has been passed onto Ian HARROD.

Q. Richard PURKISS - Marine and Harbours

Klaus, as far as I understand there has been no dead fish in this whole incident, is that true that not one dead fish has been sighted during the operation.

A. Klaus TIEDEMAN - CALM

I can't confirm that, its not CALM's area. I personally also heard that there were dead fish but never sighted any.

AUSTRALIAN CUSTOMS SERVICE

Presented by - Lance BLACK, Sub Collector of Customs, Esperance  
Aust. Customs Service

I was informed of the grounding by the ship's local agent - Dalgety Shipping at 0645 HRS. on 14 Feb 1991. My first duty was to prepare a summary of the incident for the collector of customs in Fremantle as he is responsible to report the matter to the consul concerned.

At 1400 hrs I departed Esperance on the "Sea Lion". Once onboard the "Sanko Harvest" I completed the inward check. Declarations showed that there were no narcotic or restricted drugs among the medicines and a check of the bond showed only a minor quantity of high revenue goods. I returned to Port at 2030 hrs.

I returned to the ship early P.M. on Friday. With sea conditions worsening Capt Ian HARROD ordered the evacuation of the vessel. The crew gathered all their personal belongings and transferred them to two waiting fishing boats. I gathered the twenty seaman's books and was requested by Capt. HARROD to secure and transport ashore all the charts, logs, ship's register and certificates that would be required by the D.O.T. investigator. I left the ship at 1630 hrs and reached Port two hours later on the fishing boat "Flying Fish". Onboard was a quarantine officer, twelve crew and the majority of the crew's possessions.

As the crew were booked into the Esperance Motor Hotel I had all the baggage transported there. Baggage inspection took place in the T.V. lounge upstairs. This task was made easier with the assistance of two quarantine officers. The inspection was completed by 2000 hrs with only a small amount of foodstuffs being held. Two sextants and one azimuth circle for the gyro compass were landed in the care of the Chief Officer. Duty and sales tax has since been paid on these goods.

Three officers from the customs remote area group in Fremantle arrived on 16/02/91. I placed one on the powercat "Doyen" and the other on "Sea Lion". Although the weather early was very rough, the conditions calmed down by 1100 hrs. With this in mind and the likelihood of many sightseers heading towards the ship I asked Radio Station 747 to broadcast a community call informing the public that access on the vessel was restricted and that no goods could be landed without customs approval. This call was repeated throughout the day at hourly intervals.

The two officers on "Sea Lion" were able to board the ship and gather up loose revenue goods. Late in the day the officer on "Doyen" had to order three men off the ship and warn another boat that was close to it.

On Sunday officers were placed on both boats again. I commenced immigration formalities for the fourteen crew booked to travel to Fremantle the following day. Throughout the day smallboats were met at Bandy Creek by uniformed officers.

When the ship broke up on Monday a trail of debris was floating towards Cape Le Grand. I despatched one officer on a boat to retrieve debris and sent the other two to Cape Le Grand, these officers liaised with CALM and then checked all beaches from Cape Le Grand to the east of Rossiter Bay. No goods from the wreck were located.

Immigration formalities were completed for the fourteen crew who left for Fremantle by bus. Interviews were given to the ABC and the "West Australian" stating customs requirements.

The first boat to return from the wreck was the "Melinda" at 1530 hrs. It had the two lifeboats in tow. The other boats returned throughout the evening but nothing further of significance was offloaded.

Officers were deployed in the same manner the following day. Again nothing was found on the beaches and the majority of floatsam was debris only. The only item of value landed was an inflatable six man raft. Immigration was finalised when the six crew departed that evening.

As there were no reports of goods ashore on Wednesday my team from Fremantle returned that day.

On Tuesday 26/02/91 the CALM Ranger at Stokes inlet rang to report that debris was washing ashore in his area. The following day quarantine officers and myself combed the beach at Stokes. To get there we were transported in the Ranger's dinghy. About three kms of beach were checked on foot. Some ration packs and a can of meat were held by quarantine. In the afternoon we checked Fanny Cove. Two medicine vials were handed to me by a person fishing there. Six kms of beach were checked on foot with all flammable articles being stowed in a utility. These goods were later burnt by the Ranger. Two containers of pills and some tablet bubble packs were found and later destroyed.

That evening Joe RIGGS of Torradup informed me that the Beach near his property was littered with debris. Accompanied by quarantine officers this beach was checked the following day. The only items of interest recovered were two pilot ladders. Both were about 12 mtrs long and were ashore at Margaret Cove. As they were both infested with borers they were destroyed. In another radio interview with the A.B.C I requested the public to deliver any goods from the wreck to me. I stressed the dangers of handling any flares or holding any unmarked containers of medicines.

The lifeboats and lifecraft from the wreck have been stored by the Esperance Port Authority. Recently they were donated by the insurers to the Shire Council. To finalise ownership I have completed the necessary customs entries.

In summary, the location of the wreck made it difficult for me to safeguard the community, but at the same time made it hard for the general public to souvenir goods. I found the response of agencies concerned and members of the community of great assistance to me in fulfilling my duties. In particular I am grateful to Marine and Harbours staff, Quarantine Officers, CALM Rangers and staff of the Local Media.

ESPERANCE PORT AUTHORITY

Presented by - Colin STEWART, General Manager, Esperance Port Authority

OVERVIEW OF INVOLVEMENT

The Esperance Port Authority's involvement can basically be broken into four:

1. The initial immediate response on the first days of the emergency.
2. Operating the dispersant spraying equipment on the tug and assistance to the helicopter operator.
3. Providing transport and supervision in the clean up operations in the inaccessible areas of Cape Le Grand.
4. General logistical support with the sending and storage of pollution equipment.

1. Immediate Response

The Port Authority immediately made available its National Plan pollution equipment consisting of pollution booms, dispersant and spraying equipment. Port Authority employees were provided to deploy and operate the equipment.

Diving equipment and personnel were made available to the salvage company.

Pollution booms were deployed around the vessel on the first two days.

2. Spraying Dispersant

Dispersant spraying commenced on the afternoon of day three when dispersant was sprayed into the hold of the vessel.

Spraying in earnest commenced on day five by which time the vessel had well and truly broken up.

Port Authority personnel were also involved in helicopter operations, particularly those concerned with the spraying of dispersants. Such involvement included tasks such as refuelling the helicopter and loading the dispersant spray bucket.

3. Clean Up Operation

The Port Authority provided vessels and personnel to transport workers to inaccessible areas of Cape Le Grand to clean up small inlets polluted with oil.

The Authority workforce also had the task of cleaning pollution booms and other oil contaminated equipment.



4. Logistical Support

The Port Authority provided a wide variety of logistical support including:

- (a) Storage of equipment and materials
- (b) Provision of equipment.
- (c) Unloading and re-loading of equipment and materials.
- (d) Secure compound for helicopters.

LESSONS LEARNT

- 1. Principally with the benefit of hindsight it seemed that there was an under-estimation of the magnitude of the problem which may have resulted in different emphasis on priorities. Perhaps planning for such similar incidents should in future be based on worse case scenarios rather than "having matters under control".
- 2. Booms were of little use once "normal" sea conditions developed
- 3. When booms are used there needs to be enough to completely encircle a vessel.
- 4. During the use of dispersants the workforce became aware, almost by accident, of the potential hazardous nature of the chemical. Prior to that time men had been literally saturated in dispersant.
- 5. Helicopter spraying seemed to those working from the tug to be of limited effect.
- 6. Persons planning day by day response seemed not to appreciate the importance of working with the weather at Esperance. Which means ensuring that sea work is planned for early in the day before the winds come in.
- 7. Importance of a well understood chain of command. Workforce felt at times that what seemed to be an obvious course of action was not carried out all for the want of somebody capable of making a decision.
- 8. Communication facilities need to be first class. At times people were working in isolated hazardous areas with no effective radio communication.

RECOMMENDATIONS

- 1. The immediate response is critical which should be predicated on the possibility of a worst case scenario.
- 2. Oil booms of a length capable of encircling a vessel should be on site in the port.

3. Persons involved in handling dispersants should be instructed in the hazardous nature of the chemicals. Safety data sheets need to be readily available.
4. Robust protective clothing and equipment including overalls, gloves and eye protection are essential.
5. A daily debriefing and planning session involving essential personnel.
6. A team leader approach with delegated responsibility utilising appropriately trained experts.
7. The need for regular training exercises involving the use of materials and equipment.
8. Examine the potential to make use of the equipment and personnel available within the armed services.

DISCUSSION ON ESPERANCE PORT AUTHORITY PRESENTATION

Q. Denis RAYNER - WASES

Colin, the oil booms you had weren't really suitable for rough sea conditions that is often experienced off shore, they were only suitable for in the bay area, is that correct.

A. Colin STEWART - Esperance Port Authority

I think that would be a fair comment, although on the first couple of days of the incident, we had very terrific weather in Esperance and the booms we had were okay and holding oil well for the first 36 hours, however when we experienced normal, rough conditions they very quickly ceased to be of any value.

Q. Denis RAYNER - WASES

Is there any benefit in getting more suitable booms in the future for this type of incident?

A. Colin STEWART - Esperance Port Authority

I think I'll hand that question over to David OLIVER, who would be more suitable to talk about types of pollution booms.

A. David OLIVER - Marine and Harbours

Yes, I'll answer that one Colin, Yes there are larger booms that are available. However the ones we used here are the most easily handled and used. Once you go into larger booms you have to use cranes to deploy them and you are talking about container sized systems, plus the fact that all booms suffer from the same limitations which is about 2 knots of current and I estimate about 15 knots of breeze. Once you start getting winds beyond that the strains and stresses that you get on them is astronomical - they just rip themselves apart. I believe booming can only be guaranteed to be effective in sheltered, inshore waters. In open sea conditions booming at it's best is marginal.

Q. David CLARKE - Australian Maritime Safety Authority

Can I just reinforce that point that the booming that was used on the Sanko Harvest was based in the Esperance Port Authority, really for harbour use. I wouldn't like to see a criticism of that particular equipment being used and I wouldn't like to see a criticism of the fact that a boom was used, anything which was available was brought into play at the time and it obviously wasn't the right sort of boom in that open sea condition.

A. Colin STEWART - Esperance Port Authority

I think the comment was that the amount of boom we had would have been used if we had more boom to put around the whole vessel.

A. Ron WEBB - Chairman

Perhaps if I could make a comment here and remind people that we are not having a witch hunt here, but any comment that is made, is made with a view to ensuring that future lessons can be learnt.

A. David CLARKE - Australian Maritime Safety Authority

Yes, I'm sure that if we all had Rolls Royces we would be very well off.

Q. Klaus TIEDEMAN - CALM

I have a comment about the communications there was problems initially at Boulder Bay and CALM did put a portable repeater at the top of Boulder Hill and it certainly improved operations. However we had 2 operations going at the same time, one at Mississippi Beach as well and because of the surface formation out there, although we had good communications at Boulder Bay, Seal Rock, Esperance and Hood Island we couldn't get any at Mississippi Bay. So if we're looking at a communications system we are looking at a fairly extensive system.

A. Colin STEWART - Esperance Port Authority

My only point was that we had a number of people working in what was dangerous conditions - with the potential of an accident and not being able to get any immediate emergency response.

A. Klaus TIEDEMAN - CALM

Yes, I agree with that, in fact it was brought to our attention by the casualties we had working in the area.

Q. Ralph BOWER - Esperance Port Authority

My question is to Richard PURKISS - we were very lucky that the Sanko Harvest sinking was outside the Port boundary, what would have happened if it was inside the Port boundary? Would that change the chain of responsibility.

A. Richard PURKISS - Marine and Harbours

Yes, if it happened within the Port boundaries then the responsibilities would be under direction of the Port Authority - who would instigate the pollution clean-up.

ESPERANCE SHIRE COUNCIL

Presented by - Chris COLYER, Shire Engineer, Esperance Shire Council

GENERAL MATTERS

1. It is Council's understanding that in the event of oil spills or "Pollution of the sea by oil", the prime responsibility of action lies with:
  - a) The administrative authority of a Port or Harbour when the spill is within that region.
  - b) The relevant State Government Authority when on Beaches and Foreshores. In the case of the Sanko Harvest the authority responsible was the Marine and Harbours Department.
2. In the event of oil spills, Council's role is thus assumed to be a service support role, particularly in the areas of provision of plant, labour and materials to carry out clean-up operations as directed by the responsible authority (Marine and Harbours).
3. Council and CALM are both responsible for various regions of the coastline. For land under the control of CALM, the Shire also assists them with the same service support role. For land controlled by Council, works are carried out at the direction of the responsible authority. In all cases Council works are to be fully reimbursed.
4. Council liaison with the responsible authority (Marine and Harbours) for works required to beaches under control of Council is to be with Council's Shire Engineer or Coastal Ranger.

Council's staff, being the Coastal Ranger and Shire Engineer, were very pleased with the co-ordination of the clean-up activities by the Marine and Harbours and a recent inspection of beaches by the Coastal Ranger has indicated very little visible contamination is remaining.

Works completed by the Shire in the Sanko Harvest incident were limited to the cleaning up of Lucky Bay beach using mechanical plant and to the organisation of volunteer workers to assist with cleaning of beaches between Wylie Bay and Eleven Mile Beach.

HEALTH DEPARTMENT MATTERS

Disposal

1. It is clear several areas along the Esperance Coastline need to be ratified for approval for large amounts (1000 - 5000 tonnes) of oil and/or oil affected material.

2. To this regard it is acknowledged that some investigations are already underway, including that by Council's Principal Environmental Health Officer where a wider use of Council's landfill site area is being sought for larger quantities of oil.
3. It must be stated that if a larger amount of oil was to be disposed of during the Sanko incident there would have been major problems.

It was very evident by questionable adverse reporting that matters are all the more difficult when trying to make the quick decision to respond to demands for disposal sites.

There was obviously no set approval mechanism and while assistance from the Environmental Protection Authority and the Department of Marine and Harbours was greatly appreciated, matters were far from simple.

4. It is strongly believed that disposal in second dune formations must be assessed as an alternative where guidelines are given - not general - but specific to the Esperance Coastline.

This way quick responses can be made so as not to delay clean-up operations.

#### LESSONS LEARNT

1. The procedures adopted by Marine and Harbours to carry out clean-up activities are poorly understood. Public expectations for action are high and ask for immediate action. It appears nature best cleans up spilled oil and unfortunately time is required.
2. A Liaison Officer must be appointed during any such incident where contact is made direct with the functional groups involved so that lines of communication and decision making procedures can be followed.
3. Such a person could be solely responsible for press releases to ensure accurate information is being given out as best as possible.



DISCUSSION ON ESPERANCE SHIRE COUNCIL PRESENTATION

Q. Cheryl BRADLEY - LEAF

Chris, I gather by your comments on using the sand dunes for disposal of oil, you are saying that you have not followed E.P.A.'s recommended guidelines for oil farming.

A. Chris COLYER - Esperance Shire

No, what I'm saying is that the secondary sand dune could have been used for oil farming which is a recognized technique for disposal of oils. In this particular incident the secondary sand dunes were within a known National Park boundary and it was Conservation and Land Management procedures that prohibited the disposal of the oil within the park. I'm referring to the oil that was removed from Lucky Bay.

Q. Cheryl BRADLEY - LEAF

In that case I assume that your choice at the site at Merivale and the second site at Wylie Bay in actual fact do follow E.P.A.'s guidelines.

A. Chris COLYER - Esperance Shire

The Wylie bay disposal for the Wylie Bay rubbish tip site does satisfy requirements for both the E.P.A and the Public Health, based on the individual applications to dispose there of. The Wylie Bay site was a site that was nominated by possibly the Marine and Harbours, along with the Consultant and was investigated by our Environmental Health Officer in relation with the Health Department and the E.P.A.

Q. Cheryl BRADLEY - LEAF

Does the Shire Council intend to follow through land farming techniques that have been accepted in the past.

A. Chris COLYER - Esperance Shire

We don't anticipate any more oil spills, so...

Q. Cheryl BRADLEY - LEAF

I mean with the mess thats out there, the fourty four gallon drums and plastic bags and stuff. That makes it pretty hard to aerate the soil as is recommended by the E.P.A.

A. Chris COLYER - Esperance Shire

You will find that a constant turning process of the oil will be carried out in the next 6 months and I think you have received correspondence from the Shire stating that.

A. Cheryl BRADLEY - LEAF

Not to date.

A. Chris COLYER - Esperance Shire

You actually wrote to the shire with a series of points.

A. Cheryl BRADLEY - LEAF

That's right.

A. Chris COLYER - Esperance Shire

I think the Principal Environmental Health Officer has addressed that matter where it will be turned over and covered between now and possibly Christmas.

A. Cheryl BRADLEY - LEAF

Thank you.

Q. David CLARKE - Aust. Maritime Safety Authority

I would just like to ask a question on the Shire Representative here. Does he consider that this is a really an insoluble situation where you cannot find a suitable site for the disposal of the oil. I mean you certainly seem to have some problems with that.

A. Chris COLYER - Esperance Shire

I think it's just the administrative role where you've got the Health Department and you've got the Environmental Protection Authority and you've got concerned citizens and there's got to be a joint balance between all those. We certainly didn't find it easy to come up with a quick site, to solve the problem. The easiest location we found in the short term was the Council Shire Pit, based on a fact that it had in place the Environmental Guidelines to monitor the break down of excess materials. Any other site involved along the process, now, could we have waited several months for an alternate location.

Q. David CLARKE - Aust. Maritime Safety Authority

I just want to make the point, Mr Chairman this seems to be very common on spills anywhere in the world. Its very difficult to find a site, suitable to dump this refuse, and really we should all be bending our minds to that, because its going to happen again, if not in the Esperance area it will happen somewhere else. I think every Shire and in fact all of us should be concerned with that. Its just not a problem that we can say that its not my responsibility, its going to happen and there is going to be a need to find a suitable location to dump this refuse.

A. Chris COLYER - Esperance Shire

I think certainly, some attempt should be made to define guidelines to give someone more of a chance to look for sites. Currently there are just no guidelines to assist you, its on individual applications. As I said that matter was handled by our Principal Environmental Health Officer who is unfortunately not here and won't be able to answer from that vein.

A. Ron WEBB - Chairman

That does sound like its matter that needs to be addressed by the State Government bodies responsible.

A. David OLIVER - Marine & Harbours

We are trying to take that matter on board.

A. Ron WEBB - Chairman

Right, thanks David and thank you Chris.

POLICE PRESENTATION

Presented by - Senior Sergeant Bill TODD, Officer in Charge, Esperance Police Station.

Police involvement was mainly in three areas.

1. Director WA State Emergency Service (Acting Chief Supt. Reg DRIFFEL at the time) is responsible for implementing the State Resources Plan to assist in events such as the Sanko Harvest incident. In this case the State Resources Plan was invoked to support the Control Authority for the incident the Department of Marine and Harbours.

Mr DRIFFEL was notified early on the morning of the grounding of the vessel by Marine and Harbours who had activated the State Pollution of the Sea and Inland Waters Plan. The response sought at that stage was minimal as it was initially considered that the Sanko Harvest would be freed from the reef and brought into Esperance for repairs. The Police/SES were only involved in a minor role from the State level.

2. The Local Police involvement was also minimal. Liaison contact was maintained between the Local Police, eg. Marine and Harbours, CALM, Port Authority, Customs, Shire, etc. The Officer in Charge advised the Kalgoorlie Police Regional Officer and the Police Operations Centre in Perth as events changed and when considered necessary.
3. The Police Airwing was involved in providing much needed local air transport by using their helicopter to ferry personnel to the islands and inaccessible areas along the coast, to assess pollution damage to seals and other wildlife and also to assess deposits of oil along the coastline for the clean-up operation. This resource proved to be invaluable to Marine and Harbours and CALM.

The liaison and co-operation between all of the responding personnel from the many organisations who assisted during the incident was pleasing to witness. The personnel performed their tasks (sometimes under adverse and trying conditions) most satisfactorily and in a professional manner.

LOCAL ENVIRONMENTAL ACTION FORUM

Presented by - Cheryl BRADLEY, Member, Local Environmental Action Forum.

By way of introduction to this summary of LEAF's participation in the Sanko Harvest operation may I point out that our organization has a legitimate interest in representing the people of Esperance at this forum. As long-time Esperance residents we are concerned not only with the preservation of the local environment but also, as in the case of the Sanko Harvest disaster, we are concerned that the local beaches and off-shore islands should be returned to their formerly pristine condition.

In spite of the negative connotations with which the world media has successfully imbued the word "Greenie", it is nevertheless a label which we proudly wear. Our hope is that the entire world population will one day come to realise that our most valuable common resource is the planet we share, and that the preservation of our environment must take precedence over all other considerations.

If we, the Local Environmental Action Forum, have one predominant complaint to register with regard to the handling of the Sanko Harvest incident, it is that throughout the entire operation the local environment - undoubtedly Esperance's single most valuable asset - was not treated with the respect it is due. At all times financial considerations dictated the action taken by all agencies involved at the local level.

Relegating the care of the environment to second place is not acceptable.

In the weeks preceding our attendance at this debrief, LEAF has submitted written questions to the Department of Marine and Harbours, The Department of Conservation and Land Management, The Environmental Protection Authority, The Fisheries Department and Esperance Shire Council. We are indebted to those agencies from whom we have thus far received a response.

Following is the overview of LEAF's participation in events as they occurred.

1. 14th February - LEAF President Ron TAYLOR contacted CALM to offer the assistance of LEAF members in a voluntary capacity.
2. Mr Taylor was requested by CALM Officer John WINTON to gather a list of names for the volunteer roster.
3. CALM then requested Mr TAYLOR to find volunteers able to participate in the seal rescue operation on Hood Island. LEAF members commenced work on Hood Island on the 18th February.
4. CALM then requested Mr TAYLOR to find volunteers able to participate in the search along almost 100 km of coastline for oiled wildlife. LEAF members and other volunteers scoured the coastline for three days.

5. CALM requested Mr TAYLOR to find volunteers able to participate in the seal rescue on Seal Rock. This operation commenced on the 21st February.
6. CALM requested Mr TAYLOR to assist in finding volunteers able to participate in hand-cleaning the beaches in Cape Le Grand National Park. This work was commenced by volunteers on Saturday the 23rd February.

I commend the preceding facts to the attention of anyone who has read the most recent edition of 'CALM NEWS'.

On Friday the 22nd February, CALM received a guarantee of funding to support the volunteer operation on the mainland. Subsequently, the volunteers were provided with food, gloves and cleaning agents, and their transport costs were met. (Prior to this only transport costs had been provided). CALM then assumed full responsibility for co-ordinating the volunteer roster.

7. LEAF appointed a sub-committee to investigate the consequences of the Sanko Harvest disaster.
8. The LEAF sub-committee hosted a public meeting in order to ascertain the main concerns of Esperance residents with regard to the grounding, subsequent pollution and clean-up operations.
9. LEAF submitted questions to several of the agencies represented here at the debrief.
10. Finally, our participation in this forum we regard as one more step in bringing to realization the stated aims of our organization.

I think it would be fair to say that everyone participating in this debrief believes that valuable lessons have been learned as a result of the grounding of the Sanko Harvest. In order to clearly identify the lessons we consider most important, LEAF has formulated the following list of recommendations:

In the situation where a volunteer workforce is required, our recommendations are:

1. That a co-ordinator of volunteers should be appointed immediately it is decided to call upon volunteer assistance.
2. That a headquarters for the volunteer workforce should be established.
3. That a clearly defined system of registration for volunteer workers should form part of the Combat Strategy.
4. That full insurance (against damage to or loss of property and personal accident claims) for volunteers should be incorporated in the registration procedures.
5. That the registration procedures should include details of the individual skills and expertise of the volunteers.
6. That the cost of maintaining the volunteer workforce should be met by the Fund established under the National Plan.



7. That a First Aid Officer should be seconded from normal employment to attend high risk situations for volunteers.

Other recommendations arising from the handling of the Sanko Harvest incident are:

1. That a local consultative committee should be established to provide input to the management of the incident.
2. That accurate, up-to-date information regarding the management of the incident should be made available on a daily basis to both the local consultative committee and the volunteer headquarters.
3. That the telephone number of the local consultative committee should be publicised to encourage local input to the management of the incident.

The following recommendations pertain to the information contained in the Western Australian State Pollution of the Sea and Inland Waters Plan.

1. That the authority with Prime Responsibility should be required to request the appointment of a Combat Authority. This request should be made immediately a disaster seems imminent.
2. That the Combat Authority should immediately appoint an On Scene Controller (O.S.C.).
3. The O.S.C. should have ultimate control of the incident, even when exercising control in co-operation with authorities such as Local Government and River Management Authorities.
4. That such an O.S.C should be drawn from a pool of trained personnel representing the Departments of Transport and Communications, Marine and Harbours and Mines.
5. That such O.S.C's should be fully conversant with the provisions of the State Pollution Plan in order to be in a position to effect the speediest possible response to a (pending) disaster.
6. That the authority of the O.S.C should be recognized by all other authorities represented in the State Pollution Plan.

LOCAL ENVIRONMENTAL ACTION FORUM

Q. Malcolm MACKENZIE - Mackenzie's Tug Service

Cheryl, would you have an estimation of how many hours the LEAF volunteers have put into the whole exercise?

A. Cheryl BRADLEY - LEAF

It was weeks.

Q. Malcolm MACKENZIE - Mackenzie's Tug Service

I was interested, on a figure of how many man hours you thought that your members had put in. Because I think its fairly relevant because, obviously it would be thousands of hours.

A. Cheryl BRADLEY - LEAF

It would be thousands of hours. Thats all I can say, there has been no estimate made.

Q. Chris SIMPSON - Environmental Protection Authority

It seems to me that a lot of the problems that occurred at the time were largely as a result of the media setting the agenda. They can only do that when the public's perceptions are false. Does your organisation have any role in educating the Community of Esperance to the correct priorities in regards to effects of the impacts of these sorts of accidents on the environment?

Q. Cheryl BRADLEY - LEAF

Does our organisation have any....., what did you say?

Q. Chris SIMPSON - Environmental Protection Authority

Role, do you see that as one of your roles to try and address this problem within your agenda, based on the fact that the community don't really know what the priorities are in relation to environmental impacts.

Cheryl BRADLEY - LEAF

No, I wouldn't say we did have that listed as one of our priorities. We had, in actual fact, intended to address the problem of the media because it was obviously a real problem in the Sanko Harvest incident. However, after reading the State Plan its obvious that the media is not under estimated by the Combat Committee and that the problems which arose from the Local incident would obviously have to be addressed with regard to handling of the media.

Q. Chris SIMPSON - Environmental Protection Authority

But it is largely a community education exercise. Do you see yourself as having any role in that regard?

A. Cheryl BRADLEY - LEAF

In this particular incident perhaps yes. The Local Shire Council was seen to be not very supportive of Esperance residents concerns on the Local scene and, for that reason we hosted a public meeting to talk to the people of Esperance, because that had not been forthcoming from the Shire. Thats why there is a recommendation in here to the effect that a Local Consultant of Committee should be established and that the Local Authority should be represented on that, if not in charge of that Committee. Because I think they have the responsibility for educating the public in that way ought to rest with the Shire.

A. Chris SIMPSON - Environmental Protection Authority

Well, I suggest that it also rests with groups like yourself, who are active in this area, and thats an appropriate role for conservation action groups. An important one.

A. Cheryl BRADLEY - LEAF

We have only taken to report back to the public at subsequent proceedings.

Q. Klaus TIEDEMAN - CALM

Mr Chairman, I just want to reassure that we do have 350 names on the register. I think one of the things you will find is once we have got a certain number of people and those people have got the expertise, having spent two or three days on the island. It seems foolish for us to turn around and get new volunteers on a daily basis. Because we have to re-kit them and re-train them. Certainly in a lot of situations pressure is continuously applied to us all. Varied people saying to us, look we want to continue on, we want to continue on. In that case they say, we want to help, you provide the resources and request to have our way. We want to help and we will prepared to accept assistants.

Q. Cheryl BRADLEY - LEAF

Point taken. I don't see how I stand corrected.

A. Klaus TIEDEMAN - CALM

You've given me a question that CALM is always using LEAF rather than trying to use more volunteers. I think there came a stage where we really had enough people on the ground to do the job.

A. Cheryl BRADLEY - LEAF

That's right, I've referred to that.

Q. David OLIVER - Department of Marine and Harbours

Perhaps, Mr Chairman, on that could I just make an observation. Cheryl, one of the big things has come through in the training I've done liaising with other spills for instance.

Is that the hardest problem with volunteers is getting a co-ordinated effort and I think the proposals that you put forward are the only way it can be done. But the biggest problem, and it has come over time and time again in other spills, is keeping that effort in an organised and focused direction, and that there is a tendency to be a bit wary of getting too involved in volunteers. Its very hard to keep that focus going along a constructive path.

A. Cheryl BRADLEY - LEAF

Thats exactly why we made reference to the fact that individual skills and expertise of volunteers ought to be taken into consideration so that they can be taken, so they can be allowed to have a bit of self direction in the operation from within their ranks rather than "do the donkey work" if you like.

A. David OLIVER - Marine and Harbours

I think your ideas were excellent.

A. Ron WEBB - Chairman

In fact that the risk of not being as seen impartial. I was tempted and will now since David's taken up the issue. I also found your recommendations on that score very worth while Cheryl. What I would perhaps like you to do is contact CALM before hand. Perhaps thats the thing to do, organize the thing against any eventuality in future rather than wait for the event. We should "never get caught with our pants down" if we can help it. Thats part of the whole aim of an exercise like this. To get people to liaise together to make sure.

A. Ron TAYLOR - LEAF

We've already approached CALM in that respect, and there are things moving in that line.

ENVIRONMENTAL PROTECTION AUTHORITY

Presented by - Dr Chris SIMPSON, Environmental Protection Authority

The Environmental Protection Authority is represented on the State Combat Committee and along with the Departments of CALM and Fisheries provides advice to the Committee regarding the impact of oil spills on the marine environment. This advice includes determining the relative conservation value of the marine resources in the area of likely effect and when and how dispersants are used.

The environmental impacts of oil spills on the marine environment can be grouped into three broad categories:

- a. HEALTH
  - (i) risks to human life
  - (ii) risks to human health
- b. ECOLOGICAL
  - (iii) maintenance of primary production  
(eg protection of marine plants)
  - (iv) preservation of endangered wildlife
  - (v) preservation of fauna
- c. AESTHETIC
  - (vi) protection of social amenity (eg fouling of beaches)

In determining management priorities in relation to the environmental impacts of oil spills, the EPA considers these issues should be addressed in the order outlined above.

I will now outline the approach of EPA in relation to the grounding and sinking of the Sanko Harvest. As CALM and the Fisheries Department are responsible for the protection of wildlife and management of fish stocks under their respective Acts, I will confine my comments to the areas of major concern to EPA. These were related primarily to the short and long-term effects on the marine plants of both the oil and the fertiliser that was split when the Sanko Harvest sank and broke up.

Following notification by the DMH on 14 February 1991 that a ship was grounded on a reef off Esperance and that some jettisoning of the fertiliser cargo would probably be required to refloat the ship, the EPA gave approval for this to be undertaken provided there were no other means to save the ship. By Friday 15 February, the situation had deteriorated to the extent that the ship was likely to be totally lost and the 31,000 tonnes of fertiliser and 700 tonnes of oil would wash into the ocean. With this prospect in view, the EPA commissioned Kinhill Engineers to undertake a preliminary assessment of the marine impacts derived from the wreck of the Sanko Harvest.

This assessment focussed on determining whether any short-term toxicity effects of both the oil and/or the fertiliser had occurred to the surrounding marine communities and the effect of these spillages on water quality parameters. In addition Kinhills were asked to assess the usefulness of future long-term monitoring. The results of the survey indicated that there were no lethal or sub-lethal effects of the oil pollution on local marine communities. In addition, hydrocarbons could not be detected in tainting tests in abalone collected from Hood Island. As a result of the fertiliser spillage nutrient (nitrogen and phosphorus) concentrations in the water around the ship were orders of magnitude higher than background. Further away from the ship these levels decreased sharply, particularly nitrogen concentrations. This was interpreted to be the result of dispersion and particularly in the case of nitrogen, to uptake by phytoplankton. This latter conclusion was confirmed by measured increases in chlorophyll concentration in the water which was an index of phytoplankton abundance. Seawater collected in the vicinity of the wreck was tested for heavy metals and flouride and showed no elevation of these substances. Toxicity effects of the fertiliser were not observed.

The report also pointed out that, in general, long-term monitoring of the effects of the sinking of the Sanko Harvest would not be useful because of the lack of baseline data in terms of community composition and natural variability.

What can we learn from accidents like from the Sanko Harvest in relation to the effects on the marine environment? The major lesson is that without baseline data long-term effects cannot be determined. This situation is obviously unsatisfactory and should be addressed urgently.



ENVIRONMENTAL PROTECTION AUTHORITY

Q. Greg POBAR - CALM

Chris, the State Combat Plan mentioned with regards to Environmental liaison and Environmental advice that being under Authority such as Fisheries, CALM, etc. Probably on some occasions, but possibly not on this occasion, but on some occasions, the need to speak to an Authority such as Environmental Protection Authority or to the Combat Committee in this case, that didn't occur. Could you probably indicate why that didn't occur and could you see it occurring in the future?

A. Chris SIMPSON - Environmental Protection Authority

As I say its basically three issues here as far as we are concerned, or two issues, two broad issues embracing three aspects of the environment. The health and the aesthetic we can disregard, because the Shire and CALM are looking after that. Then we can come to the ecological, and parts of the ecological three components. Wildlife, CALM and Fisheries are looking after that. As I say the habitat maintenance which we are mainly concerned with long term ecologically impacts that interruption of life support processes in this Marine environment. There is no way we can detect what the effect of that shipping accident is without any information that I said was missing. So on that basis, after this survey, and we don't believe there are any major impacts because of the open nature of that coast and the flushing etc. But what what I'm saying is there is no way we can stand here and definately say there have been no long term impacts.

Q. Greg POBAR - CALM

Thats no problem, I was talking about the operational role of the E.P.A.

A. Chris SIMPSON - Environmental Protection Authority

The E.P.A's role in the State Combat Committee is to provide advice and so I say we had a separate role and that is the role that is not filled by other organizations which takes care of certain parts of the environment and I believe we did that. We stopped, we could have come and followed up the survey six months later. Scientifically it would have been totally meaningless and until we redress that information deficeincy, this situation will continue. We will never be able to look at long term impacts in areas that aren't described scientifically.

Q. Rob STEWART - LEAF

In view of your comments, now will E.P.A be recommending that some sort of long term study of the marine habitat of Western Australia be undertaken, so that we have got some sort of baseline for future accidents.

A. Chris SIMPSON - Environmental Protection Authority

That exact objective is one of the State Combat Committee's objectives. I think that is a fair enough statement issued to develop a resource atlas.

A. David OLIVER - Marine and Harbours

We are developing a resource atlas where, we are looking at doing a pilot study using G.I.S technology thats computerized based, rather than do paper atalses. As for the actual research that goes into it, no, we don't have the funding to do that. Thats like everything else, everyone would love to see those things go, but its well beyond the resources of the State Combat Committee, or I believe the National Plan to fund that type of research. Its something which has to come in through a whole variety of areas and fed in. Thats the idea of going to this coastal atlas, because we will look at a way of trying to pull all the information across an enormous range of bodies so that we can build up some form of ground reference. But we don't have the funding as such to go out and do that research.

A. Chris SIMPSON - E.P.A

On that point, E.P.A. is persuing that with some vigor. As is the other AMSA (Australian Marine Science Association), which in it's annual general meeting last year, raised both of those issues. That is the deficeincy of resource information in Western Australia and the deficeincy process related information. If there are sea grasses there and fertilizers there, whats the connection between fertilizers in the water and sea grass loss. The process information there is also missing. So there are moves underfoot to try and digest that information, but as you can imagine its a monumental task.

Q. Rob STEWART - LEAF

So is there any time frame on that sort of work?

A. Chris SIMPSON - Environmental Protection Authority

I think we would be looking at perhaps 10 - 20 years. Well, put it like this, we have a major accident, say an oil well blows out or whatever in this State. Apart from absolutely catastrophic effects at the time, there is no way we can differentiate the effects caused by that over the long term and the natural variation. We all know that the natural environment varies greatly. That is the major issue, and we are attempting to address that and we would probably need 20 years monitoring before we sorted out the natural variation.

FISHERIES DEPARTMENT

Presented by - Howard JONES, Research Scientist, Fisheries Department.

It is considered unlikely that the fertilizer spill would have had anything but a localised effect on marine resources in the vicinity of the wreck site. The bulk of the cargo was di'ammonium phosphate which is extremely soluble. The ammonium component would have existed principally as non-toxic ammonium ions in solution in the sea water. At the temperature, salinity and pH values present only a small percentage would have existed in the potentially toxic ammonia form. The phosphate component is non-toxic.

The fertilizer would have increased the nutrient supply of the waters and this should have caused increased concentrations of phytoplankton. Since the water movements that exist in that part of the coast would have distributed the phytoplankton over large areas and there is no continuous input of nutrients or eutrophic effects on seagrasses or oxygen levels of the type seen years ago in Cockburn Sound would have occurred.

The oil would have been more likely to come into contact with species at the surface of the sea than lower down. It is thus not expected that Greenlip and Brownlip abalone, scallops and rock lobsters would have been affected. Roe's abalone close to oil-impacted beaches and pelagic fish species could have had contact with the oil. So far, no reports of dead fish at sea, fish washed up on beaches, dead abalone, abalone scars on rocks or tainting of fish species have been received by the Department. Neither have there been reports of damage to seaweed or seagrass fish habitats.

While sub-lethal long term effects of the oil on fisheries resources cannot be discounted it is not feasible to set up a research programme to examine this aspect.

The consultants hired by the EPA to examine the effects of the spill carried out chemical analysis of the waters and removed various species for later examination. High concentrations of heavy metals were not found in the waters around the wreck site and thus neither short term nor long term contamination of fish species from any trace metals in the fertilizer would be expected to occur. Greenlip abalone collected from nearby Hood Island showed no evidence of tainting by hydrocarbons.

Four months after the incident there are still no indications that the local fisheries have been adversely affected by the spilled fertilizer and oil.

FISHERIES DEPARTMENT

Q. Denis RAYNER - SES

Howard, your organisation was concerned (as reported in the media) that there was fish, herring I believe, handed into the Local Fisheries Officer. These fish were damaged and it was reported that tests were being carried out on them - what were the results?

A. Howard JONES - Fisheries Department

A few reports were received by Gerry SEGERS about damaged fish. The fish handed in were damaged by bird strikes, this was very clear by the arrows on them. There was bacterial contamination, the bacteria that was there was the sort that come from the birds beak not from the sea. This is the type of situation where something was happening, people were very aware afterwards, its probably something that happens very frequently. Because its after the Sanko Harvest incident, is it connected with it - the answer is obviously no, its not.

Q. Rob STEWART - LEAF

I'm a bit concerned that yourselves like the Environmental Protection Authority it limited by the fact that you have no real active role that you can take in these circumstances and, I'm wondering whether you couldn't look at formulating at least the sort of targets that you can chase up similar instances, like this one takes place. In other words you can, obviously monitor the whole system down here because its so fast and its such a complicated system, but if there was perhaps some target species, or some target areas that might indicate early warnings, much like the miners, when there in there canary cages down below, have some sort of warning when the airs going foul. If there isn't some similar sort of indicators that we can look for in the ocean down here that will give us an idea and hopefully a course of action. Such incidences as Sanko Harvest happen again which I can believe will over a course of time.

A. Howard JONES - Fisheries Department

The most obvious is death of fish and I tell you something that really is if you haven't got that then I'm not sure what you look for. Bearing in mind that theres going to be Environmental variations anyway and we haven't got any baselines to go by. I don't know what sort of experimental results we could actually achieve which would tell us something very obvious like death of fish basically or abalone falling off rocks.

Q. Chris SIMPSON - Environmental Protection Authority

I mean it really requires a systematic long term programme to get that sort of information where your saying this is whats there and this is how its varied naturally and thats the only way you can then say we've got something thats outside the natural variation and happens to co-incide with the sinking of the ship.

We think there is a cause and effect here. Until you have got that you've got no hope and that's very difficult, I mean if there were chronic spills of nutrients off here. Well there are ways you can do that. You can put for example, artificial sea grass in to see if sea grass grows off here, and if there is a nutrient enrichment in those waters, the algae that will grow on the leaves of sea grass, will grow on artificial sea grass and then you can compare that with areas where the water isn't nutrient enriched. But the chances of chronic nutrients spills on any of these fertilizer ships as I understand it, are fairly rare and events like these even rarer and so rather than target specific type of accidents, your money is much better spent doing systematic work, rather than sorting it out like that.

A. Howard JONES - Fisheries

Actually I think probably putting it very crudely in terms with the Commercial Fisherman. Eventually if you thought there had been some destruction of fish species in two or three years through sub defects now you would have a very good case if you wanted to get any recompense for this and, there is no way I think we could ever do that from results which we will obtain. Because we really haven't got a decent base from which we will work from. So I mean crudely any attempt of money rather than just the Environment for Commercial Fisherman this would not do them a lot of good at all. It would in fact waste perhaps a lot of resources and it might be better directed elsewhere.

Q. Rob STEWART - LEAF

Well just to follow that up. We can this effort best directed pursuing that we've got very limited resources and very limited ability to research what we've got here. The way I'm looking at it at the moment I can't see anything being any different next time. Well from what Mr SIMPSON has already told us. That a good ten years before we've even got any ideas so is that what you're looking at even in the event of another accident.?

A. Howard JONES - Fisheries

I think it's a very long term slow process and the reason for this G.I.S. survey that's being done, is you actually updated that as you go along. Slowly the information accumulates. I think especially in these sorts of areas with a massive coastline and you've got limited number of people to work on it, you're just going to take a very long time. I think accidents like this is perhaps stimulating and make you think about it a bit more before doing it, which is perhaps at their value.

Q. Michael WAITE - CALM

What we've got here is that everyone realizes that we need more knowledge, but we also realize what a vast coastline we've got. So what the Combat Committee is doing is setting up a computer base, where as the information becomes available it gets plugged into that base and then over time that body of information gets better and the sort of information that will be plugged in initially is work that, for instance E.P.A. may have done in the Albany area.



They have already got some baseline stuff there so that will get plugged in. When a new exploration licence is granted in the North West Shelf area for a new oil well or something. The oil companies are required to do an oil spill contingency plan and a lot of background information is also gathered before they start. That sort of information will also be plugged in and then over time the gaps will start to get filled in. Also with information being gathered by oil companies in the process of them doing your oil exploration. You also find that the areas in where the information is being gathered the most is also the areas where the oil companies are, and the oil exploration, the oil tankers and that sort of thing are more likely to be, Its very unlikely, I know it happened, but its very unlikely for an oil spill, if you were going to pick the next one, before the Sanko Harvest no-one really would have picked this one. It was much more likely to be in the North West Shelf area.

A. Rob STEWART - LEAF

I understand your statement about the G.I.S. system. It occurred to me that at the moment there is, like recently, theres been sensmic surveys going on in the Australian Bight for a well exploration. I'm not sure how far thats proceeding, but it would seem to me that before people were allowed to exploit that oil resource out there it should be at least a baseline data understood across the Marine Environment out there, before they are allowed to go ahead with that sort of exploration. That might be one way we can fund and expand our knowledge if we made that sort of guideline down in the future, people using the resource should at least understand what there using so that we can best protect it rather than have this situation where we wait for it to go wrong before we try and fix it and then don't know what where trying to fix because we never looked at it before we got there.

Q. Michael WAITE - CALM

That one of the arguments with the Combat Committee at the moment. Although that baseline data thats being collected at the moment is very precise and specific and with such a huge coastline theres alot of gap, but you have to start somewhere.

A. Rob STEWART - LEAF

Well, perhaps that could be a recommendation to tell your committee. That any commercial involvement on our marine resources should carry responsibility for some input into the research of the baseline marine resources in that area, so that we don't have people in there exploiting it before they know what their exploiting basically.



C.R. COX & ASSOCIATES

Presented by - Fred de ROOY, Surveyor

M.V. "Sanko Harvest" was a vessel built in May 1985 at Mitsubishi Heavy Industries Ltd, Shimonoseki, Japan.

She was a bulk carrier with five (5) self trimming holds. Four (4) cranes each of S.W.L. 25 tonnes were fitted between the hatches. All with two (2) radars and imarsat communication system.

The vessel grounded at 0320 hrs on 14th February 1991. At 0700 hrs on the same day we were requested to attend. As the regular scheduled flight had left Perth we chartered a plane and with a diver, from Franmarine Services, arrived at Esperance at 1400 hrs.

Meanwhile in Japan, a committee was set up. This committee consisted of Marine & Salvage experts. The master was in constant touch with the owner's agents in Tokyo and Sydney.

Once the event of damage was known salvage personnel were engaged and a salvage master was sent from the Eastern States to be on board at 2248 hrs. Divers were engaged on 14th and 15th February 1991 to determine the following:

- (i) Position of vessel in relation to the reef.
- (ii) Extent of damage.
- (iii) Action required to refloat and salvage the vessel.
- (iv) Ways and means to minimise pollution.

On 15th February 1991 enquiries were made to determine the availability of equipment in Esperance and surrounding districts.

On 15th February 1991 at 1130 hrs additional salvage personnel boarded the vessel. Measurements of air pipe flanges were taken to determine the size of pumps required to discharge the oil from the vessel.

Unfortunately the vessel's stability deteriorated rapidly. This can be gauged by the sudden change of list. Till 1100 hrs on 15th February 1991 the vessel was listed to port side, i.e. to the side in which the reef was located. However, by 1600 hrs the list had changed to 1 degree starboard. This change of list meant that the vessel could now slide off the reef and sink into deeper side. By 1630 hrs the list had increased to 2 degrees starboard. In a joint decision with the Salvage Master, Harbour Master and owners evacuation of the vessel was commenced at 1645 hrs.

Prior to evacuation all possible precautions were taken to prevent pollution. We were very fortunate that at the time of casualty, during and after evacuation no human loss of life or injuries took place.

Owners representative Mr SENSUI, Technical Superintendent Mr YAMADA and a Salvage Master were in attendance at Esperance from 16th February 1991.

From day one the owners were very conscious of the threat to the environment. Enquiries at all times were made to salvage the cargo and remove bunkers from the vessel. From these enquiries it was determined that the possibilities were:

- (i) Fuel from engine room tanks could be pumped by the ship's equipment.
- (ii) Submersible pumps were required to pump oil from the double bottom tanks no. 3 and 4.
- (iii) Barge/Tug with a capacity of minimum 800 tonnes was required.
- (iv) In addition waste disposal of this or partial quantity was required in case the oil/water mixture exceeded the estimated quantities.
- (v) To enable any vessel to be stationed on the weather side of M.V. "Sanko Harvest" it was necessary for the off take vessel to have four (4) point mooring system.
- (vi) Mobilisation time for a barge with the required equipment was estimated to be one (1) week in addition the travelling time was 4 - 5 days.

After the evacuation of vessel at 1645 hrs on 15th February 1991 the vessel, with the prevailing winds/seas, was expected to sink sometime on the night of 15th or early a.m. 16th February 1991. Unknown to all the wind direction changed and the vessel stayed afloat, though its structure was deteriorating, till the 18th a.m. Immediately Local Fisherman were engaged to pick up debris floating from the wreck.

On 18th a.m. a salvage expert, Mr Ian LOCKLEY, who was involved in the removal of oil from the wreck of "Mikhail Lementov", was put on stand by. Daily reports of the position of the wreck, oil/cargo pollution were transmitted to vessel's owners and insurers. The P & I Club. ie. Messrs Assurance Foreign Gard were actively involved in all decision making and we are pleased to say that instant approval for costs were obtained over the phone.

Ian LOCKLEY arrived at Esperance on 20th February 1991 and he immediately looked at the possibility of oil removal from the vessel. Commander Terry Hayes, an Environmental Consultant with experience in pollution control and clean up was flown into Esperance on 21st February 1991. The owners and insurers of the vessel were at all times planning ahead, ie. all avenues of removal and control of oil were explored.

Ian LOCKLEY, Capt. HAYES and ourselves worked closely with the monitoring of the beaches. Local State and Federal Authorities in the clean up and E.P.A. appointed Kinhill and Associates to monitor the effects of fertilizer and oil on the environment.

From the 16th February 1991 onwards samples of water were obtained to determine the pollution caused by the cargo/oil. In addition Messrs Leprovost Environmental Consultants were retained to provide an independent assessment and review all reported results.

Monitoring of the oil pollution effects was continued till 22nd April 1991. We are extremely pleased by the inter-departmental co-operation and in the swift manner with which the Governmental Agencies responded.

We take this opportunity to thank all the departments and their employees for their efforts. We are grateful and thankful to the people of Esperance for their outstanding contribution in assisting of the clean-up operations. The efforts of the numerous volunteers and school children were appreciated.

We are also pleased to state that as a result of island inspection a colony of seals, which was previous unknown to mankind, was found on the "Lybkie Island". This consists of 91 cows and 163 pups.

C.R. COX & ASSOCIATES

Q. David OLIVER - Marine and Harbours

Fred, could you possibly inform us where you think the costs are and how many bills been paid, and what their total would be now?

A. Fred de ROOY - C.R. Cox & Assoc.

The estimate cost up to date, approximately to be approaching \$1.5 million.

Q. Malcolm MACKENZIE - Mackenzie's Tug Service

Just a comment I would like to make. Its not directly to Cox & Assoc, or anything like that. Its in relation to chartering of vessels in any of these sorts of crisis. As in our waters here we have two types of licenced vessels, because the locality of the shipping is outside of the harbour limits and therefore you require a different licence. I'm talking about boats that are licenced to carry passengers and as such you have a boat that is licenced to go out thirty miles offshore. Of course for that boat to be licenced for that it must have different surveying equipment and different life saving equipment of course. The boats are of a generally much higher standard, now what happens in these situations and it did happen, but in this situation is that the Marine and Harbours can come in and they can waver these rules, or bend those rules, which is fair enough under those circumstances, but what I'm saying is that in future it hasn't necessarily happenend in this case, but in the future there is the chance, where you'll get a conflict between boats that are licenced to go into areas as such and boats that aren't licenced to go into areas as such. When you come in and give other boats that right to go into that area, immediately whoever is employing them once they get down to the nitty gritty of looking at changes and the boat that is licenced to go into those waters. He obviously is going to want to charge a lot more because his is the boat that is already licenced to go out, and if they get a free choice, obviously they would take the cheaper boat. So therefore the people who are controlling the control of the boats, should keep in mind the fact that its only through the efforts of the people who have gone to the trouble to have licenced boats to go into that area that they have invested good money and therefore rightly so they should be able to charge more.

Q. Cheryl BRADLEY - LEAF

Did the company you represent Fred have any role to play in the selection of the sites where the oil was dumped and the oil and sand was dumped.

A. Fred de ROOY - C.R. Cox & Assoc.

We can make suggestions to the Local Authorities on sites, but the approval of the sites of course have to come from the State and Federal bodies that govern the area.

Q. Cheryl BRADLEY - LEAF

In other words your saying that some State Authority has actually approved the Merivale and Wylie Bay sites?

A. Fred de ROOY - C.R. Cox & Assoc.

Yes, that is correct.

Q. Klaus TIEDEMAN - CALM

Just a question based on some media information, its directed at you and also the Shire. Just curious in regard to Tourism. There was talk about compensation at one stage, the Shire was talking about compensation for missing out on tourism. Has anything developed along those lines. Also I suppose can it be demonstrated that there was a loss of tourism.

A. Fred de ROOY - C.R. Cox & Assoc.

Can it be demonstrated that there was a loss of tourism. I don't know, that will have to be demonstrated. In addition I take this opportunity to announce from the insurance they want to say that in appreciation of the Community efforts, we are pleased to announce that the Insurers have promised to donate a sum of \$25,000 to the Shire of Esperance. These funds may be utilized by the Shire to promote Esperance and/or fund community based projects for people of the Region.

AUSTRALIAN MARITIME SAFETY AUTHORITY

"SANKO HARVEST" - OIL SPILL RESPONSE

Background to Australian Oil Spill Response Capability.

The Australian National Plan to combat the pollution of the sea by oil was instituted following the grounding of the "Oceanic Grandeur" in the Torres Straits in 1970. In addressing the pollution problem which arose, marine authorities clearly recognised that for successful management of marine oil spills there would need to be a clear division of responsibility between the major participants, namely the Commonwealth and the States. In September 1971, Commonwealth and State Ministers for Transport agreed on a basis division of responsibility which, although varying between States, generally provided for the Commonwealth to accept responsibility for pollution on the high seas and the State marine authority for the territorial seas. The Ministers also agreed to the introduction of a levy on ships for ongoing funding of materials and equipment and for training personnel in combating marine oil spills.

The National Plan has been in operation since 1973. Initially, the Commonwealth provided \$1 million to establish Combat equipment stock piles at major shipping centres. Subsequently finances from the levy have been utilised for maintenance and upgrading the Australian oil spill response capability.

The financial basis of the Plan is founded on the policy that the polluter should pay the costs of the clean up. The Commonwealth and States have introduced legislation which provides for heavy penalties against those responsible for oil spills from ships. In view of the increasing costs of oil spill clean up, attention is presently being focused on cost recovery measures.

In Western Australia, the organisation established to combat oil spills is the State Combat Committee consisting of representatives from the Department of Marine and Harbours, the Fremantle Port Authority and Commonwealth interests being represented by the Australian Maritime Authority (AMSA). Under the National Plan arrangements, responsibility for combating oil spills is shared

- within a port or harbour by the administering authority controlling the port.
- on beaches, foreshores and in the Western Australian coastal waters by the Department of Marine and Harbours, and
- on the high seas by the AMSA.

The State Committee is primarily responsible for developing contingency plans for providing advice and support to the Combat authority on the occasion of a pollution incident. The Chairmanship of the State Committee generally rests with the Department of Marine and Harbours but during an incident reverts to the authority having prime responsibility for the area concerned.



The State Committee is represented on a national body which oversees policy for Australian maritime oil spill combat capability. The Committee has access to resources located in ports within the State. It can call upon those controlled by the AMSA central marine pollution cell based in Canberra and can also obtain assistance from industry controlled resources.

In addition to its responsibilities regarding marine oil pollution, AMSA is primarily responsible for the administration of the safety provisions of the Commonwealth Navigation Act. AMSA also operates the Australian ship reporting system and the Maritime Rescue Co-ordination Centre (MRCC) (formerly the Federal Sea Safety Centre) which provides Australia's contribution to Maritime Search and Rescue in waters surrounding the Australian coast and extending in respect to the West Australian coastline halfway across the Indian Ocean.

The Navigation Act is the main body of Australian law applicable to ships engaged in interstate and overseas trade. It does not apply to fishing vessels, intrastate vessels or pleasure craft which in Western Australia Marine Act. The Navigation Act does however, contain provisions concerning wrecks and salvage which cover all ships in Australian waters. These provisions are mainly concerned with safety of life and property and protection of the marine environment.

The "Sanko Harvest" incident.

The bulk carrier "Sanko Harvest" registered Panama, was on a voyage from U.S.A to Esperance when it foundered on a reef within the Australian territorial sea. Although the vessel was engaged on an overseas voyage and subject to the Navigation Act, clearly responsibility for combating oil pollution which ensued, rested with the Department of Marine and Harbours. In this instance Commonwealth responsibilities were primarily concerned with the safety of life, providing assistance for clean up operations, and the conduct of an enquiry into circumstances surrounding the wreck.

The Marine Incident Investigation Unit within the Department of Transport and Communications has undertaken its investigation and recently completed its report into circumstances surrounding the accident. It is understood that the report concludes that although proper and reliable navigational information was promulgated, not all chart corrections were properly applied to the ship's charts and there was a lack of appreciation by the Master and Officers of the warnings contained in the charts. Furthermore, the grounding was caused by human error in the decision to navigate in an area incompletely surveyed.

As a result of this incident the Department of Marine and Harbours has requested that the area enclosing the Recherche Archipelago be closed to international shipping. This request is being considered by AMSA and will be progressed through the International Maritime Organisation to ensure that there is clear direction to international mariners concerning the hazards of navigating this largely uncharted area.

In regard to AMSA's role in the "Sanko Harvest" grounding, it is well to recap events as they occurred. Advice concerning the incident was relayed by/to state authorities early on Thursday 14th February 1991. State Combat Committee members were notified of the grounding and of the possible pollution which could eventuate both from the vessel's cargo of fertilizer and the fuel oil on board. However, initially it was advised that the vessel was expected to refloat, that salvage experts were on the way to assess the situation and that there were not immediate safety hazards for the crew. A meeting of the committee confirmed the Department of Marine and Harbours as the responsible combat authority and agreed on the response action which had been initiated. It was noted that the Department of Transport and Communications intended to conduct a preliminary investigation into the incident.

On Day 2 when it became evident that salvage was not possible, the committee's primary concerns were for the safety of the crew and that all possible measures be taken to mitigate the pollution which could result from spillage of oil fuel on board. Concerns for the crew were alleviated when it was advised that they had safely abandoned the vessel. However, it was then becoming evident that there would be major pollution resulting from ruptured fuel oil tanks.

The action undertaken by the on scene co-ordinator Captain HARROD and those employed in combating the pollution was considered most appropriate in the circumstances. Arrangements were put in hand to monitor the oil spill and alleviate its effects using equipment and materials which had been mobilised from Fremantle and regional ports. Also the attempt to boom escaping oil, the application of dispersant by helicopter spray on the sea surface and the introduction of dispersant to the ship's hold where oil was leaking provided some measure of protection from the resulting pollution problems.

There was no opportunity to off load the fuel oil on board in the time available. Local fishing vessels had insufficient capacity, there was no barge or other suitable container available locally, and no question of seeking deployment of a larger ship to the area to assist. It would have been irresponsible to even request such assistance.

The actions undertaken subsequent to the foundering of the wreck have been clearly documented elsewhere. It remains for me to describe the AMSA's role in the clean-up operation.

In addition to support and advice through involvement with the State Combat Committee, AMSA Marine Pollution unit arranged for oil spill simulations to be provided by the Victorian Institute of Marine Sciences and the interstate transfer of dispersant and equipment needed for combat operations.

AMSA personnel involved in the operation included Mr Barry DEBELJAKOVIC, officer in charge of the Fremantle Navaid's Maintenance Depot who assisted in the operation of the helicopter spray unit during most of the period that it was used. Mr Don BRODIE, Assistant Manager Marine Pollution who is based in Canberra, and Mr F H SCRIVEN, Principal Marine Surveyor from Fremantle attended the scene.

Their reports confirmed that the response initiated and directed by the Department of Marine and Harbours personnel was both appropriate and effective for the situation.

As a general comment for future incidents it should be accepted that accidents at sea are going to happen and that such occurrences do not seem to decrease over time no matter what measures are introduced to reduce their incidence. Australia is of course dependent on shipping, and accidents on or near our coast will be a natural concomitant of trade development. Accordingly, we should all do what we can to seek to minimise the effect of any marine accident by training, by improvement in operational standards, and by ensuring we have the necessary resources at hand to meet future challenges. In regard to an improved oil pollution combat response we will clearly depend on training personnel and provision of materials and equipment needed to alleviate pollution damage to the marine environment

We should also recognise that given time, nature provides the most effective pollution clean-up measures. Despite the introduction of many millions of tonnes of oil into the world's oceans there is little evidence of oil build up in the sea and while we know oil spills can have serious economic impact on coastal communities, in most cases such damage is temporary.

AUST. MARITIME SAFETY AUTHORITY

Q. Ian HAY - Esperance Shire

As far as I'm aware the chart up until 1988 does not show that foul ground. Is it known that whether the master of that ship had the updated charts and what are the obligations on the National Masters to acquire the most recent charts.

A. David CLARKE - Aust. Maritime Safety Authority

Look, I don't want to avoid the question, but I'm not fully aware of the enquires overtaken by the investigator. The vessel left Panama, I understand it had all the corrections for British Admiralty Charts and possibly had all the corrections for Australian Charts. It so happens that one of the corrections, which involved this particular reef was not on the charts with this ship had. I'm not sure whether that was the problem of the officers on board not putting that correction down, or whether not they did that particular correction. So I really can't answer that specifically, I think thats a matter to come out in the report when its published. I do think that the fact it hit that particular uncharted was just a chance and there were plenty others that you could have hit. The other thing that I should say is the Master that navigated that ship by putting down a set of courses through that area and he went right on course.

Q. Cheryl BRADLEY - LEAF

Somewhere in all this correspondence I had a document which states something to the effect that excluding ships from trading in certain waters is based primarily on navigational safety of the waters, is that a correct statement?

A. David CLARKE - Aust. Maritime Safety Authority

Its a fairly loose statement. There are international rights of passage which are fairly well established around the world and adopted by most Coastal States they don't for instance stop you traversing your waters. For instance I think of the problems you would have from going between say Malaysia and Indonesia if the Coastal States there put restrictions on the passage of international trade. So we adopt that say on an international forum. The only restrictions that I'm aware of are ones which involve say a significant commercial resource such as an oil field. Oil fields or oil rigs around the world are, its internationally recognised that you don't go within 500m of them. We have an area to be avoided around the oil fields and the Bass Strait, but to get those sorts of areas recognised internationally and thats the only way which we can have any force or have any realism to them, is to admit that we accepted it internationally was very difficult.

Q. Cheryl BRADLEY - LEAF

So therefore an area such as the Great Barrier Reef would not be considered an area of great commercial import.

A. David CLARKE - Aust. Maritime Safety Assoc.

Barrier Reef has certain acceptances internationally, for instance, its just recently been agreed that all ships traversing the Barrier Reef should have pilots on board. Now thats very unusual to be accepted by International Maritime Committee, but it has been done at our request quite recently.

A. Ron WEBB - Chairman

I am going to have to cut that line of questioning short as it is not connected with the Sanko Harvest incident, which we are here to discuss tonight.



MACKENZIE'S TUG SERVICE

Company report submitted for the Sanko Harvest debrief report.

INTRODUCTION

Mackenzie's Tug Service operates the only harbour tug in Esperance - a 25m vessel that is six years old. The tug Cape Le Grand II was extensively involved in attempted containment of the oil spill at the scene of the Sanko Harvest and also in the dispersal of the oil slick especially after the vessel broke up.

Mackenzie's Marine, its sister company was also involved with the 23m vessel 'Sea Lion'. This was used in a variety of roles such as - dive vessel rescue craft, ferry, reconnaissance and general work vessel.

This report is designed to cover, both vessels, however the majority lends itself to the tug's involvement.

14th Feb - Sea conditions: calm - moderate (SE 15-20 knots)

Tug 'Cape Le Grand' was initially standing by to berth the Sanko Harvest when its grounding was announced. Almost immediately the oil pollution equipment was loaded into the vessel. This included drums of dispersant and boom sprays and the harbour oil pollution booms. The two arrived at the Sanko Harvest at approximately 9am and the oil pollution boom was deployed from the ship's port shoulder around to midships on the starboard side. The operation was relatively smooth and efficient.

15th Feb - Sea conditions - am - moderate  
- pm - rough - Wind SE 25 knots

The tug loaded more dispersant and other oil pollution gear. It deployed the second oil boom at the ship in the afternoon. An attempt was made to encircle the ship with the boom, but rough conditions prevented this. The first boom was already under stress on the weather side and unfortunately the second boom had to be attached to the ship on the (starboard) weather side.

16th Feb - Sea Conditions - am calm  
- pm rough - SE winds to 25 knots

In the afternoon dispersant was sprayed into No. 4 hold of ship and also onto oil trapped in the boom.

17th Feb - Sea Conditions - Rough all day - SW to 25 knots

Enroute to the Sanko Harvest it was considered too rough to spray dispersant and the tug returned to Esperance harbour.

18th Feb - Sea Conditions - Moderate - SW 15 knots

The Sanko Harvest had broken into (3) three sections and a large slick running NE was evident. The tug spent most of the day spraying dispersant within the slick up to 8kms from the ship.



19th Feb - Standby in port all day.

20th and 21st Feb - Unloaded drums of dispersant and other equipment and cleaned the vessel up.

7th March - Sprayed a second smaller oil slick that had been released the previous night from the ship by movement of it on the bottom.

#### LESSONS LEARNT

##### 1. OIL BOOMS

- a. Totally unsuitable for ocean work ie: conditions over 18 knots.
- b. Desirable to encircle the source of the oil spill but in rough conditions the boom must be held off the windward side of ship to prevent the boom from destroying itself.

##### 2 OIL DISPERSANT

The amount of oil dispersant required to disperse the thick oil trapped within the boom was very large. The proportions of dispersant required was roughly 50-50. Spreading oil slicks were quickly dispersed. Two different types of dispersants were used, the latter shipment appearing to be much more concentrated and effective. From observations the dispersant sprayed by the helicopter in our vicinity had little effect. The dispersant needed to be applied directly onto the water and agitated. Spraying by helicopter with a fine mist appeared not to be having a great deal of effect.

Loading of dispersant on pallets straight onto the deck of the tug worked very well.

##### 3. OIL SLICK

It was surprising the amount of oil that was released in a short period of time when the vessel broke into 3 sections and also the distance that it spread from the stricken vessel overnight.

##### 4. COMMUNICATION

On most days the tug was not on the scene before midday. This led to limiting the number of hours at the scene and also to frustration among the operators. The plan of action for each day was formulated too late.

#### RECOMMENDATIONS

##### 1. OIL BOOMS

A boom suitable for ocean work is essential if the oil is to be contained. An anchorage system should be investigated to anchor the boom and to allow for wind direction changes. If the oil is contained within the boom, contingency plans must be available to remove it.

2. OIL DISPERSANT

For larger vessels such as the tug, longer dispersant spraying booms would be beneficial (3 - 4m longer). If a second vessel had been free to spray oil close to the coast, more oil could have been dispersed before coming ashore.

The tug should have been reloaded each evening to be ready to commence work early next morning.

3. COMMUNICATION

An earlier system of reporting conditions at the ship each morning was required.

As early as possible assessment on the scene each morning is required by the helicopter.

A vessel on the scene at daylight to assist assessment by the helicopter is required.

An action plan must be formulated as early as possible and passed on to the operators.

In our opinion under the circumstances and considering the enormity of the operation. Credit must be given to the Marine and Harbours for their overall co-ordination of rescue and oil pollution response efforts. It is obvious that a previous Equipment Operators Course conducted under the National Plan to combat oil pollution was also of great benefit in familiarization of equipment and its operation.

SUMMARY

Presented by - Ron WEBB, Chairman

Just one observation I'd make in starting and that is the comment, when Denis first approached me and invited me to be chairperson for this. I sort of gasped and ducked for cover and everything else. He did make a mention of the fact that at the Local Counter Disaster Committee Meeting down here one of the members had put very distinctly what they expected this evening to be and that was neither mutual back packing exercise, nor a witch hunt, but a forum for people with common objectives to get together, learn about each others parts in this exercise and perhaps develop some objective recommendations for future benefits of us all, and I personally believe that has been achieved this evening.

Certainly for me and perhaps for some others of you it has been an eye opener into the functions and roles of each others organisations. Also coming out of that of course is an appreciation of the realities and difficulties that we face when something like this does occur. In that vein I thank you all of you very much for your attendancy this evening on a wet and cool night, which they tell me it never happens in Esperance.

Thanks very much for the effort that you have obviously put into your planning for tonight's exercise and particularly for the recommendations that you have developed in your submissions and out of the questions that arisen.

I think from the lessons are twofold, quite clearly from the points raised, they are lessons that each organisation involved has learnt for themselves, and also no doubt those lessons that will come from the examination by the members of the State Combat Committee into the Debrief document coming from in this exercise tonight.

One of the major lessons which one as a police officer I can assure you, we appreciate all the time and that I've heard repeated time and time again this evening is the need for a adequate media liaison to make sure that full and accurate public awareness occurs. Its something we fall in a hole with, and obviously it occurred here and I think that perhaps thats a great lesson that we each can learn from this incident in conducting the debrief, such as this, obviously there are a lot of thanks to be called upon the people concerned.

Firstly I express my thanks and that would be the SES Co-ordinator, to the Shire President Councillor Don PATTERSON and his Shire for use of this facility. Thank you Don and I certainly trust that you have no leaders fund in which you place that \$25,000. A great thanks to Paul IGGLESDEN, for his we hope, great sound recording efforts which we will all see with the footing of the document when it comes out. Also to Neville MULGAT from the Shire for helping to set up the equipment and to Denis RAYNER for his customary and valuable leg work in preparing tonight's debriefing on the Sanko Harvest, and also I must add to his time keeping efforts by keeping me on track.

Finally I ask each person who makes a presentation to please not forget to submit the copy of the presentation very early to Denis RAYNER. Obviously it will assist him if there are problems with sound recording to make sense of what's been said and to make sure that the document that you receive, as I see with the recommendations which was supposed to be my part of summing up now. I don't propose for one minute to go back through the recommendations that have come out of this. They will come out in the report and it has been authorised to release the total document of the verbal presentation and your written documents will come in and obviously the recommendations that will come you will each address them to your own organisations and no doubt a step before the State Combat Committee will be looking very closely at making use of them to ensure we do the best that is possible for any future similar instances. Thank you very much.